Научном већу Института за физику Београд

Београд, 5. новембар 2020. године

Предмет:

Молба за покретање поступка за избор у звање научни саветник

С обзиром да испуњавам критеријуме прописане од стране Министарства просвете, науке и технолошког развоја за стицање звања научни саветник, молим Научно веће Института за физику Београд да покрене поступак за мој избор у наведено звање.

У прилогу достављам:

1. Мишљење руководиоца пројекта са предлогом чланова комисије за избор у звање
2. Стручну биографију
3. Преглед научне активности
4. Елементе за квалитативну и квантитативну оцену научног доприноса са доказима
5. Списак објављених научних радова и њихове копије
6. Податке о цитираности
7. Уверење о одбрањеној докторској дисертацији

Са поштовањем,
др Паси Хуовинен

5. новембар 2020

Научном већу Института за физику

Предмет: Мишљење руководиоца лабораторије за избор др Пасија Хуовинена (Pasi Huovinen) у звање научни саветник

Поштовани,

Др Паси Хуовинен докторирао је на Универзитету Јиваскила (енг. Jyväskylä) у Финској. Има богато радно искуство, а пре доласка на Институт за физику радио је као ванредни професор на Универзитету у Варшави у Пољској. Од новембра 2018. године запослен је на Институту за физику у Лабораторији за физику високих енергија у групи др Магдалене Ђорђевић. Ангажован је на пројекту H2020-ERC-2016-CoG "QGP tomography".

С обзиром да др Паси Хуовинен испуњава све услове предвиђене Правилником о поступку и начину вредновања, и квантитативном исказивању научноистраживачких резултата истраживача, сагласна сам са покретањем поступка за избор у звање научни саветник.

За чланове комисије за избор др Пасија Хуовинена у звање научни саветник предлажем следећи састав:

1. др Магдалена Ђорђевић, научни саветник, Институт за физику;
2. др Лидија Живковић, научни саветник, Институт за физику;
3. др Бранислав Цветковић, научни саветник, Институт за физику;
4. проф. др Петар Аџић, редовни професор Физичког факултета у пензији;

Руководилац Лабораторије за
физику високих енергија,

др Лидија Живковић
Научни саветник

Научном већу Института за физику Београд

Београд, 5. новембар 2020. године

Предмет:

Образложење покретања поступка за избор у адкватно звање

Др Паси Хуовинен је држављанин Финске, који је од новембра 2018. запослен на Институту за физику са пуним радним временом у оквиру пројекта ERC-2016-CoG "QGP Tomography", чији је руководилац др Магдалена Ђорђевић. Пре запослења на Институту био је запослен као ванредни професор на Универзитету у Варшави у Пољској. Др Хуовинен је водећи експерт из динамичких симулација кварк-глуонске плазме (експертизе која не постоји у Србији), и интерес Института је да се експерт из ове области задржи у Србији. Из тог разлога започињемо избор др Пасија Хуовинена у адекватно звање (у овом случају звање научног саветника). Напомињемо да др Паси Хуовинен није раније биран у било какво звање у Србији, па овај избор не представља прескакање звања, већ избор у адекватно звање.

Са поштовањем,

др Магдалена Ђорђевић, научни саветник
Руководилац пројекта ERC-2016-CoG "QGP Tomography"

др Лидија Живковић, научни саветник
Руководилац лабораторије за физику високих енергија

Scientific biography/Naučna biografija

Personal data/Lični podaci:

Full name/Puno ime:	Pasi Huovinen
Date of Birth/Datum rođenja:	24. 7. 1967
E-mail:	pasi.huovinen@ipb.ac.rs

Scientific positions/Naučne pozicije:

Nov 2018 -	Research Professor at the Institute of Physics
Oct 2016 - Sept 2018	Associate Professor, University of Wrocław, Poland
Nov 2015 - Sept 2016	Research Associate, University of Wrocław, Poland
July 2012 - Dec 2015	Research Fellow, Frankfurt Institute of Advanced Studies, Germany
Jan 2009 - Oct 2015	Research Associate, Goethe-Universität, Frankfurt, Germany
Oct 2007 - Nov 2008	Research Associate, Purdue University, West Lafayette, IN, USA
Apr 2005 - Sept 2007	Visiting Research Associate, University of Virginia, Charlottesville, VA, USA
Oct 2003 - Mar 2005	Postdoctoral researcher, University of Jyväskylä and Helsinki Institute of Physics, Finland
Oct 2001 - Sept 2003	Research Associate, University of Minnesota, Minneapolis, MN, USA
Oct 1999 - Sept 2001	Postdoctoral fellow, Lawrence Berkeley National Laboratory, Berkeley, CA, USA
Aug 1996 - Sept 1999	Research Scientist, University of Jyväskylä, Finland

Participation in projects/Učešće u projektima:

2018 – 2021	"A novel Quark-Gluon Plasma tomography tool: from jet quenching to exploring the extreme medium properties", Horizon 2020, European Research Council (ERC) 2016 Consolidator Grant, ERC-2016-COG: 725741, project member, in charge of bulk medium simulations

Oct 2016 - Sept 2018 "Dissipative properties of strongly interacting matter formed in heavy-ion collisions", National Science Center, Poland (NCN): Polonez grant 2015/19/P/ST2/03333, Principal Investigator

July 2012 - June 2015 "Dissipative relativistic fluid dynamics for heavy-ion Collisions at SIS and FAIR energies", BMBF, Germany, 05P12RFFTK, project member

Academic titles/education/Akademska zvanja/obrazovanje:

1999: Doctor of Philosophy in Theoretical Physics, University of Jyväskylä, Finland, June 18, 1999. Thesis: "Constraints from hadron spectra on thermal electromagnetic emission in heavy-ion collisions at the CERN SPS" mentor: Prof. Vesa Ruuskanen.

1996: Master of Science in Theoretical Physics, University of Jyväskylä, Finland, June 26, 1996. Master's thesis: "Raskasionitörmäysten hydrodynaamisesta mallintamisesta" (In Finnish), mentor: Prof. Vesa Ruuskanen

1986-1996: Undergraduate studies in Physics, Faculty of Physics, University of Jyväskylä, Finland

Areas of scientific interest/expertise/Područja naučnog interesovanja/ekspertize:

High energy heavy-ion collisions (CERN SPS & LHC, RHIC at BNL, FAIR at GSI, NICA in Dubna), space-time evolution, especially flow and anisotropic flow, equation of state, hydrodynamic description, theory of relativistic fluid dynamics, freeze-out, comparison and combination of hydrodynamics and transport models, hadronic equation of state, electromagnetic probes of heavy-ion collisions, signatures of QCD phase transitions.

Grants:

National Science Center, Poland: Polonez grant 2015/19/P/ST2/03333
Oct. 2016 – Sept. 2018, 699,216.00 PLN for two years.

Prizes and awards/Nagrade i priznanja:

- APS outstanding referee 2014

- Physics Letters B ``Outstanding Contribution in Reviewing"-award 2017

Other academic merits:

Referee for:

- Physical Review Letters
- Physical Review C
- Nuclear Physics A
- Physics Letters B
- European Physical Journal A
- International Journal of Modern Physics E
- Journal of High Energy Physics
- Universe
- DOE grant proposals
- grant proposals for National Science Center, Poland
- grant proposals for Czech Science Foundation

Invited keynote lectures:

- Plenary talk in Quark Matter 2002 conference, Nantes, France, July 18–24, 2002
- Plenary talk in ICPPA 2016, Moscow, Russia, October 10-14, 2016

Popular outreach:

- Talk for general audience in Lower Silesian Science Festival (Dolnośląski Festival Nauki) ``Smaller, denser, hotter, brighter -- making the hottest stuff in the Universe", September 23, 2017, Wrocław, Poland
- Talk for general audience in Lower Silesian Science Festival (Dolnośląski Festival Nauki) ``It's not Higgs' fault you are so heavy!", September 21, 2018, Wrocław, Poland

Pasi Huovinen - tables of quantitative criteria/ tabele kvantitativnih kriterijuma

Eligibility criteria for the title of scientific advisor	necessary	achieved
in total	140	346 (337.434 normalised)
M10 + M20 + M31 + M32 + M33 + M41 + M42	100	336 (327.684 normalised)
M11 + M12 + M21+ M22 + M23 + M24	70	280 (272.601 normalised)

Category/ Kategorija	M points per work/ M bodova po radu	Number of works/ Broj radova	Total M points / Ukupno M bodova	Normalised number of M points / Нормиран број М бодова
M21a	10	11	110	107.143
M21	8	14	112	109.333
M22	5	11	55	53.125
M23	3	1	3	3.000
M31	3.5	4	14	14.000
M32	1.5	18	27	26.250
M33	1	15	15	14.833
M34	0.5	20	10	9.750

M21a, M21, M22, M23	IF	M	SNIP
Total/Ukupno	127.857	280	54.73
Article averaged/ Usrednjeno po članku	3.456	7.568	1.50

Mean by author / Usrednjo po autoru	43.576	95.570	18.47

Review and qualitative analysis of scientific work/ Pregled i kvalitativna analiza naučnog rada

candidate Pasi Huovinen / kandidata Pasija Huovinena

Quality of scientific results and review of papers/Kvalitet naučnih rezultata i pregled radova:

The candidate is one of the best known experts in hydrodynamical modeling of ultrarelativistic heavy-ion collisions. The goal of these collisions is to observe the formation of new state of matter, so-called quark-gluon plasma (QGP), and to study its properties. In QGP quarks and gluons are not bound to hadrons but behave as free, although interacting, particles instead. The candidate and his collaborators were among the first ones to show that the anisotropy observed in Au+Au collisions at RHIC, so-called elliptic flow, could be reproduced using fluid dynamics to describe the expansion stage of the collision [106,107]. This result supported the idea that the fireball formed in these collisions did not consist of individual, free streaming, particles, but of matter in condensed matter physics sense. Furthermore, since the result was obtained using ideal fluid dynamics, it led to the notion of this matter, quark-gluon plasma, being the most perfect fluid observed.

After the seminal works of [105,106,107], the candidate showed that it is very difficult to figure out the order of deconfinement transition based on the flow data [36], and that if there were no lattice QCD calculations, we would conclude that the deconfinement transition is not a smooth crossover, but a first order phase transition. In [35] the candidate improved his model by including so-called chemical freeze-out before the kinetic freeze-out. This allowed better reproduction of the identified particle yields, but made reproduction of the particle distributions and anisotropies way more difficult. That had been seen previously by other authors, but this work was—among others—pointing that the ideal fluid dynamical description is not sufficient, but dissipation should be included in the model.

Before using viscous fluid dynamics to model actual heavy-ion collisions, the candidate studied with Prof. Molnar whether viscous fluid dynamics is applicable to heavy-ion collisions [10,25,34]. After all, viscous fluid dynamics is based on the assumption of small deviations from thermal equilibrium, and it is not clear a priori whether the system formed in heavy-ion collisions is close to equilibrium. It turned out that if the specific shear viscosity, η/s, is sufficiently small, viscous fluid dynamics is applicable.

Equation of State (EoS) is one of the main ingredients of fluid dynamical modeling. With Dr. Petreczky, the candidate showed that the disagreement between a simple hadron resonance gas model EoS, and then lattice QCD results was due to the unphysically large quark masses in lattice QCD calculations [33]. If one used corresponding masses in hadron resonance gas, the results agreed. Thus it made sense to assume that if one uses hadron resonance gas EoS (with physical masses) at low temperatures, and lattice QCD result at high temperatures, the resulting EoS would be close to the physical one. The candidate and his collaborator provided a couple of such EoSs in a parametrised form, which was suitable for fluid dynamical calculations. One of these equations of state, so-called *s95p*, became very popular and was practically the "industry standard" in fluid dynamical modeling around year 2015. In his most recent publication [12, discussed more later] the candidate and his collaborators have updated these parametrisations to agree with the most recent lattice results. It remains to be seen whether these parametrisations will become equally popular.

The mentioned EoSs were limited to zero net baryon density. After the lattice QCD results at finite density became available, the candidate studied with Drs. Petreczky and Schmidt how these results agree with hadron resonance gas, devised a way to match the lattice and hadron resonance gas results, and extended the parametrised EoS to finite densities [7,29,32]. After it became clear that the fluctuation and correlation variables calculated in lattice QCD and in hadron resonance gas differ, the candidate showed with Dr. Petreczky that these differences can be partially explained by including the effect of repulsion between baryons in the hadron resonance gas model [14]. This work is ongoing, and a new paper is in pipeline.

Before the LHC data became available, the candidate and his collaborators made predictions for elliptic flow in the collisions at the LHC, and in the U+U collisions at RHIC [23]. After the first measurements at the LHC, they redid the calculations, and discussed how the p_T-differential elliptic flow, $v_2(p_T)$, is almost similar both at RHIC and at the LHC, but p_T-integrated elliptic flow, v_2, changes [22]. Fluid dynamical models have many free parameters, and with his collaborators the candidate studied how all these parameters affect the particle distributions in collisions at RHIC [24] paving way to an analysis of collisions at LHC [21] where η/s value 0.2 was found. These findings, and some other results by the candidate's collaborators, were summarised in [8].

After it had became established that quark-gluon plasma has a small but finite specific shear viscosity η/s, question arose how it depends on temperature. After all, no known substance has temperature independent specific shear viscosity. With his collaborators the candidate addressed this issue in a series of papers [4,6,9,19]. First [9], they made the surprising discovery that the anisotropies observed in collisions at RHIC are not sensitive to η/s in QGP, only to its minimum value, and its value in the hadron gas. In collisions at lower LHC energy η/s both in plasma and hadron gas effect the anisotropies. Only in collisions at the full LHC energy is η/s in plasma dominant. Later the candidate and his collaborators elaborated on this discovery by exploring at what temperatures does η/s of the fluid affect the anisotropies in collisions at different energies [19], and how this behaviour depend on rapidity [4]. It turned out that at back- and forward rapidities the fluid behaves like fluid at midrapidity in a lower energy collision.

The candidate's latest publication [12] can be seen as continuation of this research project. The candidate and his collaborators applied sophisticated Bayesian analysis to the fluid dynamical description of heavy-ion collisions, and found that once one takes into account the uncertainties of the model, the extracted value of η/s hardly depends on the equation of state used in the analysis—unlike previously claimed in the literature. Furthermore they found that there is a relatively broad temperature region around T_c where η/s hardly depends on temperature.

Besides temperature, η/s can depend on the baryochemical potential. This can be explored by modeling collisions at lower energies than the RHIC full energy, i.e. the results of so-called RHIC Beam Energy Scan. The candidate modeled these collisions with his collaborators [2,28] and found that the favoured value of η/s depends on the collision energy, which may indicate that η/s depends on baryochemical potential. How, was too early to say based on this analysis. This project also lead to a development of a new publicly available code for solving the fluid dynamical equations [17]. This code was mostly written by Dr. Karpenko, but the candidate provided solutions to many technical problems.

One of the significant problems in fluid dynamical modeling of heavy-ion collisions is that we do not know what the initial state of the fluid dynamical expansion is. In other words, what the boundary conditions for the partial differential equations governing the expansion are. The candidate and his collaborators found a rule which remarkably simplifies this problem (this rule was independently discovered by other authors roughly at the same time). If one observes not only the average anisotropy in collisions, but their event-by-event distribution, and scales the distribution by its average, it is similar to the event-by-event distribution of the spatial anisotropy of initial states used to model the collisions, independently of the properties of the fluid [5,30]. Thus one needs only to evaluate the spatial anisotropy distribution of an initial state model, and compare it to the experimentally observed anisotropy distribution. If it does not agree, the model is not good enough—no fluid dynamical calculations needed. Of course this does not mean fluid dynamical modeling is unnecessary—if the distributions agree, we may use this initial state model, and use fluid dynamics to learn about the properties of the QGP formed in the collisions.

One of the conceptual problems of fluid dynamical modeling is so-called freeze-out; the stage when fluid dynamics ceases to be valid, and the system begins to behave as free streaming particles instead. The usual approximation is to take the freeze-out to happen when/where the system reaches a fixed freeze-out temperature. The candidate studied with his collaborators whether more physical assumption of freeze-out when/where the expansion rate of the system exceeds the scattering rate of particles would change the results [16]. It turned out that it made hardly any difference, but the same topic was further explored in [4, mentioned earlier] with similar results. Paper [18] is also related to freeze-out, as a technical discussion of the more general topic of particlization, the change from fluid dynamical degrees of freedom to particle degrees of freedom (the word 'particlization' is candidate's contribution to the terminology of heavy-ion collisions). In [18] the candidate presented an algorithm for finding the three dimensional particlization or freeze-out hypersurface, and its normal vector, in four-dimensional space. In the second part of the same publication, his collaborator, Prof. Petersen, provided a sampling algorithm to convert fluid to particle ensembles at such a hypersurface. This paper lead also to publication [3] where the candidate studied so-called negative Cooper-Frye contributions with his collaborators, with

the result that at large collision energies these contributions are not significant, but they may cause significant uncertainties at low energies.

One way to improve the freeze-out description are so-called hybrid models where fluid dynamics is used to describe the system in the QGP phase, and transport model in the hadronic phase. One advantage of such a description is that different particle species decouple from the system at different times. The candidate and his collaborators took advantage of this feature, and showed [1,27] that multistrange hadrons scatter less in the hadronic phase than non-strange hadrons, and thus their distributions reflect the properties of the system at earlier stage, closer to hadronisation, than the distributions of non-strange particles. However, hybrid models are not the only possible approach to improve the description of the hadronic phase. In [15] the candidate applied his collaborators' sophisticated description of ρ-mesons (based on phase shifts in pion scatterings) to heavy-ion collisions, and showed that the excess of low-p_T pions is at least partly due to omission of the width of ρ-mesons in conventional descriptions. A study where the finite width of ρ-meson and other resonances are incorporated in a proper fluid-dynamical description is currently underway.

Finally, as a member of the present ERC project, the candidate participated in showing [13,26] that the initial shape of the collision system can be obtained from the distributions of high p_T particles, providing further constraints to the models describing the initial state of fluid dynamic evolution.

During the last fifteen years, the candidate has also written three reviews of fluid dynamical modeling of heavy-ion collisions. The first with his former Ph.D. supervisor [11], the second with Profs. Hirano and Nara, and Dr. Murase [31], and the third on his own [37]. He has also written a review about the same topic in 2004 [97].

Engagement in the development of conditions for scientific work, education and the formation of scientific staff/Angažovanost u razvoju uslova za naučni rad, obrazovanju i formiranju naučnih kadrova:

As Principal Investigator of the Polonez grant (Oct 2016 – Sept 2018), the candidate was responsible for hiring two graduate students, Messrs. Michał Naskret and Maciej Lewicky, and supervising their work related to the project. Since the candidate does not have the habilitation required to supervise students at the University of Wrocław, he could not be their official supervisor.

The candidate lectured a 10 hours graduate course "Applications of fluid dynamics to heavy-ion collision" at the University of Wroław during the spring semester 2018. He was responsible for not only lecturing and preparing the lecture notes, but also for designing the syllabus. Besides this graduate course, the candidate has given the following introductory lectures (all invited) about the fluid dynamical modeling of heavy ion collisions in various winter and summer schools:

- “Hydrodynamics of heavy ion collisions” (3 hours), THOR Winter School 2020, Jahorina, Bosnia and Herzegovina, Jan 20–24, 2020.
- “Introduction to hydrodynamic description of heavy-ion collisions” (3 hours), Helmholz International Summer School “Matter under Extreme Conditions in Heavy-Ion Collisions and Astrophysics”, JINR, Dubna, Russia, Aug 21–24, 2018.
- “Viscosity and equation of state” (2 hours), Mini-school “Collective Flows and Hydrodynamics in High Energy Nuclear Collisions”, Hefei, China, Dec 14–15, 2016.
- Quark Matter 2014 student lecture “Bulk properties and hydrodynamics: Observables and concepts” (1 hour), GSI, Darmstadt, Germany, May 18, 2014.
- “Hydrodynamics for heavy-ion collisions” (5 hours), Peking University, Beijing, China, Nov 12–13, 2013.
- “Hydrodynamics” (6 hours), International School on “Quark-Gluon Plasma and Heavy Ion Collisions: past, present, future”, Siena, Italy, July 9–13, 2013.
- “Hydrodynamics of heavy-ion collisions” (3 hours), Helmholtz International Summer School “Dense Matter in Heavy-Ion Collisions and Astrophysics” (DM 2012), Dubna, Russia, Aug 28–Sept 8, 2012.
- “Ideal Hydrodynamics” (2 hours), 2012 JET Summer School, McGill University, Montreal, Canada, June 16, 2012.
- “Hydrodynamics for heavy ion collisions” (2 hours), International School for High-Energy Nuclear Collisions (SCHOOLNP2011), Institute of Particle Physics (CCNU), Wuhan, China, Nov 2, 2011.
- “Viscosity, Hydrodynamics and Flow” (8 hours), Helmholtz Research School for Quark Matter Studies lecture week, Kemer, Turkey, Nov 20–26, 2009.

The candidate has also popularised his research by giving two lectures aimed at general public at the Lower Silesian Science Festival in Wrocław---see the scientific biography.

Standardization of the number of co-authored works, patents and technical solutions / Normiranje broja koautorskih radova, patenata i tehničkih rešenja:

The candidate’s works are phenomenological based on (often heavy) numerical calculations. In the vast majority of papers and presentations there has been five or fewer authors, so no normalisation is necessary. Among the candidate’s publications there is one paper with eight authors, one with seven and two with six authors. The contribution from these papers has been normalised accordingly, which reduces the points from category M20 from 280 to 272.6. Likewise there are seven presentations with six authors. Normalising their contribution reduces the

candidate's final score from 346 points to 337.4. Note that in heavy-ion physics it is commonplace to list the authors in alphabetical order, and thus the concept of the first author is not well defined.

Project, subproject and project management / Rukovođenje projektima, potprojektima i projektnim zadacima:

As the Principal Investigator of the Polonez grant 2015/19/P/ST2/03333, the candidate was in charge of the entire project including the use of funds, and hiring and supervising two students. The final report of this project is attached.

The candidate has also organised the following four workshops (documentation attached):

- Workshop on Sampling Particles on the Cooper-Frye Transition Surface, July 18–20, 2013, Schmitten, Germany
- Workshop on Transport Theory in Heavy Ion Collisions, July 15–17, 2013, Schmitten, Germany
- HICforFAIR Symposium "Modeling of the Parton-Hadron Phase Transition", Sept 23–24, 2010, Villasimius, Italy
- Workshop "Flow and dissipation in ultrarelativistic Heavy Ion Collisions", Sept 14–18, 2009, ECT*, Trento, Italy (main organiser)

Impact of scientific results/Uticaj naučnih rezultata:

One of the candidate's papers [33] has been cited more than 330 times. In this paper the candidate and his collaborator introduced practical parametrisations of the lattice QCD equation of state to be used in the fluid dynamical calculations. One of these parametrisations, *s95p*, became very popular, and was practically the "industry standard" in fluid dynamical modeling of heavy-ion collisions around year 2015. Thus, even if this paper was published in a journal (Nuclear Physics A, category M22) with a modest impact factor (IF 1.986), it's impact on heavy-ion physics has been significant.

The bulk of the candidate's work has been published in journals belonging to categories M21a and M21, in particular in Physical Review C (IF 3.304–3.881), Physical Review Letters (IF 7.622) and Physics Letters B (IF 4.807). Among these articles there are six publications cited more than one hundred times [5,9,19,21,24,25], and one review cited more than 200 times [11]. The articles the candidate has published since November 2005 have been cited 2229/2235/1967/2667 (Web of Science/Scopus excluding self citations of the candidate/Scopus excluding self citations of all authors/Inspire excluding self citations, July 2020) times, and his h-index for these publications is 23/23/22/23. The papers written during his entire career have been cited 4238/4232/3754/4969 times with h-index 31/30/30/32.

Concrete contribution of the candidate in the realization of works in scientific centers in the country and abroad / Konkretan doprinos kandidata u realizaciji radova u naučnim centrima u zemlji i inostranstvu:

As seen in his publications, the candidate's network of collaborators extends not only to several countries, but to several continents (both Americas, Europe and Asia). He has presently ongoing projects with Dr. Petreczky at Brookhaven National Laboratory (BNL), Prof. Rischke at Goethe University, Profs. Redlich and Sasaki at University of Wrocław, and Prof. Eskola and Dr. Niemi at University of Jyväskylä. Consequently he is a frequent visitor and seminar speaker at BNL, Frankfurt, and Jyväskylä (see the list of recent seminars after the list of publications). During his career the candidate has been employed in several universities and research institutes, and consequently his work has been carried out in several countries.

The candidate has been invited to give introductory lectures in several summer and winter schools for graduate students (see above), and has been an invited speaker in several workshops and conferences (22 items in categories M31 and M32). Furthermore, he has participated in organising three workshops, and has been the main organiser of one workshop (for details, see above).

List of works of Pasi Huovinen/Spisak radova Pasija Huovinena:

Papers published during the last 15 years (i.e. since October 2005)
citations: Web of Science/Scopus excluding self citations of the candidate/Scopus excluding self citations of all authors/Inspire excluding self citations
source normalised impact per publication (SNIP): CWTS journal indicators

Category M21a (11 papers, á 10 points, sum 110 points, normalised 107.143 points)

1. Shiori Takeuchi, Koichi Murase, Tetsufumi Hirano, Pasi Huovinen and Yasushi Nara, "Effects of hadronic rescattering on multistrange hadrons in high-energy nuclear collisions,"
   Phys. Rev. C92, 044907 (2015); doi:10.1103/PhysRevC.92.044907
   (IF 2013: 3.881, SNIP: 1.52, 29/25/23/36 citations)

2. Yuriy A. Karpenko, Pasi Huovinen, Hannah Petersen and Marcus Bleicher, ``Estimation of the shear viscosity at finite net-baryon density from A+A collision data at $\sqrt{s_{NN}}$ = 7.7-200 GeV,"
   Phys. Rev. C91, 064901 (2015); doi:10.1103/PhysRevC.91.064901
   (IF 2013: 3.881, SNIP: 1.52, 64/71/51/78 citations)

3. Dmytro Oliinychenko, Pasi Huovinen and Hannah Petersen, ``Systematic Investigation of Negative Cooper-Frye Contributions in Heavy Ion Collisions Using Coarse-grained Molecular Dynamics,"
   Phys. Rev. C91, 024906 (2015); doi:10.1103/PhysRevC.91.024906
   (IF 2013: 3.881, SNIP: 1.52, 6/5/3/3 citations)

4. Etele Molnar, Hannu Holopainen, Pasi Huovinen and Harri Niemi, ``Influence of temperature-dependent shear viscosity on elliptic flow at backward and forward rapidities in ultrarelativistic heavy-ion collisions,"
   Phys. Rev. C90, 044904 (2014); doi:10.1103/PhysRevC.90.044904
   (IF 2013: 3.881, SNIP: 1.79, 26/23/22/26 citations)

5. Harri Niemi, Gabriel S. Denicol, Hannu Holopainen and Pasi Huovinen, ``Event-by-event distributions of azimuthal asymmetries in ultrarelativistic heavy-ion collisions,"
   Phys. Rev. C87, 054901 (2013); doi:10.1103/PhysRevC.87.054901
   (IF 2013: 3.881, SNIP: 1.89, 141/144/133/193 citations)

6. Harri Niemi, Gabriel S. Denicol, Pasi Huovinen, Etele Molnar and Dirk H. Rischke, ``Sensitivity of the elliptic flow to a temperature-dependent shear viscosity-to-entropy density ratio,"
   J. Phys. G 38, 124050 (2011); doi:10.1088/0954-3899/38/12/124050
   (IF 2011: 4.178, SNIP: 1.73, 3/2/2/1 citations)

7. Pasi Huovinen and Peter Petreczky, ``Equation of state at finite baryon density based on lattice QCD,"
   J. Phys. G 38, 124103 (2011); doi:10.1088/0954-3899/38/12/124103
   (IF 2011: 4.178, SNIP: 1.73, 14/12/9/16 citations)

8. Chun Shen, Steffen A. Bass, Tetsufumi Hirano, Pasi Huovinen, Zhi Qiu, Huichao Song and Ulrich W. Heinz, ``The QGP shear viscosity: Elusive goal or just around the corner?,"

J. Phys. G 38, 124045 (2011); doi:10.1088/0954-3899/38/12/124045
(IF 2011: 4.178, SNIP: 1.73, 35/38/33/43 citations)

9. Harri Niemi, Gabriel S. Denicol, Pasi Huovinen, Etele Molnar and Dirk H. Rishcke,
``Influence of the shear viscosity of the quark-gluon plasma on elliptic flow in ultrarelativistic heavy-ion collisions,''
Phys. Rev. Lett. 106, 212302 (2011); doi:10.1103/PhysRevLett.106.212302
(IF 2010: 7.622, SNIP: 2.89, 179/178/150/188 citations)

10. Denes Molnar and Pasi Huovinen,
``Dissipative effects from transport and viscous hydrodynamics,"
J. Phys. G 35, 104125 (2008); doi:10.1088/0954-3899/35/10/104125
(IF 2008: 5.270, SNIP: 0.90, 61/61/59/69 citations)

11. Pasi Huovinen and Vesa Ruuskanen,
``Hydrodynamic Models for Heavy Ion Collisions,"
Ann. Rev. Nucl. Part. Sci. 56, 163-206 (2006);
doi:10.1146/annurev.nucl.54.070103.181236
(IF 2004: 7.739, SNIP: 3.31, 220/218/217/288 citations)

Category M21 (14 papers, á 8 points, sum 112 points, normalised 109.333 points)

12. Jussi Auvinen, Kari J. Eskola, Pasi Huovinen, Harri Niemi, Risto Paatelainen and Peter Petreczky,
``Temperature dependence of eta/s of strongly interacting matter: effects of the equation of state and the parametric form of (eta/s)(T),"
Phys. Rev. Cxxx, yyyyyy (2020); [arXiv:2006.12499 [nucl-th]].
(IF 2017: 3.304, SNIP: 1.26, 0 citations)

13. Magdalena Djordjevic, Stefan Stojku, Marko Djordjevic and Pasi Huovinen,
``Shape of the quark gluon plasma droplet reflected in the high-p_T data,"
Phys. Rev. C100, 031901 (2019); doi:10.1103/PhysRevC.100.031901
(IF 2017: 3.304, SNIP: 1.26, 1/1/1/1 citations)

14. Pasi Huovinen and Peter Petreczky,
``Hadron Resonance Gas with Repulsive Interactions and Fluctuations of Conserved Charges,"
Phys. Lett. B 777, 125-130 (2018); doi:10.1016/j.physletb.2017.12.001
(IF 2016: 4.807, SNIP: 1.37, 24/25/24/31 citations)

15. Pasi Huovinen, Pok Man Lo, Michał Marczenko, Kenji Morita, Krzyzstof Redlich and Chihiro Sasaki,
``Effects of ρ-meson width on pion distributions in heavy-ion collisions,"
Phys. Lett. B 769, 509-512 (2017); doi:10.1016/j.physletb.2017.03.060
(IF 2016: 4.807, SNIP: 1.40, 18/18/10/17 citations)

16. Saeed Ahmad, Hannu Holopainen and Pasi Huovinen,
``Dynamical freeze-out criterion in a hydrodynamical description of Au + Au collisions at $\sqrt{s_{NN}}$=200 GeV and Pb + Pb collisions at $\sqrt{s_{NN}}$=2760 GeV,"
Phys. Rev. C95, 054911 (2017); doi:10.1103/PhysRevC.95.054911
(IF 2016: 3.820, SNIP: 1.56, 2/2/2/5 citations)

17. Yuriy A. Karpenko, Pasi Huovinen and Marcus Bleicher,
``A 3+1 dimensional viscous hydrodynamic code for relativistic heavy ion collisions,"
Comput. Phys. Commun. 185, 3016-3027 (2014); doi:10.1016/j.cpc.2014.07.010
(IF 2014: 3.112, SNIP: 1.59, 65/66/46/94 citations)

18. Pasi Huovinen and Hannah Petersen,
``Particlization in hybrid models,"
Eur. Phys. J. A 48, 171 (2012); doi:10.1140/epja/i2012-12171-9
(IF 2010: 2.592, SNIP: 1.50, 70/62/52/84 citations)

19. Harri Niemi, Gabriel S. Denicol, Pasi Huovinen, Etele Molnar and Dirk H. Rischke,
``Influence of a temperature-dependent shear viscosity on the azimuthal asymmetries of transverse momentum spectra in ultrarelativistic heavy-ion collisions,"
Phys. Rev. C86, 014909 (2012); doi:10.1103/PhysRevC.86.014909
(IF 2012: 3.715, SNIP: 1.91, 102/98/80/100 citations)

20. Xu-Guang Huang, Pasi Huovinen and Xin-Nian Wang,
``Quark Polarization in a Viscous Quark-Gluon Plasma,"
Phys. Rev. C84, 054910 (2011); doi:10.1103/PhysRevC.84.054910
(IF 2009: 3.477, SNIP: 2.08, 46/50/36/41 citations)

21. Chun Shen, Ulrich W. Heinz, Pasi Huovinen and Huichao Song,
``Radial and elliptic flow in Pb+Pb collisions at the Large Hadron Collider from viscous hydrodynamics,"
Phys. Rev. C84, 044903 (2011); doi:10.1103/PhysRevC.84.044903
(IF 2009: 3.477, SNIP: 2.08, 169/195/162/231 citations)

22. Tetsufumi Hirano, Pasi Huovinen and Yasushi Nara, ``Elliptic flow in Pb+Pb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV: hybrid model assessment of the first data,"
Phys. Rev. C84, 011901 (2011); doi:10.1103/PhysRevC.84.011901
(IF 2009: 3.477, SNIP: 2.08, 46/47/39/54 citations)

23. Tetsufumi Hirano, Pasi Huovinen and Yasushi Nara,
``Elliptic flow in U+U collisions at $\sqrt{s_{NN}}$ = 200 GeV and in Pb+Pb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV: Prediction from a hybrid approach,"
Phys. Rev. C83, 021902 (2011); doi:10.1103/PhysRevC.83.021902
(IF 2009: 3.477, SNIP: 2.08, 55/63/58/75 citations)

24. Chun Shen, Ulrich W. Heinz, Pasi Huovinen and Huichao Song,
``Systematic parameter study of hadron spectra and elliptic flow from viscous hydrodynamic simulations of Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV,"
Phys. Rev. C82, 054904 (2010); doi:10.1103/PhysRevC.82.054904
(IF 2009: 3.477, SNIP: 1.89, 113/114/85/103 citations)

25. Pasi Huovinen and Denes Molnar,
``The Applicability of causal dissipative hydrodynamics to relativistic heavy ion collisions,"
Phys. Rev. C79, 014906 (2009); doi:10.1103/PhysRevC.79.014906
(IF 2009: 3.477, SNIP: 1.88, 106/110/107/129 citations)

Category M22 (11 papers, á 5 points, sum 55 points, normalised 53.125 points)

26. Magdalena Djordjevic, Stefan Stojku, Dusan Zigic, Bojana Ilic, Jussi Auvinen, Igor Salom, Marko Djordjevic and Pasi Huovinen,
``From high $p_\perp$ theory and data to inferring anisotropy of Quark-Gluon Plasma,"
Nucl. Phys. A in press (100x, yyy-zzz (2020))
(IF 2017: 1.992, SNIP: 0.74, 0 citations)

27. Shiori Takeuchi, Koichi Murase, Tetsufumi Hirano, Pasi Huovinen and Yasushi Nara,
``Violation of mass ordering for multi-strange hadrons at RHIC and LHC,"Nucl. Phys. A 956, 457-460 (2016); doi:10.1016/j.nuclphysa.2016.01.024
(IF 2014: 2.202, SNIP: 0.81, 2/2/2/2 citations)

28. Yuriy A. Karpenko, Marcus Bleicher, Pasi Huovinen and Hannah Petersen,
``Effects of EoS in viscous hydro + cascade model for the RHIC Beam Energy Scan," Nucl. Phys. A 956, 834-837 (2016); doi:10.1016/j.nuclphysa.2016.02.030
(IF 2014: 2.202, SNIP: 0.81, 4/4/2/2 citations)

29. Pasi Huovinen, Peter Petreczky and Christian Schmidt,
``Equation of state at finite net-baryon density using Taylor coefficients up to sixth order,"
Nucl. Phys. A 931, 769-773 (2014); doi:10.1016/j.nuclphysa.2014.08.069
(IF 2013: 2.499, SNIP: 0.87, 3/3/3/6 citations)

30. Harri Niemi, Gabriel S. Denicol, Hannu Holopainen and Pasi Huovinen,
``Fluid dynamical response to initial state fluctuations,"
Nucl. Phys. A 926, 109-114 (2014); doi:10.1016/j.nuclphysa.2014.03.014
(IF 2013: 2.499, SNIP: 0.87, 2/2/2/3 citations)

31. Tetsufumi Hirano, Pasi Huovinen, Koichi Murase and Yasushi Nara,
``Integrated Dynamical Approach to Relativistic Heavy Ion Collisions,"
Prog. Part. Nucl. Phys. 70, 108-158 (2013); doi:10.1016/j.ppnp.2013.02.002
(IF 2011: 2.614, SNIP: 2.12, 63/53/38/64 citations)

32. Pasi Huovinen, Peter Petreczky and Christian Schmidt,
``Equation of state at non-zero baryon density based on lattice QCD,"
Central Eur. J. Phys. 10, 1385 (2012); doi:10.2478/s11534-012-0110-3
(IF 2011: 0.909, SNIP N/A, 6/4/4/5 citations)

33. Pasi Huovinen and Peter Petreczky,
``QCD Equation of State and Hadron Resonance Gas,"
Nucl. Phys. A 837, 26-53 (2010); doi:10.1016/j.nuclphysa.2010.02.015
(IF 2010: 1.986, SNIP: 0.83, 357/352/334/424 citations)

34. Denes Molnar and Pasi Huovinen,
``Applicability of viscous hydrodynamics at RHIC,"
Nucl. Phys. A 830, 475c (2009); doi:10.1016/j.nuclphysa.2009.10.104
(IF 2007: 3.096, SNIP: 1.07, 11/11/11/10 citations)

35. Pasi Huovinen,
``Chemical freeze-out temperature in hydrodynamical description of Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV,"
Eur. Phys. J. A 37, 121-128 (2008); doi:10.1140/epja/i2007-10611-3
(IF 2008: 2.015, SNIP: 0.76, 43/37/37/55 citations)

36. Pasi Huovinen,
``Anisotropy of flow and the order of phase transition in relativistic heavy ion collisions,"
Nucl. Phys. A 761, 296-312 (2005); doi:10.1016/j.nuclphysa.2005.07.016
(IF 2004: 2.108, SNIP: 0.84, 62/69/58/85 citations)

Category M23 (1 paper, á 3 points, sum 3 points, normalised 3 points)

37. Pasi Huovinen,
``Hydrodynamics at RHIC and LHC: What have we learned?,"
Int. J. Mod. Phys. E 22, 1330029 (2013); doi:10.1142/S0218301313300294
(IF 0.842, SNIP: 0.54, 44/44/44/53 citations)

Category M31 (4 talks, á 3.5 points, sum 14 points, normalised 14 points)

38. Pasi Huovinen,
``Hydrodynamics of QCD Matter,"
Acta Phys. Polon. Supp. 11, 569-575 (2018); doi:10.5506/AphysPolBSupp.11.569
Proceedings of 10th International Winter Workshop "Excited QCD" 2018, March 11-15, 2018, Kopaonik, Serbia

39. Pasi Huovinen,
``Hydrodynamic flow in heavy-ion collisions at RHIC and LHC,"
J. Phys. Conf. Ser. 798, 012063 (2017); doi:10.1088/1742-6596/798/1/012063
Proceedings of the 2nd International Conference on Particle Physics and Astrophysics (ICPPA 2016), October 10-14, 2016, Moscow, Russia

40. Pasi Huovinen,
``Hydrodynamics of QCD,"
Acta Phys. Polon. Supp. 8, 327 (2015); doi:10.5506/AphysPolBSupp.8.327
Proceedings of the 7th International Winter Workshop "Excited QCD" 2015, March 8-14, 2015, Tatranska Lomnica, Slovakia

41. Pasi Huovinen,
``Decade of hydrodynamics: What have we learnt?,"
PoS ConfinementX, 165 (2012); doi:10.22323/1.171.0165
Proceedings of the Confinement X conference, October 8-12, 2012, Munich, Germany

Category M32 (18 talks, á 1.5 points, sum 27 points, normalised 26.25 points)

42. Pasi Huovinen, Pok Man Lo, Michał Marczenko, Kenji Morita, Krzyzstof Redlich and Chihiro Sasaki,
``Effects of resonance widths on particle spectra and anisotropies,"
International Workshop XLVII on Gross Properties of Nuclei and Nuclear Excitations, "From QCD matter to hadrons", Hirschegg, Kleinwalsertal, Austria, January 13-19, 2019

43. Pasi Huovinen and Peter Petreczky,
``Fictions, fluctuations and mean fields,"

Workshop “Constraining the QCD Phase Boundary with Data from Heavy Ion Collisions", GSI, Darmstadt, Germany, February 12-14, 2018

44. Pasi Huovinen, Pok Man Lo, Michał Marczenko, Kenji Morita, Krzyzstof Redlich and Chihiro Sasaki,
``The effect of resonance widths on hadron distributions,"
International Workshop on “Flow, Jet Quenching and Strong Coupling Physics”, Huzhou, China, December 17-19, 2016

45. Pasi Huovinen, Pok Man Lo, Michał Marczenko, Kenji Morita, Krzyzstof Redlich and Chihiro Sasaki,
``Lattice QCD vs. Hadron Resonance Gas: Do we need more or better resonances?,"
Workshop “YSTAR2016, Excited Hyperons in QCD Thermodynamics at Freeze-Out”, Thomas Jefferson National Accelerator Facility, Newport News, VA, USA, November 16-17, 2016

46. Pasi Huovinen, Peter Petreczky and Christian Schmidt,
``Lattice QCD based equation of state at finite baryon density,"
Workshop “Hydrodynamics for strongly coupled fluids”, ECT*, Trento, Italy, May 12-16, 2014

47. Pasi Huovinen,
``EoS and hydrodynamic evolution in HIC,"
EMMI Workshop “Fluctuations and Correlations and QCD Phase Transition”, GSI, Darmstadt, Germany, Feb 11-12, 2013.

48. Pasi Huovinen and Peter Petreczky,
``Lattice QCD based equation of state at finite baryon density,"
5th International Winter Workshop "Excited QCD" 2013, Sarajevo, Bosnia-Herzegivina, February 3-9, 2013

49. Pasi Huovinen, Saeed Ahmad and Hannu Holopainen,
``Dynamical freeze-out,"
The 2nd International Symposium on Non-equilibrium Dynamics (NeD-2012), Hersonissos, Crete, Greece, June 25–30, 2012

50. Pasi Huovinen and Peter Petreczky,
``Lattice QCD based equation of state at finite baryon density,"
The International Symposium on Non-equilibrium Dynamics (NeD-2011), Heraklion, Crete, Greece, August 31-September 3, 2011

51. Pasi Huovinen and Peter Petreczky,
``Lattice QCD based equation of state at finite baryon density,"
"Three days on quarkyonic island", HIC for FAIR Workshop and XXVIII Max Born Symposium, Wroclaw, Poland, May 19-21, 2011

52. Pasi Huovinen,
``Hadronic equation of state and relativistic heavy-ion collisions,"
Workshop on Excited Hadronic States and the Deconfinement Transition, Thomas Jefferson National Accelerator Facility, Newport News, VA, USA, February 23-25, 2011

53. Pasi Huovinen, Harri Niemi and Gabriel Denicol,
``Recent results from hydrodynamics,"

RNM-workshop, Frankfurt Institute for Advanced Studies, Frankfurt, Germany, January 27, 2011

54. Pasi Huovinen and Peter Petreczky,
``Lattice QCD Equation of state and hydrodynamic flow,"
Workshop Extreme QCD 2010, Bad Honnef, Germany, June 21-23, 2010

55. Pasi Huovinen and Peter Petreczky,
``Lattice based Equation(s) of State and its (their) effect(s) on the hydrodynamical evolution,"
INT program "Quantifying the Properties of Hot QCD Matter", Institute for Nuclear Theory, Seattle, WA, USA, May 24-July 16, 2010

56. Pasi Huovinen and Peter Petreczky,
``State of the art Equation of State,"
Joint CATHIE/TECHQM Workshop, Brookhaven National Laboratory, Upton, NY, USA, December 14-18, 2009

57. Pasi Huovinen,
``Collective flow - status and open questions,"
Workshop "Theory meets Experiment: Theory-Experiment Collaboration for Hot QCD Matter (TECHQM)", Brookhaven National Laboratory, Upton, NY, USA, May 6-7, 2008

58. Pasi Huovinen and Denes Molnar,
``Comparing viscous hydrodynamics to a parton cascade,"
BNL Workshop "Viscous Hydrodynamics and Transport Models in Heavy Ion Collisions", Brookhaven National Laboratory, Upton, NY, USA, April 23-May 2, 2008

59. Pasi Huovinen,
``The effects of the order of phase transition, chemical equilibrium and freeze-out in ideal hydro," RIKEN BNL Research Center Workshop "Hydrodynamics in Heavy Ion Collisions and QCD Equation of State", Brookhaven National Laboratory, Upton, NY, USA, April 21-22, 2008

Category M33 (15 talks, á 1 point, sum 15 points, normalised 14.833)

60. Pasi Huovinen and Peter Petreczky,
``Hadron gas with repulsive mean field,"
PoS Confinement2018, 145 (2018); doi:10.22323/1.336.0145
Proceedings of the Confinement XIII conference, July 31 - August 6, 2018, Maynooth, Ireland

61. Jussi Auvinen, Kari J. Eskola, Pasi Huovinen, Harri Niemi, Risto Paatelainen and Peter Petreczky,
``Temperature dependence of η/s: uncertainties from the equation of state,"
PoS Confinement2018, 135 (2018); doi:10.22323/1.336.0135
Proceedings of the Confinement XIII conference, July 31 - August 6, 2018, Maynooth, Ireland

62. Pasi Huovinen and Peter Petreczky,
``Hadron resonance gas with repulsive interactions,"

J. Phys. Conf. Ser. 1070, 012004 (2018); 012004 doi:10.1088/1742-6596/1070/1/012004
Proceedings of the 34th Winter Workshop on Nuclear Dynamics (WWND 2018), March 25-31, 2018, Deshaies, Guadeloupe

63. Pasi Huovinen and Peter Petreczky,
``Hadron resonance gas with repulsive interactions and baryon rich matter,"
PoS CPOD2017, 034 (2018); doi:10.22323/1.311.0034
Proceedings of the 11th International Workshop on Critical Point and Onset of Deconfinement (CPOD 2017), August 7-11, 2017, Stony Brook, NY, USA

64. Pasi Huovinen and Hannu Holopainen,
``Freeze-out at Constant Knudsen Number in Event-by-event Hydrodynamics,"
Acta Phys. Polon. Supp. 10, 913-914 (2017); doi:10.5506/AphysPolBSupp.10.913
Proceedings of the 10th International Workshop on Critical Point and Onset of Deconfinement (CPOD 2016), May 30 - June 4, 2016, Wrocław, Poland

65. Yuriy A. Karpenko, Marcus Bleicher, Pasi Huovinen and Hannah Petersen,
``Estimating η/s of QCD matter at high baryon densities,"
J. Phys. Conf. Ser. 668, 012063 (2016); doi:10.1088/1742-6596/668/1/012063
Proceedings of the 15th International Conference on Strangeness in Quark Matter (SQM 2015), July 6-11, 2015, Dubna, Russia

66. Yuriy A. Karpenko, Marcus Bleicher, Pasi Huovinen and Hannah Petersen, ``3+1 dimensional viscous hydrodynamics at high baryon densities,"
J. Phys. Conf. Ser. 612, 012052 (2015); doi:10.1088/1742-6596/612/1/012052
Proceedings of Hot Quarks 2014: Workshop for Young Scientists on the Physics of Ultrarelativistic Nucleus-Nucleus Collisions (HQ2014), September 21-28, 2014, Las Negras, Spain

67. Dmytro Oliinychenko, Pasi Huovinen and Hannah Petersen,
``Cooper-Frye Negative Contributions in a Coarse-Grained Transport Approach,"
J. Phys. Conf. Ser. 599, 012017 (2015); doi:10.1088/1742-6596/599/1/012017
Proceedings of the 3rd FAIR NExt generation ScientistS (FAIRNESS 2014), September 22-27, 2014, Vietri sul Mare, Italy

68. Anton Wiranata, Madappa Prakash, Pasi Huovinen, Volker Koch and Xin-Nian Wang,
``The η/s of hadrons out of chemical equilibrium,"
J. Phys. Conf. Ser. 535, 012017 (2014); doi:10.1088/1742-6596/535/1/012017
Proceedings of the 30th Winter Workshop on Nuclear Dynamics (WWND 2014), April 6-12, 2014, Galveston, TX, USA

69. Yuriy A. Karpenko, Marcus Bleicher, Pasi Huovinen and Hannah Petersen, ``3+1 dimensional viscous hydrodynamics at high baryon densities,"
J. Phys. Conf. Ser. 503, 012040 (2014); doi:10.1088/1742-6596/503/1/012040
Proceedings of the 2nd FAIR NExt generation ScientistS (FAIRNESS 2013), September 16-21, 2013, Berlin, Germany

70. Yuriy A. Karpenko, Marcus Bleicher, Pasi Huovinen and Hannah Petersen,
``Beam energy scan using a viscous hydro+cascade model,"
J. Phys. Conf. Ser. 509, 012067 (2014); doi:10.1088/1742-6596/509/1/012067
Proceedings of the 14th International Conference on Strangeness in Quark Matter (SQM 2013), July 22-27, 2013, Birmingham, United Kingdom

71. Hannu Holopainen and Pasi Huovinen,
``Dynamical freeze-out criterion in event-by-event hydrodynamics,"
J. Phys. Conf. Ser. 509, 012114 (2014); doi:10.1088/1742-6596/509/1/012114
Proceedings of the 14th International Conference on Strangeness in Quark Matter (SQM 2013), July 22-27, 2013, Birmingham, United Kingdom

72. Hannu Holopainen and Pasi Huovinen,
``Dynamical Freeze-out in Event-by-Event Hydrodynamics,"
J. Phys. Conf. Ser. 389, 012018 (2012); doi:10.1088/1742-6596/389/1/012018
Proceedings of the 28th Winter Workshop on Nuclear Dynamics (WWND 2012), April 7-14, 2012, Dorado del Mar, Puerto Rico

73. Harri Niemi, Gabriel S. Denicol, Pasi Huovinen, Etele Molnar and Dirk H. Rishcke,
``Effect of temperature-dependent eta/s on flow anisotropies,"
Acta Phys. Polon. Supp. 5, 305-310 (2012); doi:10.5506/AphysPolBSupp.5.305
Proceedings of the 13th International Conference on Strangeness in Quark Matter (SQM 2011), September 18-24, 2011, Cracow, Poland

74. Pasi Huovinen and Peter Petreczky,
``On Fluctuations of Conserved Charges : Lattice Results Versus Hadron Resonance Gas,"
J. Phys. Conf. Ser. 230, 012012 (2010); doi:10.1088/1742-6596/230/1/012012
Proceedings of the 26th Winter Workshop on Nuclear Dynamics (WWND 2010), January 2-9, 2010, Ocho Rios, Jamaica

Category M34 (20 talks, á 0.5 points, sum 10 points, normalised 9.75)

75. Pasi Huovinen, Jussi Auvinen, Harri Niemi, Kari J. Eskola, Risto Paatelainen and Peter Petreczky,
``Does eta/s depend on the EoS?,"
MIAPP topical workshop "Exploring the Perfect Liquid", Garching, Germany, September 6-8, 2018

76. Pasi Huovinen, Pok Man Lo, Michał Marczenko, Kenji Morita, Krzyzstof Redlich and Chihiro Sasaki,
``Effects of resonance widths on EoS and particle distributions,"
Workshop “Phase diagram of strongly interacting matter: From Lattice QCD to Heavy-Ion Collision Experiments”, ECT*, Trento, Italy, November 27-December 1, 2017

77. Pasi Huovinen,
``Better fitting through (fictitious) chemistry,"
"Light, Color, and Dense Matter Symposium”, University of Minnesota, Minneapolis, MN, USA, June 14-17, 2017

78. Pasi Huovinen, Pok Man Lo, Michał Marczenko, Kenji Morita, Krzyzstof Redlich and Chihiro Sasaki,
``Is there a low p_T “anomaly” in the pion momentum spectra from relativistic nuclear collisions?"
Workshop “ULtra-RelatIvistiCH HEavy IoNZ 2016”, CERN, Geneva, Switzerland, July 18-20, 2016

79. Pasi Huovinen, Peter Petreczky and Christian Schmidt,
``Lattice QCD based equation of state at finite baryon density,"
Deutsche Physikalische Gesellschaft spring meeting, Heidelberg, Germany, March 23-27, 2015

80. Pasi Huovinen,
``Improving thermal models with sequential freeze-out,"
Deutsche Physikalische Gesellschaft spring meeting, Frankfurt, Germany, March 17-21, 2014

81. Pasi Huovinen, Saeed Ahmad and Hannu Holopainen,
``Dynamical freeze-out in event-by-event hydrodynamics,"
Workshop "New Frontiers in QCD 2013", Yukawa Institute for Theoretical Physics, Kyoto, Japan, November 18-December 20, 2013

82. Pasi Huovinen and Peter Petreczky,
``Lattice QCD based equation of state at finite baryon density,"
Deutsche Physikalische Gesellschaft spring meeting, Dresden, Germany, March 4-8, 2013

83. Pasi Huovinen, Saeed Ahmad and Hannu Holopainen,
``Dynamical freeze-out in event-by-event hydrodynamics,"
The VIII Workshop on Particle Correlations and Femtoscopy (WPCF-2012), Frankfurt, Germany, September 10-14, 2012

84. Pasi Huovinen, Saeed Ahmad and Hannu Holopainen,
``Dynamical freeze-out and its consequences,"
A symposium on contemporary subatomic physics, McGill University, Montreal, Canada, June 12-14, 2012

85. Pasi Huovinen and Peter Petreczky,
``Lattice QCD based equation of state at finite baryon density,"
NICA/JINR-FAIR Bilateral Workshop, Frankfurt, Germany, April 2-4, 2012

86. Pasi Huovinen and Peter Petreczky,
``Lattice QCD based equation of state at finite baryon density,"
Critical Point and Onset of Deconfinement (CPOD 2011), Wuhan, China, November 7-11, 2011

87. Pasi Huovinen and Saeed Ahmad,
``Dynamical freeze-out criterion in heavy-ion collisions,"
Deutsche Physikalische Gesellschaft spring meeting, Münster, Germany, March 21-25, 2011

88. Pasi Huovinen and Peter Petreczky,
``QCD Equation of State and Hadron Resonance Gas,"
Strong and Electroweak Matter 2010, Montreal, Canada, June 29-July 2, 2010

89. Pasi Huovinen,
``Viscous hydrodynamics,"
2010 RHIC & AGS Annual Users' Meeting, Brookhaven National Laboratory, Upton, NY, USA, June 7-11, 2010

90. Pasi Huovinen and Peter Petreczky,
``Lattice and hadron resonance gas Equations of State,"
Workshop “Statistical Particle Production: Beyond the first moment”, Bad Liebenzell Germany, April 25–28, 2010

91. Pasi Huovinen,
``Chemical freeze-out in hydrodynamical description,"
Workshop “Statistical Particle Production: Beyond the first moment”, Bad Liebenzell Germany, April 25–28, 2010

92. Pasi Huovinen and Peter Petreczky,
``Hadron Resonance Gas and lattice QCD Equation of State,"
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93. Pasi Huovinen,
``Hydrodynamics in relativistic heavy ion collisions,"
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94. Pasi Huovinen,
``Anisotropy of flow and the order of phase transition in relativistic heavy-ion collisions,"
INT program "From RHIC to LHC: Achievements and Opportunities", Institute for Nuclear Theory, Seattle, WA, USA, September 25-December 8, 2006

Eligibility criteria:

	necessary	achieved
in total	140	346 (337.434 normalised)
M10 + M20 + M31 + M32 + M33 + M41 + M42	100	336 (327.684 normalised)
M11 + M12 + M21+ M22 + M23 + M24	70	280 (272.601 normalised)

Publications older than 15 years:

95. Denes Molnar and Pasi Huovinen,
``Dissipation and elliptic flow at RHIC,"
Phys. Rev. Lett. 94, 012302 (2005); doi:10.1103/PhysRevLett.94.012302

96. Pasi Huovinen and Joseph I. Kapusta,
``Rate equation network for baryon production in high energy nuclear collisions,"
Phys. Rev. C69, 014902 (2004); doi:10.1103/PhysRevC.69.014902

97. Pasi Huovinen,
``Hydrodynamical description of collective flow,"
in ``Quark-Gluon Plasma 3", pages 600--633, eds. R. C. Hwa and X. N. Wang (World Scientific, Singapore, 2004); doi:10.1142/9789812795533_0009

98. G. Agakichiev et al. [CERES/NA45],
``Semihard scattering unraveled from collective dynamics by two pion correlations in 158 A GeV/c Pb + Au collisions,"
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99. Pasi Huovinen,
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100. Pasi Huovinen,
``Hydrodynamics at RHIC,"
Acta Phys. Polon. B 33, 1635-1650 (2002)

101. Pasi Huovinen, Mohamed Belkacem, Paul J. Ellis and Joseph I. Kapusta,
``Dileptons and photons from coarse grained microscopic dynamics and hydrodynamics compared to experimental data,"
Phys. Rev. C66, 014903 (2002); doi:10.1103/PhysRevC.66.014903

102. Pasi Huovinen, Vesa Ruuskanen and Sami Rasanen,
``Photon emission in heavy ion collisions at the CERN SPS,"
Phys. Lett. B 535, 109-116 (2002); doi:10.1016/S0370-2693(02)01721-5

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``Transverse expansion and high p(T) azimuthal asymmetry at RHIC,"
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104. Pasi Huovinen, Peter F. Kolb and Ulrich W. Heinz,
``Is There elliptic flow without transverse flow?,"
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105. Peter F. Kolb, Ulrich W. Heinz, Pasi Huovinen, Kari J. Eskola and Kimmo Tuominen,
``Centrality dependence of multiplicity, transverse energy, and elliptic flow from hydrodynamics,"
Nucl. Phys. A 696, 197-215 (2001); doi:10.1016/S0375-9474(01)01114-9

106. Pasi Huovinen, Peter F. Kolb, Ulrich W. Heinz, Vesa Ruuskanen and Sergei Voloshin,
``Radial and elliptic flow at RHIC: Further predictions,"
Phys. Lett. B 503, 58-64 (2001); doi:10.1016/S0370-2693(01)00219-2

107. Peter F. Kolb, Pasi Huovinen, Ulrich W. Heinz and Henning Heiselberg,
``Elliptic flow at SPS and RHIC: From kinetic transport to hydrodynamics,"
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108. Pasi Huovinen and Madappa Prakash,
``Baryonic contributions to e+ e- yields in a hydrodynamic model of Pb + Au collisions at the SPS,"
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110. Pasi Huovinen, Vesa Ruuskanen and Josef Sollfrank,
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111. Pasi Huovinen, Vesa Ruuskanen and Josef Sollfrank,
``Dependence of lepton pair emission on EoS and initial state,"
Nucl. Phys. A 638, 503c (1998); doi:10.1016/S0375-9474(98)00344-3

112. Josef Sollfrank, Pasi Huovinen and Vesa Ruuskanen,
``Mass number scaling in ultrarelativistic nuclear collisions from a hydrodynamical approach,"
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113. Josef Sollfrank, Pasi Huovinen and Vesa Ruuskanen,
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114. Josef Sollfrank, Pasi Huovinen, Markku Kataja, Vesa Ruuskanen, Madappa Prakash and Raju Venugopalan,
``Hydrodynamical description of 200-A/GeV/c S + Au collisions: Hadron and electromagnetic spectra,"
Phys. Rev. C55, 392-410 (1997); doi:10.1103/PhysRevC.55.392

Recent seminars (2016--2020):

- virtual BNL NT/RIKEN seminar, Brookhaven National Laboratory, NY, USA, August 28, 2020
- Nuclear Physics Seminar, Goethe Universität, Frankfurt, Germany, December 12, 2019
- QCD seminar, University of Jyväskylä, Jyväskylä, Finland, June 7, 2019
- Transport group meeting, Goethe Universität, Frankfurt, Germany, June 21, 2018
- Nuclear Physics Seminar, Brookhaven National Laboratory, NY, USA, April 24, 2018
- Transport group meeting, Goethe Universität, Frankfurt, Germany, October 26, 2017
- Institute Seminar, Uniwersytet Wrocławski, Wrocław, Poland, October 6, 2017

- IPB Colloquium, Institute of Physics Belgrade, Belgrade, Serbia, June 28, 2017
- Nuclear Physics Seminar, Brookhaven National Laboratory, NY, USA, June 19, 2017
- Nuclear Physics seminar, University of Jyväskylä, Finland, June 9, 2017
- Nuclear Physics Colloquium, Goethe Universität, Frankfurt, Germany, March 28, 2017
- Nuclear Physics seminar, University of Jyväskylä, Finland, January 12, 2017
- Seminar in Hadronic Physics, McGill University, Montreal, Canada, November 22, 2016
- Nuclear Physics Seminar, Brookhaven National Laboratory, NY, USA, Nov 15, 2016
- Transport group meeting, Goethe Universität, Frankfurt, Germany, June 16, 2016
- Institute Seminar, Uniwersytet Wrocławski, Wrocław, Poland, May 6, 2016
- Nuclear Physics seminar, University of Jyväskylä, Finland, January 12, 2016

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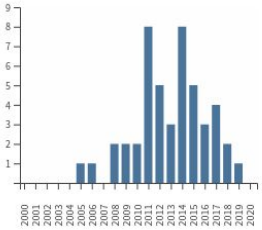
Article Group for: Huovinen, Pasi

Timespan=2005-2020. Indexes=BKCI-S, ESCI, SSCI, BKCI-SSH, SCI-EXPANDED, IC, A&HCI, CPCI-SSH, CPCI-S, CCR-EXPANDED.

Total Publications by Year



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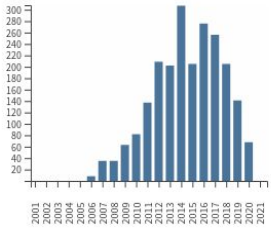

Results found:	**47**
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Average Citations per Item:	**47.43**
h-index:	**23**

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		276	256	205	141	68	2229	148.60
1.	**Title:** Shape of the quark gluon plasma droplet reflected in the high-p(perpendicular to) data **By:** Djordjevic, Magdalena; Stojku, Stefan; Djordjevic, Marko; et al. **Source:** PHYSICAL REVIEW C **Volume:** 100 **Issue:** 3 **Article Number:** 031901 **Published:** SEP 12 2019	0	0	0	0	1	1	0.50
2.	**Title:** Hadron resonance gas with repulsive interactions and fluctuations of conserved charges **By:** Huovinen, Pasi; Petreczky, Peter **Source:** PHYSICS LETTERS B **Volume:** 777 **Pages:** 125-130 **Published:** FEB 10 2018	0	0	8	14	2	24	8.00
3.	**Title:** HYDRODYNAMICS OF QCD MATTER **By:** Huovinen, Pasi **Conference:** International Meeting on Excited QCD **Location:** SERBIA **Date:** MAR 11-15, 2018 **Source:** ACTA PHYSICA POLONICA B PROCEEDINGS SUPPLEMENT **Volume:** 11 **Issue:** 3 **Pages:** 569-575 **Published:** 2018	0	0	0	0	0	0	0.00
4.	**Title:** Effects of rho-meson width on pion distributions in heavy-ion collisions **By:** Huovinen, Pasi; Lo, Pok Man; Marczenko, Michal; et al. **Source:** PHYSICS LETTERS B **Volume:** 769 **Pages:** 509-512 **Published:** JUN 10 2017	0	2	9	5	2	18	4.50
5.	**Title:** Dynamical freeze-out criterion in a hydrodynamical description of Au plus Au collisions at root s(NN)=200 GeV and Pb plus Pb collisions at root s(NN)=2760 GeV **By:** Ahmad, Saeed; Holopainen, Hannu; Huovinen, Pasi **Source:** PHYSICAL REVIEW C **Volume:** 95 **Issue:** 5 **Article Number:** 054911 **Published:** MAY 19 2017	0	0	1	1	0	2	0.50
6.	**Title:** Hydrodynamic flow in heavy-ion collisions at RHIC and LHC **By:** Huovinen, P. **Edited by:** Galper, A; Petrukhin, A; Taranenko, A; et al. **Conference:** 2nd International Conference on Particle Physics and Astrophysics (ICPPA) **Location:** Moscow, RUSSIA **Date:** OCT 11-14, 2016 **Sponsor(s):** Natl Res Nucl Univ MEPhI **Source:** INTERNATIONAL CONFERENCE ON PARTICLE PHYSICS AND ASTROPHYSICS **Book Series:** Journal of Physics Conference Series **Volume:** 798 **Article Number:** UNSP 012063 **Published:** 2017	0	0	1	0	0	1	0.25
7.	**Title:** FREEZE-OUT AT CONSTANT KNUDSEN NUMBER IN EVENT-BY-EVENT HYDRODYNAMICS **By:** Huovinen, Pasi; Holopainen, Hannu **Conference:** Critical Point and Onset of Deconfinement 2016 and Working Group Meeting of COST Action MP1304 **Location:** Wroclaw, POLAND **Date:** MAY 30-JUN 04, 2016 **Source:** ACTA PHYSICA POLONICA B PROCEEDINGS SUPPLEMENT **Volume:** 10 **Issue:** 3 **Pages:** 913-914 **Published:** 2017	0	0	0	0	0	0	0.00
8.	**Title:** Violation of mass ordering for multi-strange hadrons at RHIC and LHC **By:** Takeuchi, Shiori; Murase, Koichi; Hirano, Tetsufumi; et al. **Conference:** 25th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions **Location:** Sci Council Japan, Kobe, JAPAN **Date:** SEP 27-OCT 03, 2015 **Sponsor(s):** Phys Soc Japan; Univ Tokyo, Sch Sci,	0	2	0	0	0	2	0.40

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		276	256	205	141	68	2229	148.60
	Ctr Nucl Study; RIKEN Nishina Ctr **Source:** NUCLEAR PHYSICS A **Volume:** 956 **Pages:** 457-460 **Published:** DEC 2016							
9.	**Title:** Effects of EoS in viscous hydro plus cascade model for the RHIC Beam Energy Scan **By:** Karpenko, Iu.; Bleicher, M.; Huovinen, P.; et al. **Conference:** 25th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions **Location:** Sci Council Japan, Kobe, JAPAN **Date:** SEP 27-OCT 03, 2015 **Sponsor(s):** Phys Soc Japan; Univ Tokyo, Sch Sci, Ctr Nucl Study; RIKEN Nishina Ctr **Source:** NUCLEAR PHYSICS A **Volume:** 956 **Pages:** 834-837 **Published:** DEC 2016	0	2	1	0	1	4	0.80
10.	**Title:** Estimating eta/s of QCD matter at high baryon densities **By:** Karpenko, Iu.; Bleicher, M.; Huovinen, P.; et al. **Edited by:** AlvarezCastillo, D; Blaschke, D; Kekelidze, V; et al. **Conference:** 15th International Conference on Strangeness in Quark Matter (SQM) **Location:** Dubna, RUSSIA **Date:** JUL 06-11, 2015 **Sponsor(s):** Joint Inst Nucl Res, Veksler & Baldin Lab High Energy Phys **Source:** 15TH INTERNATIONAL CONFERENCE ON STRANGENESS IN QUARK MATTER (SQM2015) **Book Series:** Journal of Physics Conference Series **Volume:** 668 **Article Number:** 012063 **Published:** 2016	0	0	0	1	0	1	0.20

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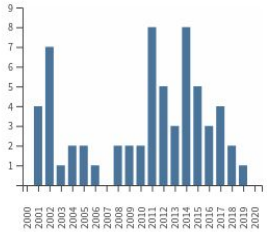

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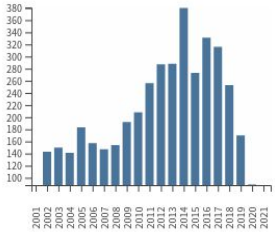

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		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	**316**	**253**	**170**	**89**	**4238**	**176.58**
11.	**Title:** Effects of hadronic rescattering on multistrange hadrons in high-energy nuclear collisions **By:** Takeuchi, Shiori; Murase, Koichi; Hirano, Tetsufumi; et al. **Source:** PHYSICAL REVIEW C **Volume:** 92 **Issue:** 4 **Article Number:** 044907 **Published:** OCT 16 2015	10	7	8	1	3	29	4.83
12.	**Title:** Estimation of the shear viscosity at finite net-baryon density from A plus A collision data at root s(NN)=7.7-200 GeV **By:** Karpenko, Iu. A.; Huovinen, P.; Petersen, H.; et al. **Source:** PHYSICAL REVIEW C **Volume:** 91 **Issue:** 6 **Article Number:** 064901 **Published:** JUN 1 2015	18	20	10	6	8	64	10.67
13.	**Title:** Systematic investigation of negative Cooper-Frye contributions in heavy ion collisions using coarse-grained molecular dynamics **By:** Oliinychenko, D.; Huovinen, P.; Petersen, H. **Source:** PHYSICAL REVIEW C **Volume:** 91 **Issue:** 2 **Article Number:** UNSP 024906 **Published:** FEB 17 2015	0	3	2	0	0	6	1.00
14.	**Title:** 3+1 dimensional viscous hydrodynamics at high baryon densities **By:** Karpenko, Iu.; Bleicher, M.; Huovinen, P.; et al. **Conference:** 6th Workshop on Young Scientists on the Physics of Ultrarelativistic Nucleus-Nucleus Collisions (Hot Quarks) **Location:** Las Negras, SPAIN **Date:** SEP 21-28, 2014 **Sponsor(s):** Brookhaven Natl Lab; CPAN; Czech Sci Fdn; European Lab Particle Phys; European Res Council; ExtreMe Matter Inst; Helmholtz Assoc & GSI; Helmholtz Int Ctr FAIR; Natl Sci Fdn; ASCR, Nucl Phys Inst; Patronato Alhambra Generalife; Univ Granada **Source:** HOT QUARKS 2014: WORKSHOP FOR YOUNG SCIENTISTS ON THE PHYSICS OF ULTRARELATIVISTIC NUCLEUS-NUCLEUS COLLISIONS **Book Series:** Journal of Physics Conference Series **Volume:** 612 **Article Number:** 012052 **Published:** 2015	0	0	0	0	0	0	0.00
15.	**Title:** Cooper-Frye Negative Contributions in a Coarse-Grained Transport Approach **By:** Oliinychenko, D.; Huovinen, P.; Petersen, H. **Conference:** 3rd Workshop on FAIRNESS - FAIR Next Generation ScientistS **Location:** Vietri sul Mare, ITALY **Date:** SEP 22-27, 2014 **Source:** FAIRNESS 2014: FAIR NEXT GENERATION SCIENTISTS 2014 **Book Series:** Journal of Physics Conference Series **Volume:** 599 **Article Number:** 012017 **Published:** 2015	0	2	0	0	0	2	0.33
16.	**Title:** Equation of state at finite net-baryon density using Taylor coefficients up to sixth order **By:** Huovinen, Pasi; Petreczky, Peter; Schmidt, Christian **Source:** NUCLEAR PHYSICS A **Volume:** 931 **Pages:** 769-773 **Published:** NOV 2014	2	0	1	0	0	3	0.43
17.	**Title:** A 3+1 dimensional viscous hydrodynamic code for relativistic heavy ion collisions **By:** Karpenko, Iu; Huovinen, P.; Bleicher, M. **Source:** COMPUTER PHYSICS COMMUNICATIONS **Volume:** 185 **Issue:** 11 **Pages:** 3016-3027 **Published:** NOV 2014	14	16	14	10	4	65	9.29

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	316	253	170	89	4238	176.58
18.	**Title:** Influence of temperature-dependent shear viscosity on elliptic flow at backward and forward rapidities in ultrarelativistic heavy-ion collisions **By:** Molnar, E.; Holopainen, H.; Huovinen, P.; et al. **Source:** PHYSICAL REVIEW C **Volume:** 90 **Issue:** 4 **Article Number:** 044904 **Published:** OCT 7 2014	12	4	4	1	0	26	3.71
19.	**Title:** Fluid dynamical response to initial state fluctuations **By:** Niemi, H.; Denicol, G. S.; Holopainen, H.; et al. **Source:** NUCLEAR PHYSICS A **Volume:** 926 **Pages:** 109-114 **Published:** JUN 2014	0	0	0	0	0	2	0.29
20.	**Title:** The eta/s of hadrons out of chemical equilibrium **By:** Wiranata, A.; Prakash, M.; Huovinen, P.; et al. **Conference:** 30th Winter Workshop on Nuclear Dynamics (WWND) **Location:** Galveston, TX **Date:** APR 06-12, 2014 **Source:** 30TH WINTER WORKSHOP ON NUCLEAR DYNAMICS (WWND2014) **Book Series:** Journal of Physics Conference Series **Volume:** 535 **Article Number:** UNSP 012017 **Published:** 2014	1	0	0	0	0	2	0.29

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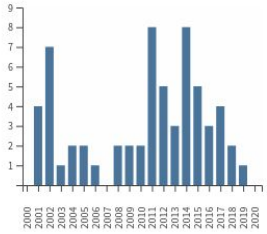

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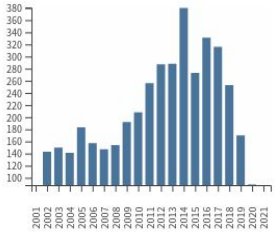

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		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	**316**	**253**	**170**	**89**	**4238**	**176.58**
21.	**Title:** Dynamical freeze-out criterion in event-by-event hydrodynamics **By:** Holopainen, Hannu; Huovinen, Pasi **Edited by:** Evans, D; Hands, S; Lietava, R; et al. **Conference:** 14th International Conference on Strangeness in Quark Matter (SQM) **Location:** Univ Birmingham, Birmingham, ENGLAND **Date:** JUL 22-27, 2013 **Source:** 14TH INTERNATIONAL CONFERENCE ON STRANGENESS IN QUARK MATTER (SQM2013) **Book Series:** Journal of Physics Conference Series **Volume:** 509 **Article Number:** 012114 **Published:** 2014	1	1	0	0	0	3	0.43
22.	**Title:** Beam energy scan using a viscous hydro cascade model **By:** Karpenko, Iu. A.; Bleicher, M.; Huovinen, P.; et al. **Edited by:** Evans, D; Hands, S; Lietava, R; et al. **Conference:** 14th International Conference on Strangeness in Quark Matter (SQM) **Location:** Univ Birmingham, Birmingham, ENGLAND **Date:** JUL 22-27, 2013 **Source:** 14TH INTERNATIONAL CONFERENCE ON STRANGENESS IN QUARK MATTER (SQM2013) **Book Series:** Journal of Physics Conference Series **Volume:** 509 **Article Number:** 012067 **Published:** 2014	0	1	0	0	0	6	0.86
23.	**Title:** 3+1 dimensional viscous hydrodynamics at high baryon densities **By:** Karpenko, Iu A.; Bleicher, M.; Huovinen, P.; et al. **Conference:** 2nd Workshop on FAIR NExt Generation of ScientistS (FAIRNESS) **Location:** Berlin, GERMANY **Date:** SEP 16-21, 2013 **Source:** FAIRNESS 2013: FAIR NEXT GENERATION OF SCIENTISTS 2013 **Book Series:** Journal of Physics Conference Series **Volume:** 503 **Article Number:** 012040 **Published:** 2014	1	2	0	0	1	8	1.14
24.	**Title:** HYDRODYNAMICS AT RHIC AND LHC: WHAT HAVE WE LEARNED? **By:** Huovinen, Pasi **Source:** INTERNATIONAL JOURNAL OF MODERN PHYSICS E **Volume:** 22 **Issue:** 12 **Article Number:** 1330029 **Published:** DEC 2013	8	8	9	4	0	44	5.50
25.	**Title:** Event-by-event distributions of azimuthal asymmetries in ultrarelativistic heavy-ion collisions **By:** Niemi, H.; Denicol, G. S.; Holopainen, H.; et al. **Source:** PHYSICAL REVIEW C **Volume:** 87 **Issue:** 5 **Article Number:** 054901 **Published:** MAY 2 2013	26	26	17	11	7	141	17.63
26.	**Title:** Integrated dynamical approach to relativistic heavy ion collisions **By:** Hirano, T.; Huovinen, P.; Murase, K.; et al. **Source:** PROGRESS IN PARTICLE AND NUCLEAR PHYSICS **Volume:** 70 **Pages:** 108-158 **Published:** MAY 2013	10	13	6	9	0	63	7.88
27.	**Title:** Equation of state at non-zero baryon density based on lattice QCD **By:** Huovinen, Pasi; Petreczky, Peter; Schmidt, Christian **Source:** CENTRAL EUROPEAN JOURNAL OF PHYSICS **Volume:** 10 **Issue:** 6 **Pages:** 1385-1387 **Published:** DEC 2012	0	0	0	0	0	6	0.67

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	316	253	170	89	4238	176.58
28.	**Title:** Particlization in hybrid models **By:** Huovinen, Pasi; Petersen, Hannah **Source:** EUROPEAN PHYSICAL JOURNAL A **Volume:** 48 **Issue:** 11 **Article Number:** 171 **Published:** NOV 2012	8	20	10	5	2	70	7.78
29.	**Title:** Influence of a temperature-dependent shear viscosity on the azimuthal asymmetries of transverse momentum spectra in ultrarelativistic heavy-ion collisions **By:** Niemi, H.; Denicol, G. S.; Huovinen, P.; et al. **Source:** PHYSICAL REVIEW C **Volume:** 86 **Issue:** 1 **Article Number:** 014909 **Published:** JUL 27 2012	18	6	12	10	2	102	11.33
30.	**Title:** Dynamical freeze-out in event-by-event hydrodynamics **By:** Holopainen, Hannu; Huovinen, Pasi **Conference:** 28th Winter Workshop on Nuclear Dynamics (WWND) **Location:** PR **Date:** APR 07-14, 2012 **Source:** 28TH WINTER WORKSHOP ON NUCLEAR DYNAMICS 2012 **Book Series:** Journal of Physics Conference Series **Volume:** 389 **Article Number:** 012018 **Published:** 2012	2	1	1	0	0	11	1.22

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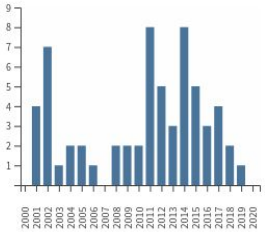
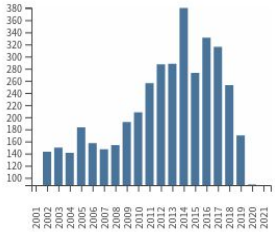
Total Publications by Year



Sum of Times Cited by Year



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Average Citations per Item:	**62.32**
h-index:	**31**

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	**316**	**253**	**170**	**89**	**4238**	**176.58**
31.	**Title:** EFFECT OF TEMPERATURE-DEPENDENT eta/s ON FLOW ANISOTROPIES **By:** Niemi, H.; Denicol, G. S.; Huovinen, P.; et al. **Edited by:** Praszalowicz, M **Conference:** Conference on Strangeness in Quark Matter **Location:** Krakow, POLAND **Date:** SEP 18-24, 2011 **Sponsor(s):** Polish Acad Arts & Sci; Jan Kochanowski Univ; Henryk Niewodniczanski Inst Nucl Phys; Jagiellonian Univ; Cracow Univ Technol; ExtreMe Matter Inst EMMI; Helmholtz Int Ctr FAIR **Source:** STRANGENESS IN QUARK MATTER 2011 **Book Series:** Acta Physica Polonica B Proceedings Supplement-Series **Volume:** 5 **Issue:** 2 **Pages:** 305-+ **Published:** 2012	0	1	0	0	0	3	0.33
32.	**Title:** Equation of state at finite baryon density based on lattice QCD **By:** Huovinen, Pasi; Petreczky, Peter **Source:** JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS **Volume:** 38 **Issue:** 12 **Article Number:** 124103 **Published:** DEC 2011	0	0	1	1	0	14	1.40
33.	**Title:** Sensitivity of the elliptic flow to a temperature-dependent shear viscosity-to-entropy density ratio **By:** Niemi, H.; Denicol, G. S.; Huovinen, P.; et al. **Source:** JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS **Volume:** 38 **Issue:** 12 **Article Number:** 124050 **Published:** DEC 2011	0	0	0	0	0	3	0.30
34.	**Title:** The QGP shear viscosity - elusive goal or just around the corner? **By:** Shen, Chun; Bass, Steffen A.; Hirano, Tetsufumi; et al. **Source:** JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS **Volume:** 38 **Issue:** 12 **Article Number:** 124045 **Published:** DEC 2011	2	2	3	1	2	35	3.50
35.	**Title:** Quark polarization in a viscous quark-gluon plasma **By:** Huang, Xu-Guang; Huovinen, Pasi; Wang, Xin-Nian **Source:** PHYSICAL REVIEW C **Volume:** 84 **Issue:** 5 **Article Number:** 054910 **Published:** NOV 21 2011	11	8	5	8	4	46	4.60
36.	**Title:** Radial and elliptic flow in Pb plus Pb collisions at energies available at the CERN Large Hadron Collider from viscous hydrodynamics **By:** Shen, Chun; Heinz, Ulrich; Huovinen, Pasi; et al. **Source:** PHYSICAL REVIEW C **Volume:** 84 **Issue:** 4 **Article Number:** 044903 **Published:** OCT 7 2011	26	16	10	11	3	169	16.90
37.	**Title:** Elliptic flow in Pb+Pb collisions at root S-NN=2.76 TeV: Hybrid model assessment of the first data **By:** Hirano, Tetsufumi; Huovinen, Pasi; Nara, Yasushi **Source:** PHYSICAL REVIEW C **Volume:** 84 **Issue:** 1 **Article Number:** 011901 **Published:** JUL 7 2011	2	8	4	1	1	46	4.60

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	316	253	170	89	4238	176.58
38.	**Title:** Influence of Shear Viscosity of Quark-Gluon Plasma on Elliptic Flow in Ultrarelativistic Heavy-Ion Collisions **By:** Niemi, H.; Denicol, G. S.; Huovinen, P.; et al. **Source:** PHYSICAL REVIEW LETTERS **Volume:** 106 **Issue:** 21 **Article Number:** 212302 **Published:** MAY 26 2011	20	17	14	7	3	179	17.90
39.	**Title:** Elliptic flow in U+U collisions at root s(NN)=200 GeV and in Pb+Pb collisions at root s(NN)=2.76 TeV: Prediction from a hybrid approach **By:** Hirano, Tetsufumi; Huovinen, Pasi; Nara, Yasushi **Source:** PHYSICAL REVIEW C **Volume:** 83 **Issue:** 2 **Article Number:** 021902 **Published:** FEB 10 2011	2	6	4	3	0	55	5.50
40.	**Title:** Systematic parameter study of hadron spectra and elliptic flow from viscous hydrodynamic simulations of Au plus Au collisions at root s(NN)=200 GeV **By:** Shen, Chun; Heinz, Ulrich; Huovinen, Pasi; et al. **Source:** PHYSICAL REVIEW C **Volume:** 82 **Issue:** 5 **Article Number:** 054904 **Published:** NOV 12 2010	16	8	5	3	2	113	10.27

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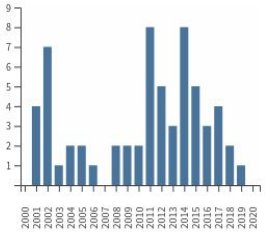
Article Group for: Huovinen, Pasi

Timespan=All years. Indexes=BKCI-S, ESCI, SSCI, BKCI-SSH, SCI-EXPANDED, IC, A&HCI, CPCI-SSH, CPCI-S, CCR-EXPANDED.

Total Publications by Year



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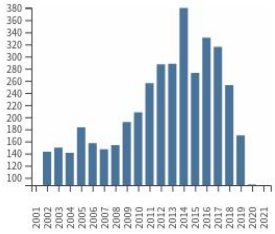

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Sum of the Times Cited:	**4238**
Average Citations per Item:	**62.32**
h-index:	**31**

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	**316**	**253**	**170**	**89**	**4238**	**176.58**
41.	**Title:** QCD equation of state and hadron resonance gas **By:** Huovinen, Pasi; Petreczky, Peter **Source:** NUCLEAR PHYSICS A **Volume:** 837 **Issue:** 1-2 **Pages:** 26-53 **Published:** JUN 1 2010	47	30	33	20	10	357	32.45
42.	**Title:** Applicability of viscous hydrodynamics at RHIC **By:** Molnar, Denes; Huovinen, Pasi **Conference:** 21st International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2009) **Location:** Knoxville, TN **Date:** MAR 30-APR 04, 2009 **Source:** NUCLEAR PHYSICS A **Volume:** 830 **Pages:** 475C-478C **Published:** NOV 1 2009	1	1	1	0	0	11	0.92
43.	**Title:** Applicability of causal dissipative hydrodynamics to relativistic heavy ion collisions **By:** Huovinen, Pasi; Molnar, Denes **Source:** PHYSICAL REVIEW C **Volume:** 79 **Issue:** 1 **Article Number:** 014906 **Published:** JAN 2009	6	6	5	3	3	106	8.83
44.	**Title:** Dissipative effects from transport and viscous hydrodynamics **By:** Molnar, Denes; Huovinen, Pasi **Source:** JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS **Volume:** 35 **Issue:** 10 **Article Number:** 104125 **Published:** OCT 2008	1	4	0	1	2	61	4.69
45.	**Title:** Chemical freeze-out temperature in the hydrodynamical description of Au+Au collisions at root S-NN=200 GeV **By:** Huovinen, P. **Source:** EUROPEAN PHYSICAL JOURNAL A **Volume:** 37 **Issue:** 1 **Pages:** 121-128 **Published:** JUL 2008	2	2	2	1	2	43	3.31
46.	**Title:** Hydrodynamic models for heavy ion collisions **By:** Huovinen, P.; Ruuskanen, R. V. **Source:** ANNUAL REVIEW OF NUCLEAR AND PARTICLE SCIENCE **Book Series:** Annual Review of Nuclear and Particle Science **Volume:** 56 **Pages:** 163-206 **Published:** 2006	6	11	3	3	3	220	14.67
47.	**Title:** Anisotropy of flow and the order of phase transition in relativistic heavy ion collisions **By:** Huovinen, P **Source:** NUCLEAR PHYSICS A **Volume:** 761 **Issue:** 3-4 **Pages:** 296-312 **Published:** NOV 14 2005	3	0	1	0	0	62	3.88
48.	**Title:** Dissipation and elliptic flow at relativistic energies **By:** Molnar, D; Huovinen, P **Source:** PHYSICAL REVIEW LETTERS **Volume:** 94 **Issue:** 1 **Article Number:** 012302 **Published:** JAN 14 2005	1	1	1	0	0	54	3.38
49.	**Title:** Semihard scattering unraveled from collective dynamics by two-pion azimuthal correlations in 158A GeV/c Pb+Au collisions **By:** Agakichiev, G; Appelshauser, H; Baur, R; et al. **Group Author(s):** CERES Collaboration	0	2	0	2	0	55	3.24

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	316	253	170	89	4238	176.58
	Source: PHYSICAL REVIEW LETTERS **Volume:** 92 **Issue:** 3 **Article Number:** 032301 **Published:** JAN 23 2004							
50.	**Title:** Rate equation network for baryon production in high energy nuclear collisions **By:** Huovinen, P; Kapusta, J **Source:** PHYSICAL REVIEW C **Volume:** 69 **Issue:** 1 **Article Number:** 014902 **Published:** JAN 2004	0	0	1	0	0	19	1.12

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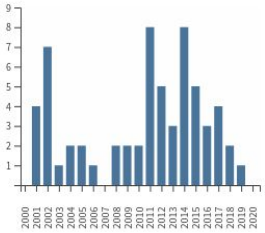
Timespan=All years. Indexes=BKCI-S, ESCI, SSCI, BKCI-SSH, SCI-EXPANDED, IC, A&HCI, CPCI-SSH, CPCI-S, CCR-EXPANDED.

Total Publications by Year



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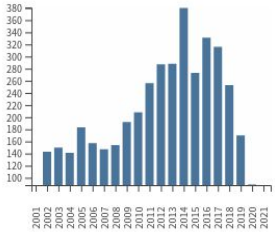

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		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	**316**	**253**	**170**	**89**	**4238**	**176.58**
51.	**Title:** Results of the hydrodynamics approach to heavy ion collisions **By:** Huovinen, P **Conference:** 16th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions **Location:** NANTES, FRANCE **Date:** JUL 18-24, 2002 **Source:** NUCLEAR PHYSICS A **Volume:** 715 **Special Issue:** SI **Pages:** 299C-308C **Published:** MAR 10 2003	0	0	0	0	0	25	1.39
52.	**Title:** Points of epsilon-differentiability of Lipschitz functions from R-n to Rn-1 **By:** De Pauw, T; Huovinen, P **Source:** BULLETIN OF THE LONDON MATHEMATICAL SOCIETY **Volume:** 34 **Pages:** 539-550 **Part:** 5 **Published:** SEP 2002	1	0	0	1	0	9	0.47
53.	**Title:** Dileptons and photons from coarse-grained microscopic dynamics and hydrodynamics compared to experimental data **By:** Huovinen, P; Belkacem, M; Ellis, PJ; et al. **Source:** PHYSICAL REVIEW C **Volume:** 66 **Issue:** 1 **Article Number:** 014903 **Published:** JUL 2002	5	3	2	1	2	31	1.63
54.	**Title:** Hydrodynamics at RHIC **By:** Huovinen, P **Conference:** Cracow Epiphany Conference on Quarks and Gluons in Extreme Conditions **Location:** KRAKOW, POLAND **Date:** JAN 03-06, 2002 **Sponsor(s):** Polish State Comm Sci Res; Polish Acad Sci, Comm Phys **Source:** ACTA PHYSICA POLONICA B **Volume:** 33 **Issue:** 6 **Pages:** 1635-1650 **Published:** JUN 2002	0	0	0	0	0	10	0.53
55.	**Title:** Photon emission in heavy ion collisions at the CERN SPS **By:** Huovinen, P; Ruuskanen, PV; Rasanen, SS **Source:** PHYSICS LETTERS B **Volume:** 535 **Issue:** 1-4 **Pages:** 109-116 **Article Number:** PII S0370-2693(02)01721-5 **Published:** MAY 23 2002	0	0	1	0	1	57	3.00
56.	**Title:** Is there elliptic flow without transverse flow? **By:** Huovinen, P; Kolb, PF; Heinz, U **Conference:** 15th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (QM 2001) **Location:** LONG ISL CITY, NEW YORK **Date:** JAN 15-20, 2001 **Source:** NUCLEAR PHYSICS A **Volume:** 698 **Pages:** 475C-478C **Published:** FEB 11 2002	0	0	0	0	0	32	1.68
57.	**Title:** Transverse expansion and high p(T) azimuthal asymmetry at RHIC **By:** Gyulassy, M; Vitev, I; Wang, XN; et al. **Source:** PHYSICS LETTERS B **Volume:** 526 **Issue:** 3-4 **Pages:** 301-308 **Published:** FEB 7 2002	2	1	0	0	0	84	4.42
58.	**Title:** Hydrodynamical analysis of flow at RHIC **By:** Huovinen, P **Edited by:** Norman, E; Schroeder, L; Wozniak, G	0	0	0	0	0	1	0.05

		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	316	253	170	89	4238	176.58
	Conference: International Nuclear Physics Conference **Location:** UNIV CALIF BERKELEY, BERKELEY, CA **Date:** JUL 30-AUG 03, 2001 **Sponsor(s):** Int Union Pure & Appl Phys; Lawrence Berkeley Natl Lab; Argonne Natl Lab; Brookhaven Natl Lab; US DOE; Thomas Jefferson Natl Lab; Natl Sci Fdn; Los Alamos Natl Lab; Lawrence Livermore Natl Lab; JM Nitschke Fund E Bay Community Fdn **Source:** NUCLEAR PHYSICS IN THE 21ST CENTURY **Book Series:** AIP Conference Proceedings **Volume:** 610 **Pages:** 571-575 **Published:** 2002							
59.	**Title:** Centrality dependence of multiplicity, transverse energy, and elliptic flow from hydrodynamics **By:** Kolb, PF; Heinz, U; Huovinen, P; et al. **Source:** NUCLEAR PHYSICS A **Volume:** 696 **Issue:** 1-2 **Pages:** 197-215 **Published:** DEC 17 2001	4	6	2	5	3	280	14.00
60.	**Title:** Radial and elliptic flow at RHIC: further predictions **By:** Huovinen, P; Kolb, PF; Heinz, U; et al. **Source:** PHYSICS LETTERS B **Volume:** 503 **Issue:** 1-2 **Pages:** 58-64 **Published:** MAR 22 2001	29	28	18	11	9	693	34.65

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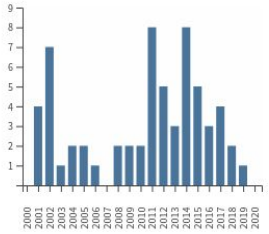
Article Group for: Huovinen, Pasi

Timespan=All years. Indexes=BKCI-S, ESCI, SSCI, BKCI-SSH, SCI-EXPANDED, IC, A&HCI, CPCI-SSH, CPCI-S, CCR-EXPANDED.

Total Publications by Year



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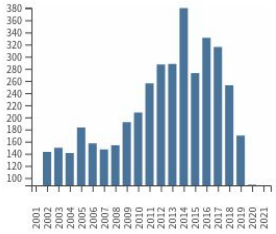

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		2016	2017	2018	2019	2020	Total	Average Citations per Year
		331	**316**	**253**	**170**	**89**	**4238**	**176.58**
61.	**Title:** Elliptic flow at SPS and RHIC: from kinetic transport to hydrodynamics **By:** Kolb, PF; Huovinen, P; Heinz, U; et al. **Source:** PHYSICS LETTERS B **Volume:** 500 **Issue:** 3-4 **Pages:** 232-240 **Published:** FEB 22 2001	11	9	11	5	4	374	18.70
62.	**Title:** A nicely behaved singular integral on a purely unrectifiable set **By:** Huovinen, P **Source:** PROCEEDINGS OF THE AMERICAN MATHEMATICAL SOCIETY **Volume:** 129 **Issue:** 11 **Pages:** 3345-3351 **Published:** 2001	0	2	1	1	1	15	0.75
63.	**Title:** Baryonic contributions to e(+)e(-) yields in a hydrodynamic model of Pb + Au collisions at the SPS **By:** Huovinen, P; Prakash, M **Conference:** 14th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions **Location:** TURIN, ITALY **Date:** MAY 10-15, 1999 **Sponsor(s):** Ist Nazl Fica Nucleare; Univ Torino; Univ Piemonte Orientale; Regione Piemonte; Provincia Torino; Compagnia San Paolo; Cassa Risparmio Torino; Caen; Hamamatsu; Canberra; Tecnol Avanzate **Source:** NUCLEAR PHYSICS A **Volume:** 661 **Pages:** 522C-525C **Published:** DEC 27 1999	0	0	0	0	0	2	0.09
64.	**Title:** Sensitivity of electromagnetic spectra to equation of state and initial energy density in the Pb+Pb collisions at SPS **By:** Huovinen, P; Ruuskanen, PV; Sollfrank, J **Source:** NUCLEAR PHYSICS A **Volume:** 650 **Issue:** 2 **Pages:** 227-244 **Published:** APR 12 1999	0	0	0	0	0	34	1.55
65.	**Title:** e(+)e(-) yields in Pb+Au collisions at 158AGeV/c: assessment of baryonic contributions **By:** Huovinen, P; Prakash, M **Source:** PHYSICS LETTERS B **Volume:** 450 **Issue:** 1-3 **Pages:** 15-23 **Published:** MAR 18 1999	0	0	0	0	0	18	0.82
66.	**Title:** Mass number scaling in ultra-relativistic nuclear collisions from a hydrodynamical approach **By:** Sollfrank, J; Huovinen, P; Ruuskanen, PV **Source:** EUROPEAN PHYSICAL JOURNAL C **Volume:** 6 **Issue:** 3 **Pages:** 525-536 **Published:** JAN 1999	0	0	0	0	0	15	0.68
67.	**Title:** Dependence of lepton pair emission on EoS and initial state **By:** Huovinen, P; Ruuskanen, PV; Sollfrank, J **Conference:** 13th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (Quark Matter 97) **Location:** UNIV TSUKUBA, IBARAKI, JAPAN **Date:** DEC 01-05, 1997 **Sponsor(s):** Yamada Sci Fdn **Source:** NUCLEAR PHYSICS A **Volume:** 638 **Issue:** 1-2 **Pages:** 503C-506C **Published:** AUG 10 1998	0	0	0	0	0	2	0.09
68.	**Title:** Hydrodynamical description of 200A GeV/c S+Au collisions: Hadron and electromagnetic spectra **By:** Sollfrank, J; Huovinen, P; Kataja, M; et al. **Source:** PHYSICAL REVIEW C **Volume:** 55 **Issue:** 1 **Pages:** 392-410 **Published:** JAN 1997	2	8	11	3	1	199	8.29

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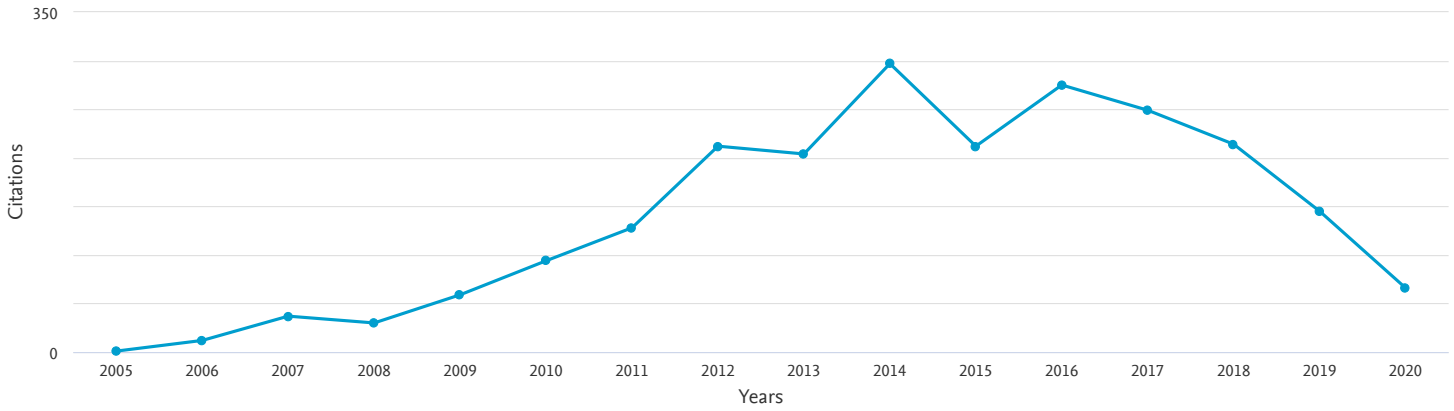

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2	Hadron resonance gas with repulsive interactions	2018																		0		0
3	Hadron resonance gas with repulsive interactions and fluctua...	2018															8	14	3	25		25
4	Temperature dependence of η/s: Uncertainties from the equati...	2018																		0		0
5	Hadron gas with repulsive mean field	2018																		0		0
6	Hydrodynamics of QCD matter	2018																		0		0
7	Effects of ρ-meson width on pion distributions in heavy-ion ...	2017														2	9	5	2	18		18

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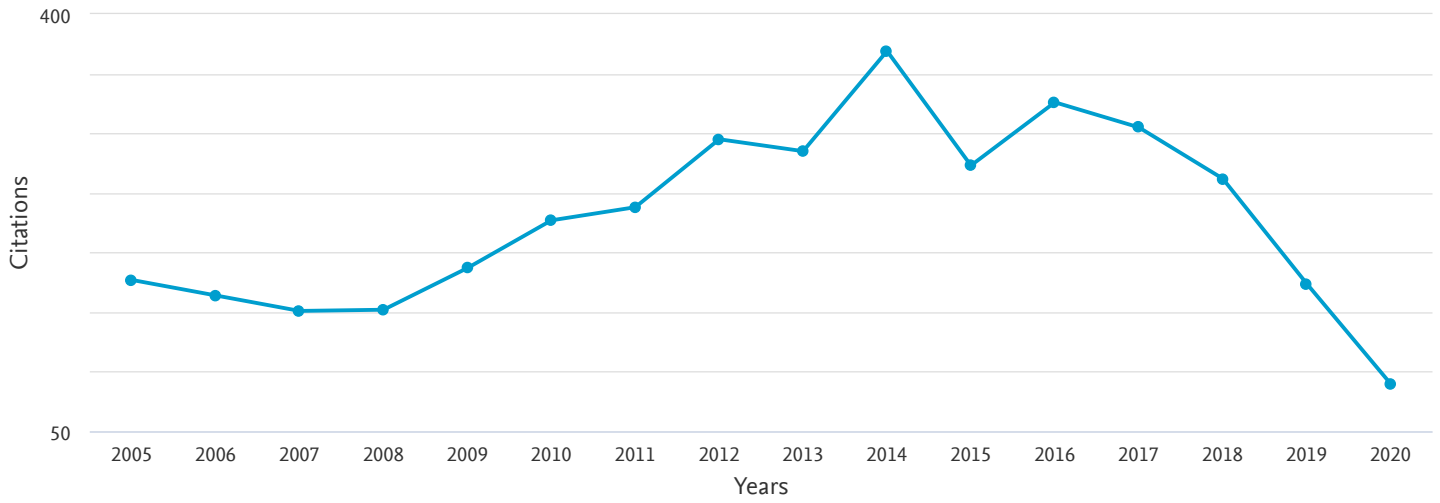

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	Documents	Citations	<2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Subtotal	>2020	Total
		Total	557	177	164	151	152	187	227	238	295	285	369	273	326	305	262	174	90	3675	0	4232
1	Shape of the quark gluon plasma droplet reflected in the hig...	2019																	1	1		1
2	Hadron resonance gas with repulsive interactions	2018																		0		0
3	Hadron resonance gas with repulsive interactions and fluctua...	2018															8	14	3	25		25
4	Temperature dependence of η/s: Uncertainties from the equati...	2018																		0		0
5	Hadron gas with repulsive mean field	2018																		0		0
6	Hydrodynamics of QCD matter	2018																		0		0
7	Effects of ρ-meson width on pion distributions in heavy-ion ...	2017														2	9	5	2	18		18

All works, excluding self citations of the candidate

		Documents	Citations	<2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Subtotal	>2020	Total
			Total	557	177	164	151	152	187	227	238	295	285	369	273	326	305	262	174	90	3675	0	4232
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☐	9	Hydrodynamic flow in heavy-ion collisions at RHIC and LHC	2017																		0		0
☐	10	Hadron resonance gas with repulsive interactions and baryon ...	2017																		0		0
☐	11	Freeze-out at constant Knudsen number in event-by-event hydr...	2017																		0		0
☐	12	Violation of mass ordering for multi-strange hadrons at RHIC...	2016														2				2		2
☐	13	Effects of EoS in viscous hydro + cascade model for the RHIC...	2016														2	1		1	4		4
☐	14	Estimating η/s of QCD matter at high baryon densities	2016																1		1		1
☐	15	Effects of hadronic rescattering on multistrange hadrons in ...	2015													9	6	7	1	2	25		25
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☐	23	Fluid dynamical response to initial state fluctuations	2014											1	1						2		2
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☐	26	Beam energy scan using a viscous hydro+cascade model	2014											1	1		1				3		3
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☐	29	Hydrodynamics at RHIC and LHC: What have we learned?	2013											7	10	8	7	8	4		44		44
☐	30	Event-by-event distributions of azimuthal asymmetries in ult...	2013										7	34	15	24	27	18	13	6	144		144
☐	31	Integrated dynamical approach to relativistic heavy ion coll...	2013										4	9	6	9	11	6	8		53		53
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38	Sensitivity of the elliptic flow to a temperature-dependent ...	2011								1		1								2		2
39	The QGP shear viscosity-elusive goal or just around the corn...	2011								3	8	7	6	4	2	2	3	1	2	38		38
40	Equation of state at finite baryon density based on lattice ...	2011								1	6	2	1				1	1		12		12
41	Quark polarization in a viscous quark-gluon plasma	2011									3	2	5	2	11	8	6	8	5	50		50
42	Radial and elliptic flow in Pb + Pb collisions at energies a...	2011								3	27	29	33	36	26	16	9	12	4	195		195
43	Elliptic flow in Pb+Pb collisions at √s<inf>NN</inf> = 2.76 ...	2011								4	6	6	10	5	2	8	4	1	1	47		47
44	Influence of shear viscosity of quark-gluon plasma on ellipt...	2011								7	32	22	36	19	19	18	14	7	4	178		178
45	Elliptic flow in U+U collisions at √s<inf>NN</inf>=200 GeV a...	2011								9	10	8	7	8	5	7	6	3		63		63
46	Systematic parameter study of hadron spectra and elliptic fl...	2010			1					15	14	12	23	15	15	8	6	4	1	114		114
47	QCD equation of state and hadron resonance gas	2010			1				17	39	40	37	48	30	47	29	33	21	10	352		352
48	On fluctuations of conserved charges : Lattice results versu...	2010							3	1	4	2	2							12		12
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50	Applicability of causal dissipative hydrodynamics to relativ...	2009						12	23	7	12	13	15	6	6	6	5	3	2	110		110
51	Dissipative effects from transport and viscous hydrodynamics	2008			1		1	10	17	5	6	3	7	3	2	4		1	1	61		61
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53	Hydrodynamic models for heavy ion collisions	2006				20	22	28	21	23	29	19	14	13	7	11	5	4	2	218		218
54	Anisotropy of flow and the order of phase transition in rela...	2005		1	9	17	7	6	6	3	2	3			3		1			58		58
55	Dissipation and elliptic flow at relativistic energies	2005		4	7	3	12	8	6	5	3		1	1		1	1			52		52
56	Semihard Scattering Unraveled from Collective Dynamics by Tw...	2004	7	14	7	8	5	3	4	1	2	2	2			3		1		52		59
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63	Photon emission in heavy ion collisions at the CERN SPS	2002	19	8	2	1	4	2	9	4		6	1	3			1		1	42		61
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66	Transverse expansion and high p<inf>T</inf> azimuthal asymme...	2002	52	15	3	3	1	2	6	3	3		4		2			1		43		95
67	Centrality dependence of multiplicity, transverse energy, an...	2001	58	23	17	16	17	24	22	24	22	7	13	8	4	6	2	5	4	214		272
68	Radial and elliptic flow at RHIC: Further predictions	2001	130	55	54	37	48	55	44	41	38	41	33	31	29	27	20	13	10	576		706
69	Elliptic flow at SPS and RHIC: From kinetic transport to hyd...	2001	109	34	40	26	22	24	25	12	8	18	12	10	11	8	11	5	5	271		380
70	Baryonic contributions to e⁺e⁻ yields ...	1999	3																	0		3
71	Sensitivity of electromagnetic spectra to equation of state ...	1999	17	2	2	1	1			4										10		27
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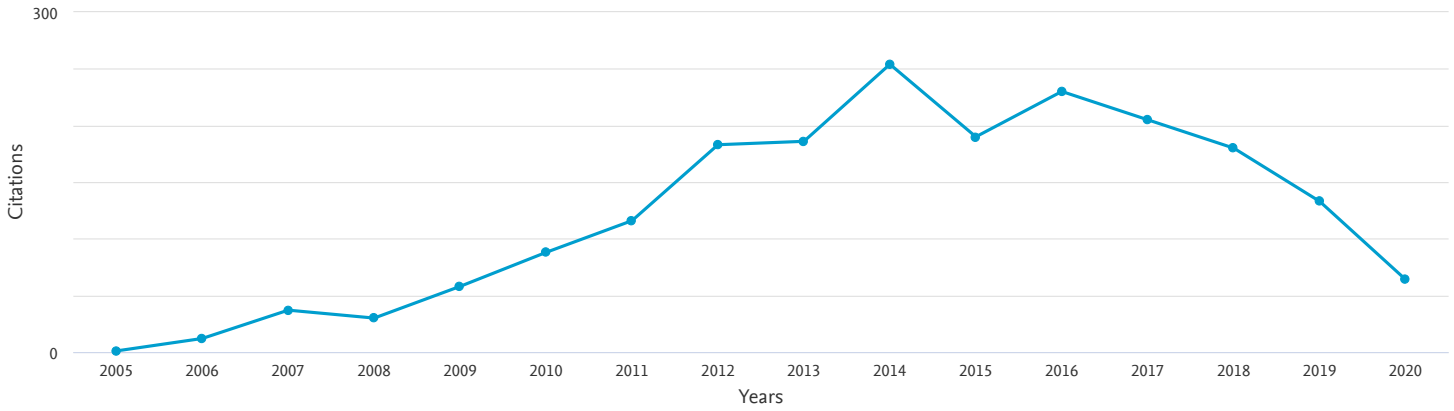

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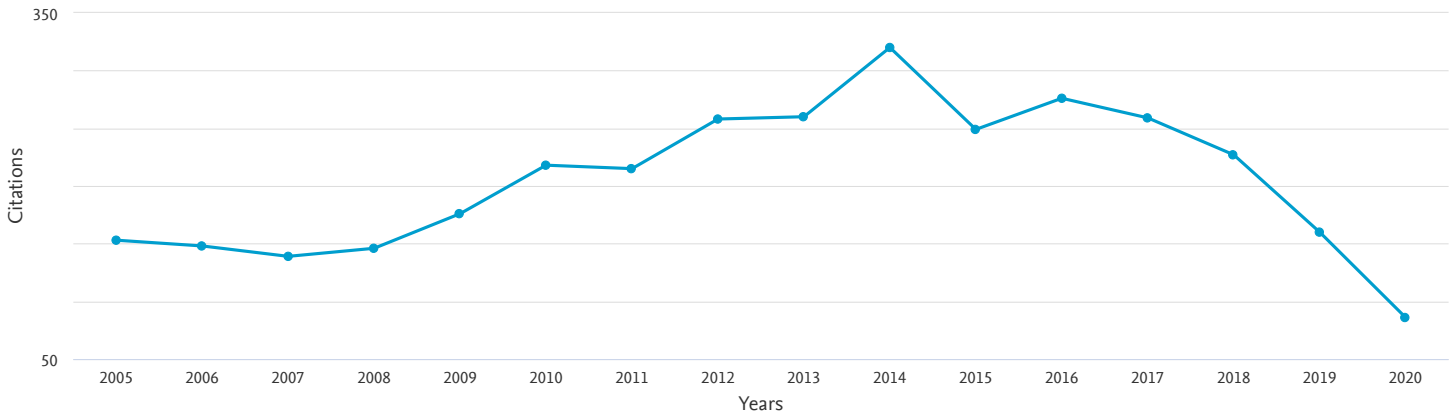

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		Documents	Citations	<2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Subtotal	>2020	Total
			Total	464	153	148	139	146	176	218	215	258	260	320	249	276	259	227	160	86	3290	0	3754
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☐	11	Freeze-out at constant Knudsen number in event-by-event hydr...	2017																		0		0
☐	12	Violation of mass ordering for multi-strange hadrons at RHIC...	2016														2				2		2
☐	13	Effects of EoS in viscous hydro + cascade model for the RHIC...	2016															1		1	2		2
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☐	16	Estimation of the shear viscosity at finite net-baryon densi...	2015												3	14	16	6	4	8	51		51
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☐	19	Systematic investigation of negative Cooper-Frye contributio...	2015												1			2			3		3
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☐	23	Fluid dynamical response to initial state fluctuations	2014											1	1						2		2
☐	24	The η/s of hadrons out of chemical equilibrium	2014												1	1					2		2
☐	25	A 3 + 1 dimensional viscous hydrodynamic code for relativist...	2014												4	8	10	12	8	4	46		46
☐	26	Beam energy scan using a viscous hydro+cascade model	2014												1		1				2		2
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☐	29	Hydrodynamics at RHIC and LHC: What have we learned?	2013											7	10	8	7	8	4		44		44
☐	30	Event-by-event distributions of azimuthal asymmetries in ult...	2013										7	28	13	21	27	18	13	6	133		133
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35	Effect of temperature-dependent η/s on flow anisotropies	2012									1									1		1
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37	Dynamical freeze-out in event-by-event hydrodynamics	2012										2	1	1	2		1			7		7
38	Sensitivity of the elliptic flow to a temperature-dependent ...	2011								1		1								2		2
39	The QGP shear viscosity-elusive goal or just around the corn...	2011								3	4	7	6	3	2	2	3	1	2	33		33
40	Equation of state at finite baryon density based on lattice ...	2011								1	4	1	1				1	1		9		9
41	Quark polarization in a viscous quark-gluon plasma	2011									2	2	5	1	7	6	4	5	4	36		36
42	Radial and elliptic flow in Pb + Pb collisions at energies a...	2011								3	21	24	27	29	23	13	8	10	4	162		162
43	Elliptic flow in Pb+Pb collisions at √s<inf>NN</inf> = 2.76 ...	2011								3	4	6	8	4	1	7	4	1	1	39		39
44	Influence of shear viscosity of quark-gluon plasma on ellipt...	2011								7	30	19	27	18	11	16	12	7	3	150		150
45	Elliptic flow in U+U collisions at √s<inf>NN</inf>=200 GeV a...	2011								6	9	8	7	7	5	7	6	3		58		58
46	Systematic parameter study of hadron spectra and elliptic fl...	2010			1					9	10	10	20	10	11	4	5	4	1	85		85
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48	On fluctuations of conserved charges : Lattice results versu...	2010							2	1	2	1	2							8		8
49	Applicability of viscous hydrodynamics at RHIC	2009							3		2	1	1	2		1	1			11		11
50	Applicability of causal dissipative hydrodynamics to relativ...	2009						12	23	6	12	13	14	6	6	5	5	3	2	107		107
51	Dissipative effects from transport and viscous hydrodynamics	2008			1		1	10	17	5	6	3	7	3	2	2		1	1	59		59
52	Chemical freeze-out temperature in the hydrodynamical descri...	2008						3	4	7	8	3	2	2	2	1	2	1	2	37		37
53	Hydrodynamic models for heavy ion collisions	2006				20	22	27	21	23	29	19	14	13	7	11	5	4	2	217		217
54	Anisotropy of flow and the order of phase transition in rela...	2005		1	9	17	7	6	6	3	2	3			3		1			58		58
55	Dissipation and elliptic flow at relativistic energies	2005		4	6	2	12	8	6	5	3		1	1		1	1			50		50
56	Semihard Scattering Unraveled from Collective Dynamics by Tw...	2004	5	7	3	6	4	1	4		1	2	1			1		1		31		36
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63	Photon emission in heavy ion collisions at the CERN SPS	2002	18	7	2	1	4	2	9	3		6	1	3			1		1	40		58
64	Is there elliptic flow without transverse flow?	2002	8	4	4	4	3	2	2	3		1	1	1						25		33
65	Dileptons and photons from coarse-grained microscopic dynami...	2002																		0		0
66	Transverse expansion and high p<inf>T</inf> azimuthal asymme...	2002	37	10	2	3		2	6	3	3		1		1					31		68
67	Centrality dependence of multiplicity, transverse energy, an...	2001	50	20	13	16	15	22	21	18	18	6	12	8	3	6	2	5	4	189		239
68	Radial and elliptic flow at RHIC: Further predictions	2001	100	50	50	32	47	50	42	38	36	36	32	29	26	27	19	12	9	535		635
69	Elliptic flow at SPS and RHIC: From kinetic transport to hyd...	2001	93	33	39	23	21	24	25	12	8	17	12	10	11	8	11	5	4	263		356
70	Baryonic contributions to e⁺e⁻ yields ...	1999	2																	0		2
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76	Hydrodynamical description of 200A GeV/c S+Au collisions: Ha...	1997	100	5	4	5	3	4	7	5	4	4	3	3	1	8	10	3	2	71		171

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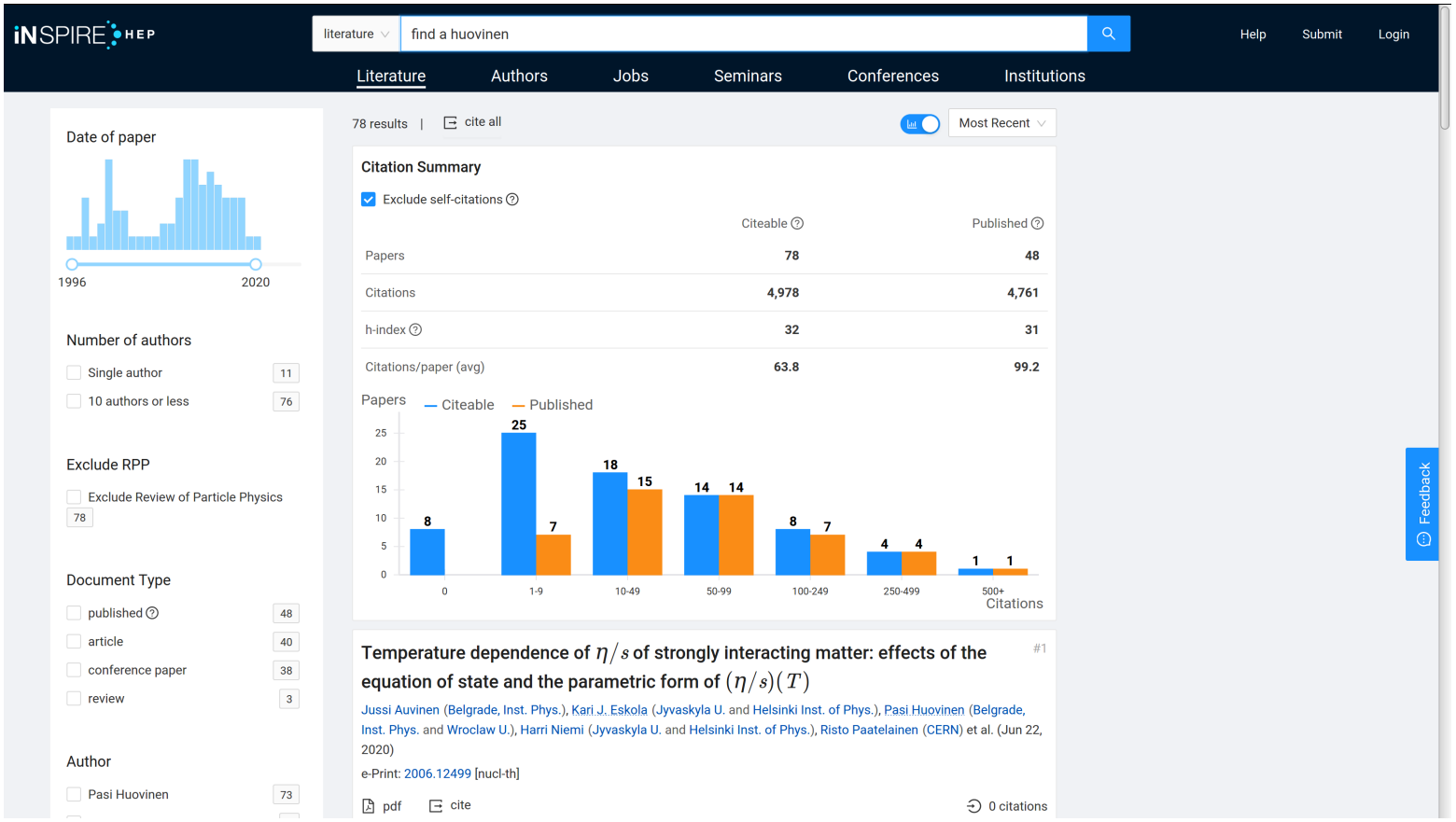

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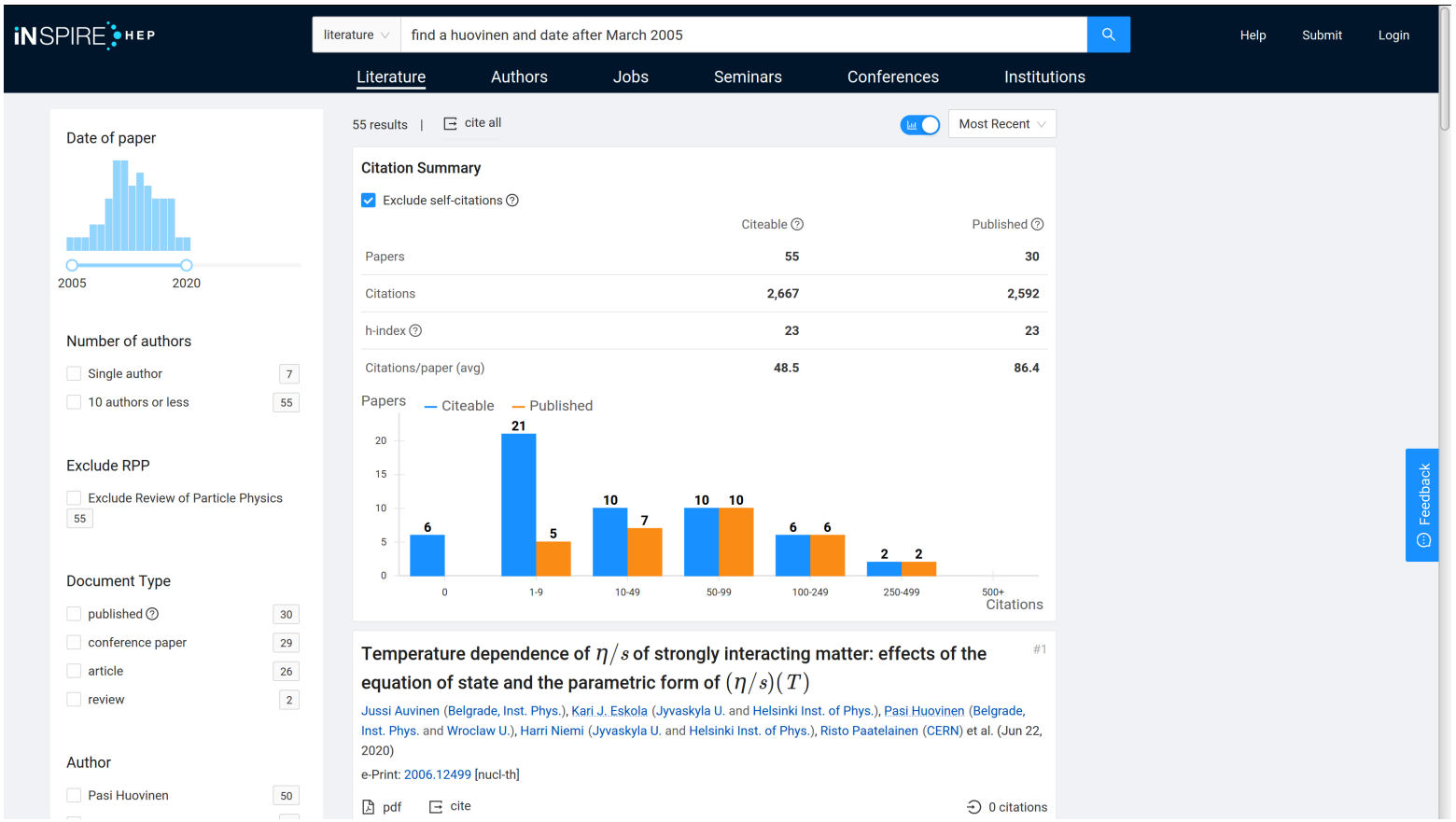

Invitations

invitation to Exited QCD 2018, item [38]

From pedro3bicudo@gmail.com Mon Jan 15 18:17:04 2018
Date: Mon, 15 Jan 2018 18:16:22
From: pedro3bicudo@gmail.com
Reply-To: eQCD.conference@cern.ch
To: huovinen@th.physik.uni-frankfurt.de
Subject: Invitation to eQCD 2018 in Serbia

Dear Pasi,

Following the very interesting meeting in 2017, we will be organising the next edition of our Workshop Series - Excited QCD 2018 - in the Dinaric Alps, during 11-15 March 2018, at the Kapaonik National Park , Serbia, https://indico.cern.ch/event/685849/

This is the 10th edition of eQCD, after Zakopane, Tatranska Lomnica, Les Houches, Peniche, Sarajevo, Sarajevo, Tatranska Lomnica, Costa da Caparica and Sintra. We cover diverse aspects of QCD: (i) QCD at low energies: excited hadrons, glueballs, multiquarks, resonances. (ii) QCD at high temperatures and large densities: heavy-ion collisions, jets, diffraction, hadronisation, quark-gluon plasma, holography, colour-glass condensate, compact stars, applications to astrophysics.

We would like to invite you to participate at Excited QCD 2018 and give a presentation on,
'Hydrodynamics of QCD'.

Please register directly at our indico webpage.
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and please book directy at Family Hotel Angella, by email
info@mkresort.com
or by phone
+381 36 54 71 246
and mention that you are coming for the Excited QCD conference.

Thank you very much and we hope to see you at Kapaonik!
Best regards,

the organisers of Excited QCD 2018

Jelena Jovicevic (jelena@cern.ch)
Marina Krstic Marinkovic (marina.marinkovic@cern.ch)
Nuno Cardoso (nuno.cardoso@tecnico.ulisboa.pt)
Pedro Bicudo (bicudo@tecnico.ulisboa.pt)
Robert Kaminski (robert.kaminski@ifj.edu.pl)

Excited QCD Winter Workshop
11-15 March 2018, Kopaonik National Park,
Kopaonik, Serbia
https://indico.cern.ch/event/685849/
eQCD.conference@cern.ch

invitation to ICPPA 2016, item [39]

From ilya.selyuzhenkov@gmail.com Tue Jul 19 00:09:17 2016
Date: Tue, 19 Jul 2016 00:08:40
From: Ilya Selyuzhenkov <ilya.selyuzhenkov@gmail.com>
To: Pasi Huovinen <huovinen@th.physik.uni-frankfurt.de>
Subject: Invitation for a plenary talk at the ICPPA2016 conference in Moscow, 10-14 October 2016

Dear Pasi,

we are organizing a heavy-ion session during the ICPPA conference in Moscow on 10-14 October 2016:

http://indico.cfr.mephi.ru/event/4/

As a member of the program organizing committee, I would like to invite you to give a plenary talk on Hydrodynamic flow in HIC: from RHIC to the LHC.

Please let me know asap if you are available.

Best regards,
Ilya

invitation to Exited QCD 2015, item [40]

From pedro2bicudo@gmail.com Mon Nov 3 00:19:38 2014
Date: Mon, 3 Nov 2014 00:19:36
From: pedro2bicudo@gmail.com
Reply-To: excitedqcd@th.physik.uni-frankfurt.de
To: huovinen@th.physik.uni-frankfurt.de
Subject: Invitation to eQCD 2015 in Slovakia

Dear Pasi,

Following the very interesting meeting in 2014, we will be organising the next edition of our Workshop Series - Excited QCD 2015 - at the High Tatras mountains, during the week 8-14 March 2015, at Tatranska Lomnica, Slovakia, https://indico.cern.ch/event/336427/

We organize our meeting especially right after the Schladming Winter School and before the St Goar Workshop. This is the 7th edition of eQCD, after Zakopane, Tatranska Lomnica, Les Houches, Peniche, Sarajevo and Sarajevo. We cover diverse aspects of QCD: (i) QCD at low energies: excited hadrons, glueballs, multiquarks, resonances. (ii) QCD at high temperatures and large densities: heavy-ion collisions, jets, diffraction, hadronisation, quark-gluon plasma, holography, colour-glass condensate, compact stars, applications to astrophysics.

We would like to invite you to participate at Excited QCD 2014 and give a presentation on,
'Hydrodynamics of QCD'.

Please register directly at our indico webpage.
https://indico.cern.ch/event/336427/

Thank you very much and we hope to see you at Tatranska Lomnica!

Best regards,

the organisers of Excited QCD 2015
Pedro Bicudo (bicudo@tecnico.ulisboa.pt)
Francesco Giacosa (giacosa@th.physik.uni-frankfurt.de)
Robert Kaminski (robert.kaminski@ifj.edu.pl)
Marina Marinkovic (marina.marinkovic@cern.ch)

Excited QCD Winter Workshop
8-14 March 2015, High Tatras,
Tatranska Lomnica, Slovakia
https://indico.cern.ch/event/336427/
excitedqcd@th.physik.uni-frankfurt.de

-- the type format of this email is html --

invitation to Confinement X, item [41]

From parnold@virginia.edu Fri Feb 3 17:00:20 2012
Date: Fri, 3 Feb 2012 17:00:17
From: Peter Arnold <parnold@virginia.edu>
To: Pasi Huovinen <huovinen@th.physik.uni-frankfurt.de>
Subject: conference in Munich

Hi Pasi!

I was wondering if I could entice you to come to the conference "Xth Quark Confinement and the Hadron Spectrum" in Munich, 8-12 October 2012, and give a parallel session talk in the various sections we will have on Deconfinement. (I am co-convening those sections with Jan Rafelski, Harvey Meyer, and experimentalist Yiota Foka.) We would very much like to hear a discussion of what hydro has to say about heavy ion collisions these days.

Unfortunately, the funding situation is such that, even though we're inviting you to come give a parallel session talk, you would still have to pay your own expenses as well as the conference fee. Sorry about that -- I wish we could do better!

More information on the conference can be found at

http://www.confx.de/index.html

Also, this year's program is not set, but to get a flavor for the conference, you might find it useful to glance at last year's program at

http://147.96.27.42//conferenceTimeTable.py?confId=0

Let me know if you can be cajoled into coming.

I hope that life is going well for you and Heli these days!

Peter

--
Peter Arnold work: (434) 924-6813
Department of Physics fax : (434) 924-7909
University of Virginia
382 McCormick Road e-mail: parnold@virginia.edu
P.O. Box 400714
Charlottesville, VA 22904-4714

----- End forwarded message -----

--
Peter Arnold work: (434) 924-6813
Department of Physics fax : (434) 924-7909
University of Virginia
382 McCormick Road e-mail: parnold@virginia.edu
P.O. Box 400714
Charlottesville, VA 22904-4714

----- End forwarded message -----

--
Peter Arnold work: (434) 924-6813
Department of Physics fax : (434) 924-7909
University of Virginia
382 McCormick Road e-mail: parnold@virginia.edu
P.O. Box 400714
Charlottesville, VA 22904-4714

invitation to Hirschegg 2019, item [42]

From guydmoore@gmail.com Mon May 21 15:36:22 2018
Date: Mon, 21 May 2018 15:35:11
From: Guy Moore <guydmoore@gmail.com>
To: pasi.huovinen@ift.uni.wroc.pl
Cc: Friman Bengt <b.friman@gsi.de>, Michael Buballa <buballa@theorie.ikp.physik.tu-darmstadt.de>, Tetyana Galatyuk <T.Galatyuk@gsi.de>, Thomas Neff <t.neff@gsi.de>
Subject: Hirschegg 2019

Dear Pasi,

We are organizing a conference from 13 to 19 January 2019
in the DarmstÃ¤dter Haus in Hirschegg, Austria, with the topic
"From QCD Matter to Hadrons," covering the subtopics:
-- Understanding statistical hadronization and its limitations
-- Hydrodynamics
-- How to do freeze-out from a hydro simulation
-- Vorticity and polarization observables
-- HBT radii and their interpretation
-- Thermodynamic transition between Hadron Resonance Gas and Quark-Gluon Plasma
for further information see https://theory.gsi.de/hirschegg/2019/

Based on a recommendation from our international advisory
committee, we are pleased to invite you to contribute a talk
at the meeting. As an invited speaker, we will be able to cover your
expenses for full-board accommodation in the DarmstÃ¤dter
Haus. Alternatively, we can partially support hotel costs in
Hirschegg. In addition, your conference fee will be waived.

Please respond at your earlier convenience whether you would
be interested in participating in the conference.

Sincerely,
Guy D. Moore, on behalf of the organizers
Michael Buballa, Bengt Friman, Tetyana Galatyuk, Guy Moore, Thomas Neff

invitation to GSI, item [43]

From krzysztof.redlich@ift.uni.wroc.pl Mon Oct 23 17:38:28 2017
Date: Mon, 23 Oct 2017 17:38:27
From: Krzysztof <krzysztof.redlich@ift.uni.wroc.pl>
To: pasi.huovinen@ift.uni.wroc.pl
Subject: Invitation to EMMI Worshop /February 12/ GSI (2018)

Dear Pasi,

It is our great pleasure to invite you as a key participant and speaker to
the EMMI workshop which will be held in GSI/Darmstadt from

February 12 (morning) till February 14th (noon) 2018.

We will be able to support your travel expenses up to 400 Euro for trips
within Europe, and up to 800 Euro for trips from oversea.
We will also support your hotel expenses up to 50 Euro/day.

We hope very much that you will be able to accept our invitation and
participate in this Workshop.

We are looking forward to your positive answer,

with our kind regards

Jean Cleayms
Bengt Friman
Krzysztof Redlich

(for Organizers)

p.s. We are including further information as an attachment.

This email was sent using SquirrelMail.
   "Webmail for nuts!"
http://squirrelmail.org/

    [Part 2, Application/PDF (Name: "Worshop_Info.pdf") 23 KB.]
    [Unable to print this part.]

invitation to Huzhou 2016, item [44]

From huichaosong@pku.edu.cn Thu Aug 18 05:54:24 2016
Date: Thu, 18 Aug 2016 05:53:31
From: Huichao Song <huichaosong@pku.edu.cn>
To: Pasi Huovinen <huovinen@fias.uni-frankfurt.de>
Cc: wangfuqiang <fqwang@physics.purdue.edu>, wangqun <qunwang@ustc.edu.cn>, fqwang@zjhu.edu
.cn
Subject: workshop and school invitations

Dear Pasi,

We would like to invite you to attend a workshop to be held at Huzhou University on Dec. 17-19 (Sat-Mon), 2016. The workshop will focus on flow and jet-quenching in relativistic heavy ion collisions, assess the current status of the research and discuss future opportunities. We would like to invite you to give a talk on your recent work related to hydrodynamics and flow. The talk will be 30 min. or so but details are yet to be worked out.

There will be a meeting/school just prior to that in USTC, Hefei on Dec. 14-15 and we would like to ask you to give a lecture on EOS and hydrodynamics with more emphasis on the RHIC BES and other related physics (1-2 hours, final details to be worked out). This is aimed for graduate students and young post-docs.

Your travel and local expenses will be covered. We hope you can attend both events. In case you cannot, attending either one of them will already be a great help.

Best regards,

Fuqiang Wang, Huichao Song, Qun Wang

invitation to YSTAR 2016, item [45]

From igor@gwu.edu Tue Jul 19 17:58:39 2016
Date: Tue, 19 Jul 2016 17:57:40
From: Igor Strakovsky <igor@gwu.edu>
To: Pasi Huovinen <huovinen@th.physik.uni-frankfurt.de>
Subject: YSTAR2016

Dear Doctor Huovinen,

The organizers of the YSTAR2016 WorkshopÂ are pleased to invite you to attend the "Excited Hyperons in QCD Thermodynamics at Freeze-Out" Workshop, to be held from 16 to 18 November 2016 in Newport News, VA, USA. The workshop site will be main site of Jefferson Laboratory. For more information, registration, and talk submission, please visit the Workshop website https://www.jlab.org/conferences/ystar2016/ (it will come soon).

The YSTAR2016 workshop to discuss the influence of possible "missing" hyperon resonances (JLab KLF Project) on QCD thermodynamics, on freeze-out in heavy ion collisions and in the early universe, and in spectroscopy. Recent studies that compare lattice QCD calculations of thermodynamic calculations, statistical hadron resonance gas models, and ratios between measured yields of different hadron species in heavy ion collisions provide indirect evidence for the presence of "missing" resonances in all of these contexts. The aim of the workshop is to sharpen these comparisons, advance our understanding of the formation of baryons from quarks and gluons microseconds after the Big Bang and in today's experiments, and to connect these developments to experimental searches for direct, spectroscopic, evidence for these resonances. This YSTAR2016 Workshop is a successor to the recent KL2016 Workshop https://www.jlab.org/conferences/kl2016/ .

The format of the Workshop is following: morning and afternoon sessions and no parallel sessions. Each talk will last 25+5'. Slides of all talks will be posted on the Workshop website. There will be mini-proceedings for the arXiv.

Organizing Committee:

Moskov Amaryan, ODU - chair	mamaryan@odu.edu
Eugene Chudakov, JLab	gen@jlab.org
Krishna Rajagopal, MIT	krishna@mit.edu
Claudia Ratti, HU, Huston	cratti@uh.edu
James Ritman, Ruhr-U. Bochum&IKP JÃ¼lich	j.ritman@fz-juelich.de
Igor Strakovsky, GWU	igor@gwu.edu

We have a limited financial support, but we are trying to keep the costs low. The Workshop Fee is $xx (under the consideration now) and it covers breakfast, coffee breaks, snacks as well as a reception and dinner. There is no fee for students and postdocs.

A room block has been reserved at the ResFac, http://sura.org:3283/resfac/accomodations/ , which can accommodate up to 20-25 people. It is within easy walking distance of Jefferson Lab. There are many good hotels around JLab.

We cordially invite you to participate in the Workshop and submit a talk on topic relevant to the scientific program of the Workshop. We appreciate to get your tentative title which you can change any time.

Please feel free to contact us for any additional information.

Best Regards,

Igor Strakovsky for YSTAR2016 organizers

---

invitation to YSTAR 2016, item [45]

Igor Strakovsky, SAID INS The George Washington University
Tel: 571-553-8344,Skype: igors1945_2, Fax: 202-994-3001
Cell: 703-728-5627, Emails: igor@gwu.edu, igor@jlab.org

invitation to ECT*, item [46]

From paul.romatschke@colorado.edu Tue Oct 22 17:32:20 2013
Date: Tue, 22 Oct 2013 17:32:17
From: Paul Romatschke <paul.romatschke@colorado.edu>
To: Pasi Huovinen <huovinen@fias.uni-frankfurt.de>, Sangyong Jeon <jeon@physics.mcgill.ca>,
 Thomas Schaefer <tmschaef@ncsu.edu>
Subject: ECT* workshop, May 12-16, 2014

Dear Pasi,

 We would like to invite you to a ECT* workshop on
``Hydrodynamics of Strongly Coupled Fluids''. The
workshop will be held May 12-16, 2014, and is organized
by Sangyong Jeon, Paul Romatschke and Thomas Schaefer.
The meeting is scheduled for the week prior to the Quark
Matter 2012 meeting, which will be held in Darmstadt,
Germany. The workshop will overlap with the last week
of a QGP school, also held at the ECT*. The ECT* is
located in a beautiful old villa in Trento, Italy with
a gorgeous view of the Italian Alps, see the ECT* web
page http://www.ectstar.eu/ .

 We plan to cover a wide variety of topics, ranging
from precision determination of QGP transport properties,
challenges posed by the data from the beam energy scan
and recent data on p+p and p+Pb collisions, the role of
fluctuations, anomalous effects, connections to AdS/CFT,
strongly coupled non-relativistic fluids and data from
cold atomic gases.

 We hope that you will be able to attend and give a
presentation. We will be able to cover your local expenses.

 Best regards

Thomas Schaefer
Sangyong Jeon
Paul Romatschke

invitation to GSI, item [47]

From krzysztof.redlich@ift.uni.wroc.pl Wed Dec 19 14:08:31 2012
Date: Wed, 19 Dec 2012 14:08:29
From: krzysztof.redlich@ift.uni.wroc.pl
To: huovinen@th.physik.uni-frankfurt.de
Cc: nxu@lbl.gov, karsch@physik.uni-bielefeld.de, b.friman@gsi.de
Subject: Invitation to GSI Fluctuations Workshop

Dear Pasi,

we have a great pleasure to invite you to participate in the EMMI Workshop

"Fluctuations and Correlations and QCD Phase Transition"

February 11 – February 12, 2013

Place: The ExtreMe Matter Institute EMMI at the GSI Helmholtz Centre for Heavy Ion Research, Darmstadt, Germany

Organizers: Bengt Friman, Frithjof Karsch, K. Redlich, Nu Xu

Topics:
Lattice gauge theory and QCD thermodynamics
QCD phase structure
Modeling QCD phase transition and the equation of state
Fluctuations and correlations as probe of criticality
Critical phenomena in heavy ion collisions
Quark Gluon plasma and its properties

Format of the meeting:
We plan two days workshop that will include presentations, 25 minutes each, of different topics relevant for recent understanding of the properties of strongly interacting matter under extreme conditions.

We hope very much that you will be able to attend this meeting and give a talk on:

"EQS and hydrodynamical evolution in HIC"

For more information and registration please see:

http://www-aix.gsi.de/conferences/emmi/QCDPT2013/

With best regards,

Bengt Friman,
Frithjof Karsch,
Krzysztof Redlich
Nu Xu

invitation to Exited QCD 2013, item [48]

From huovinen@th.physik.uni-frankfurt.de Tue Oct 30 17:53:53 2012
Date: Wed, 7 Nov 2012 23:36:17
From: Pasi Huovinen <huovinen@th.physik.uni-frankfurt.de>
To: Excited QCD 2013 <excitedqcd@th.physik.uni-frankfurt.de>
Cc: denisp@hep.itp.tuwien.ac.at, bicudo@ist.utl.pt, giacosa@th.physik.uni-frankfurt.de, mag
dalena.malek@cern.ch
Subject: Re: Invitation to Excited QCD 2013

Dear organisers,

My apologies for a slow reply. Thank you very much for the invitation.
I'm pleased to tell that I am willing to participate the workshop.

regards

Pasi Huovinen

On Tue, 30 Oct 2012, Excited QCD 2013 wrote:

> Dear Pasi,
>
> We would like to invite you to participate, and present a talk on a topic
> of your recent interest regarding hydrodynamics of QCD, at the workshop
> "Excited QCD 2013" to be held from 03-09 February 2013 on the Olympic
> mountain Bjelasnica, close to the Bosnian capital Sarajevo.
>
> This workshop is the fifth one in a series whose previous editions took
> place in Zakopane (Poland, February 2009), Tatranska Lomnica (Slovakia,
> February 2010), Les Houches (France, February 2011) and Peniche (Portugal,
> May 2012).
>
> The workshop covers diverse aspects of QCD:
>
> (i) QCD at low energies: excited hadrons, glueballs, multiquarks.
>
> (ii) QCD at high temperatures and large densities: heavy-ion collisions,
> jets, diffraction, hadronisation, quark-gluon plasma, holography,
> colour-glass condensate, compact stars, applications to astrophysics.
>
>
> You can find more information on our homepage:
>
> http://indico.cern.ch/event/exqcd2013
>
> This is a relatively small workshop in which we aim to bring together
> young researchers and experts with different perspectives of QCD. One of
> the most important characteristics of our workshop is the lively dialogue
> between young researchers willing to learn and experts willing to share
> their knowledge.
>
>
> Also, for information concerning the previous editions, you can look at
> the respective webpages:
>
> http://th.physik.uni-frankfurt.de/~excitedqcd/
> http://th.physik.uni-frankfurt.de/~excitedqcd/2010.html
> http://th.physik.uni-frankfurt.de/~excitedqcd/2011.html
> https://indico.cern.ch/conferenceDisplay.py?ovw=True&confId=153191
>
>
> We would be grateful if you could please answer us ASAP and register on
> the workshop homepage before 9 November 2012. After this deadline we
> cannot guarantee your talk spot in the workshop program.
>
>
> Looking forward to seeing you next February in Sarajevo!

invitation to Exited QCD 2013, item [48]

> Best regards,
>
> The Organisers
> Pedro Bicudo
> Francesco Giacosa
> Magdalena Malek
> Denis Parganlija
>
> ---
> Excited QCD Winter Workshop
> 03 to 09 February 2013, Bjelasnica Mountain - Sarajevo, Bosnia-Herzegovina
> http://indico.cern.ch/event/exqcd2013
> excitedqcd@th.physik.uni-frankfurt.de
>
> Organised by:
> "Pedro Bicudo" <bicudo@ist.utl.pt>,
> "Francesco Giacosa" <giacosa@th.physik.uni-frankfurt.de>,
> "Magdalena Malek" <magdalena.malek@cern.ch>
> "Denis Parganlija" <denisp@hep.itp.tuwien.ac.at>
>
> ---

invitation to NeD-2012, item [49]

From crete2012@fias.uni-frankfurt.de Thu Feb 16 16:01:40 2012
Date: Thu, 16 Feb 2012 16:01:46
From: crete2012 <crete2012@fias.uni-frankfurt.de>
To: Pasi Huovinen <huovinen@th.physik.uni-frankfurt.de>
Subject: NeD/TURIC-2012

Dear Pasi,

it is our pleasure to invite you to the 2nd International Symposium on Non-equilibrium Dynamics (NeD-2012) and the 3d Network I3-HP3 Workshop on Theory of UltraRelativistic heavy Ion Collisions (TURIC-2012) which will be held together from June 25 to 30, 2012, in Hersonissos, Crete, Greece.

The NeD Symposium addresses the physics of strongly interacting systems far from equilibrium and their approach to equilibrium as relevant for the dynamics of the early universe and ultra-relativistic nucleus-nucleus collisions.
The key topics include:
- dynamical description of strongly interacting systems
- Kadanoff-Baym equations and solutions
- transport models for strongly interacting systems
- description of phase transitions
- viscous hydrodynamics

The goal of the TURIC Workshop - which unites almost all theory groups working on the field of relativistic heavy ions in Europe - is a comprehensive understanding of the results of relativistic heavy ion collisions from FAIR to LHC energies.
The new TURIC program concentrates on three basic topics:
- properties of the quark-gluon plasma before hadronization and the phase transition towards the hadronic world
- transport properties of hard probes in the quark gluon plasma and their traces in final hadronic spectra
- microscopic study of initial thermalization

This year we plan to have a common scientific program of NeD and TURIC meetings.

The venue and accommodation of participants will be at the 'Creta Maris Beach Resort' in Hersonissos
http://www.maris.gr/creta.aspx
which is located in 24 km from the Heraklion Airport (~25 min. driving).

More information can be found on the Workshops Web-page:
http://fias.uni-frankfurt.de/crete2012

We would be honored if you could participate in those events and give a talk on your latest research on one of the primary topics. Please send us your response (including registration form as requested on the Workshops Web-page) to
crete2012@fias.uni-frankfurt.de

The Organizers,

Elena Bratkovskaya
Joerg Aichelin
Marcus Bleicher

invitation to NeD-2011, item [50]

From Elena.Bratkovskaya@th.physik.uni-frankfurt.de Sat Apr 2 01:56:24 2011
Date: Sat, 2 Apr 2011 01:56:14
From: Elena Bratkovskaya <Elena.Bratkovskaya@th.physik.uni-frankfurt.de>
To: huovinen@th.physik.uni-frankfurt.de
Subject: NeD-2011

Dear Pasi,

it is our pleasure to invite you to the International Symposium on
"Non-equilibrium Dynamics" (NeD-2011), to be held in Heraklion,
Crete, Greece, from 31 August to 3 September 2011.

The Symposium addresses the physics of strongly interacting
systems far from equilibrium and their approach to equilibrium
as relevant for the dynamics of the early universe and
ultra-relativistic nucleus-nucleus collisions.

The key topics include:
- dynamical description of strongly interacting systems
- Kadanoff-Baym equations and solutions
- transport models for strongly interacting systems
- description of phase transitions
- viscous hydrodynamics

More information can be found on the Web-page:
http://th.physik.uni-frankfurt.de/~brat/Home-NeD/index.html

We would be honored if you could participate in this Symposium and
give a talk on your latest research on one of the primary Symposium
topics.

The Symposium venue and accommodation of participants will be
at the 'Candia Maris Resort& Spa Crete' in Heraklion.
http://www.candiamaris.gr/accommodation-heraklion-hotel-crete.aspx

We are currently in the process to obtain funding for local support.
However, further information in this respect will only be available
after July 1st 2011. Please request local support by e-mail until
the end of June 2011 and expect a decision in the first week of July.

Note that the 'NeD-2011' Symposium will be followed by the
Network Workshop of the I3-HP2 Network 'TORIC' which is held
from 5th to 9th September at the same place.

The Organizers,

Elena Bratkovskaya
Marcus Bleicher
Joerg Aichelin
Igor Mishustin

[Part 2, Application/PDF (Name: "Ned-2011-poster.pdf") 346 KB.]
[Unable to print this part.]

invitation to Quarkyonic Island, item [51]

From mborn28@ift.uni.wroc.pl Mon Feb 28 02:57:34 2011
Date: Mon, 28 Feb 2011 02:57:23
From: Max Born 28 <mborn28@ift.uni.wroc.pl>
To: huovinen@th.physik.uni-frankfurt.de
Cc: Max Born 28 <mborn28@ift.uni.wroc.pl>
Subject: Invitation to Wroclaw, 18.-22.5.

Dear Pasi,

herewith we invite you to participate and to give a lecture at the workshop

THREE DAYS ON QUARKYONIC ISLAND
Wroclaw (Poland), May 19-21, 2011

The workshop is organized as the XXVIII Max-Born Symposium jointly
by the University of Wroclaw and by the Helmholtz International Center
(HIC) for FAIR. The workshop will be centered around the following topics:

- QCD phase diagram and equation of state
- Nonequilibrium and transport phenomena in hot, dense QCD matter
- Hadron and lepton pair production in heavy ion collisions
- QCD phases in supernova collapse, compact stars and binary mergers

The focus of this workshop is on the question whether chiral symmetry
restoration has to entail deconfinement (and vice versa) in hot and dense QCD
matter.

The Symposium shall be opened on May 19, at 9 am and concludes in the afternoon
of May 21 (i.e. arrival date 18.5. and departure 22.5.).
It is a satellite meeting at the eve of the Conference "Quark Matter 2011".
The total number of contributions (30' including discussion) has to be
limited to 30 in order to give enough time for follow-up discussions,
contacts and collaboration.

For upcoming actual informations about program, logistics, support and
the registration we recommend to visit (and bookmark) the homepage at

http://www.ift.uni.wroc.pl/~mborn28

Hotel costs and lunches of invited speakers will be covered.

Please inform us whether you could accept our invitation to the XXVIII.
Max-Born Symposium in reply to this email asap
by filling the little contact information sheet below.

We are looking very much forward to meeting you soon in Wroclaw!

David Blaschke, Ludwik Turko, Krzysztof Redlich, (Wroclaw)
(for the organizers)

==========
CONTACT INFORMATION SHEET
I plan to attend the HIC for FAIR workshop in Wroclaw (May 19-21, 2011)
( ) yes
( ) no
( ) maybe
I suggest as a title of my contribution:

.....

invitation to JLab 2011, item [52]

From muller@phy.duke.edu Mon Dec 13 15:20:56 2010
Date: Mon, 13 Dec 2010 15:20:54
From: Berndt Mueller <muller@phy.duke.edu>
To: huovinen@th.physik.uni-frankfurt.de
Cc: Berndt Mueller <mueller@phy.duke.edu>
Subject: workshop invitation

Dear Pasi:

We are organising a workshop on "Excited Hadronic States and the Deconfinement Transition" at Jefferson Lab from Wednesday, February 23rd to Friday, February 25th 2011 and we append the circular below. Â The aim is to bring together practitioners on hadron transport models, lattice QCD at non-zero temperature, and lattice and QCD-inspired descriptions of the spectrum and properties of resonances, together with members of the experimental communities, to explore these connections. Â The workshop will consist of a number of invited talks that address key questions, together with extended opportunities for discussion.

We hereby invite you to give a 40 minute review talk on "Hadronic equation of state and relativistic heavy-ionÂ collisions"The aim of your talk is to provide a review of the dependence of hydrodynamic simulations of relativistic heavyÂ ion collisions on the QCD equation of state, especially below T_c, inÂ comparison with experimental data.

We very much hope that you will be able to come and would be grateful if you could inform as soon as possible about your ability to accept this invitation. Please get in touch with me if you have any questions regarding the workshop or your lecture.

Best wishes,
Berndt Mueller for the Local Organising Committee

PS: I will be in Frankfurt this week; we probably can find time to talk about this invitation in person if you like.

Excited Hadronic States and the Deconfinement Transition

The equation of state of QCD close to the finite-temperature phaseÂ transition may be described by a hadron resonance gas. Â However, theÂ applicability of this description depends on the density of hadronÂ resonances at increasing energies. Â Recent progress at computing theÂ excited state spectrum of QCD, together with the expectation of newÂ experimental determinations of the spectrum from Jefferson Lab@ 12 GeV,Â afford the prospect of refining the hadron resonance gas picture of QCDÂ close to the phase transition, and of relating our description of QCD atÂ zero temperature to that at high temperatures and densities, explored atÂ RHIC and at the LHC.

This workshop aims to bring together practitioners on hadron transportÂ models, lattice QCD at non-zero temperature, and lattice andÂ QCD-inspired descriptions of the spectrum and properties of resonances,Â together with members of the experimental communities, to explore theseÂ connections. Â The workshop will consist of number of invited talks thatÂ address key questions, together with extended opportunities for discussion.

Local Organising Committee: Jozef Dudek, Robert Edwards, Abhijit Majumder,Â Berndt Mueller, Peter Petreczky, David Richards, Christopher Thomas

invitation to RNM workshop, item [53]

From ilya.selyuzhenkov@gmail.com Fri Oct 22 22:41:25 2010
Date: Fri, 22 Oct 2010 22:41:25
From: Ilya Selyuzhenkov <ilya.selyuzhenkov@gmail.com>
To: huovinen@th.physik.uni-frankfurt.de
Cc: Peter Braun-Munzinger <P.Braun-Munzinger@gsi.de>, "Stachel, Johanna Prof. Dr." <stachel@physi.uni-heidelberg.de>
Subject: Invitation to talk on the newest theoretical developments in hydrodynamics at RNM workshop

Dear Dr. Pasi Huovinen,

we are organizing the next RNM workshop at FIAS, Frankfurt
and would like to invite you to give a talk on the
newest theoretical developments in hydrodynamics.
Tentative workshop dates are December 16, 2010 or January 27, 2011.

Please, let us know if you will be able to talk on
the hydrodynamics developments on one of these dates.

We are looking forward to hear from you soon!

With best regards,
Ilya Selyuzhenkov, Johanna Stachel, and Peter Braun-Munzinger

--

Dr. Ilya Selyuzhenkov

EMMI Fellow QGP Physics
GSI Helmholtzzentrum fÃ¼r Schwerionenforschung GmbH
E-mail: ilya.selyuzhenkov@gmail.com
Phone: +49 6159 71 2660

invitation to Extreme QCD 2010, item [54]

From karsch@physik.uni-bielefeld.de Sat Mar 6 04:14:28 2010
Date: Sat, 6 Mar 2010 04:14:27
From: Frithjof Karsch <karsch@physik.uni-bielefeld.de>
To: huovinen@th.physik.uni-frankfurt.de
Subject: xQCD 2010

Dear Pasi,

the next Extreme QCD workshop will take place (as usual) during the week following Lattice 2010, i.e.

Extreme QCD 2010
June 21-23, 2010
Bad Honnef, Germany
http://www.physik.uni-bielefeld.de/xqcd/

We would like to invite you to give a talk related to the implementation of the (lattice) QCD equation of state in hydrodynamic calculations.

The workshop will be organized in the Conference Center of the German Physical Society. Through funds of the Heraeus Foundation we will be able to cover your traveling and local costs.

It would be nice, if you could answer soon as we need to fix a preliminary list of invited speakers, that needs to be submitted to the funding agency.

regards,
Frithjof

Frithjof Karsch	Tel +49-521-106-6227	
Universitaet Bielefeld	FAX +49-521-106-2961	
Fakultaet fuer Physik	internet:	
Universitaetsstr 25	http://www.physik.uni-bielefeld.de	
33615 Bielefeld	e-Mail	
	karsch@physik.uni-bielefeld.de	

invitation to INT 2010, item [55]

From inge@u.washington.edu Tue Jan 19 18:36:13 2010
Date: Tue, 19 Jan 2010 18:32:24
From: Inge Dolan <inge@u.washington.edu>
To: huovinen@th.physik.uni-frankfurt.de
Subject: INT 10-2A Invitation to Program Quantifying the Properties of Hot QCD Matter

Pasi Huovinen
Johann Wolfgang Goethe-Univ.
Institut f. Theoretische Physik
Max von Laue-Str. 1
60438 Frankfurt
GERMANY

January 19, 2010

Dear Dr. Huovinen:

I am very pleased to invite you to participate in the Institute for Nuclear Theory program INT-10-2A, "Quantifying the Properties of Hot QCD Matter" for two weeks beginning June 7, 2010. The program dates are May 24 to July 20, 2010.

Please return your completed Visitor Information form as soon as possible in order to confirm the dates of your participation in the program and to enable the administrative staff to help you with arrangements for your stay in Seattle. A prompt reply would be greatly appreciated.

Your financial support will include $40 per day for meals plus the actual cost of your single-occupancy lodging up to a maximum of $95 per day. The total amount of support provided will depend on the arrangements we are able to make for your housing. The intent of INT support is to help cover the additional costs occasioned by your living away from home. Please read the information guides, Visitor Support Information and Housing Information, which are attached; these explain the details of your financial support and housing options. Questions regarding housing in Seattle should be directed to Inge Dolan at 206-685-4286 or by email to inge@phys.washington.edu.

Please do not hesitate to contact any of the organizers for questions regarding the program:

Peter Jacobs
pmjacobs@lbl.gov

Brian Cole
cole@nevis.columbia.edu

Ulrich Heinz
heinz@mps.ohio-state.edu

Berndt Mueller
muller@phy.duke.edu
Jamie Nagle
jamie.nagle@colorado.edu

We look forward to your participation in this program.

Sincerely,

David Kaplan
Director

[Part 2, Application/MSWORD (Name: "INT 10-2A Visitor Information]
[Sheet.doc") 32 KB.]
[Unable to print this part.]

invitation to INT 2010, item [55]

[Part 3, Application/MSWORD (Name: "INT 10-2A Lodging]
[Information.doc") 83 KB.]
[Unable to print this part.]

invitation to CATHIE/TECHQM workshop, item [56]

From petreczk@quark.phy.bnl.gov Mon Oct 12 04:31:39 2009
Date: Mon, 12 Oct 2009 04:31:37
From: Peter Petreczky <petreczk@quark.phy.bnl.gov>
To: Pasi Huovinen <huovinen@th.physik.uni-frankfurt.de>
Subject: talk at CATHIE-TECHQM workshop

Dear Pasi,
I would like to invite you to give a talk on the parametrization of EoS and its effect on elliptic flow at the Joit CATHIE-TECHQM meeting to be held at BNL on Dec. 14-18, 2009.

Please let me know if you can come.

Best regards,
Peter

--

Peter Petreczky
Brookhaven National Laboratory
Physics Department
Bldg. 510
Upton NY 11973-500
Tel: 631 344 3890
Fax: 631 344 7561
e-mail: petreczk@quark.phy.bnl.gov

From petreczk@quark.phy.bnl.gov Thu Oct 8 16:22:05 2009
Date: Thu, 8 Oct 2009 16:21:42
From: Peter Petreczky <petreczk@quark.phy.bnl.gov>
To: cathie_participants <cathie-participants@quark.phy.bnl.gov>
Subject: Joint CATHIE/TECHQM Workshop, BNL Dec. 14-18, 2009 (fwd)

FIRST ANNOUNCEMENT: Joint CATHIE/TECHQM Workshop, Brookhaven National Laboratory, Dec. 14-18, 2009

The CATHIE and TECHQM collaborations will hold a joint workshop at Brookhaven National Laboratory on December 14-18, 2009. The workshop will include plenary and parallel sessions, as well as unscheduled discussion time.

The workshop will have three areas of focus:

1. Assessment of the theoretical status of
(i) viscous hydrodynamics,
(ii) gluon saturation and initial conditions for transport models of heavy ion collisions,
(iii) long range rapidity correlations,
(iv) local P and CP violation,
(v) thermal photons and dileptons, and
(vi) heavy flavor hadrons as probes of the QGP;

2. Formation of a new, broad-based Physics Working Group of experimentalists and theorists, aimed at quantitative comparison of calculations based on viscous hydrodynamics with measurements of global observables in relativistic heavy ion collisions;

3. Detailed discussion of partonic energy loss theory and data, including analysis and writeup of the "QCD Brick Problem" and discussion of next steps to quantify the transport parameters governing energy loss.

A web page will be available soon that includes a detailed agenda and

invitation to CATHIE/TECHQM workshop, item [56]

registration and travel information.

Please mark your calendar for the week of Dec. 14-18, 2009, if you are interested in participating.

Workshop organizers:

K. Dusling, Ulrich Heinz, Peter Jacobs, Dima Kharzeev, Berndt Mueller, Jamie Nagle, Peter Petreczky, Raju Venugopalan, Urs Wiedemann

invitation to TECHQM, item [57]

From heinz@mps.ohio-state.edu Thu Mar 20 10:10:44 2008
Date: Thu, 20 Mar 2008 09:46:03
From: Ulrich Heinz <heinz@mps.ohio-state.edu>
To: phuovine@purdue.edu
Cc: Peter Jacobs <pmjacobs@lbl.gov>, Urs Wiedemann <Urs.Wiedemann@cern.ch>, Brian Cole <col
e@nevis.columbia.edu>, Berndt Mueller <muller@phy.duke.edu>, James Nagle <jamie.nagle@color
ado.edu>, Xin-Nian Wang <XNWang@lbl.gov>, gyulassy@phys.columbia.edu, Peter Petreczky <petr
eczk@quark.phy.bnl.gov>
Subject: Invitation to speak at TECHQM Workshop

Dear Pasi:

I hope you have received the announcement that was sent around 2 weeks
ago, and been briefed by Denes on the TECHQM initiative. Please check
http://www.bnl.gov/TECHQM/ for a quick reminder.

This first TECHQM Workshop will focus on two important issues in RHIC/LHC
physics, parton energy loss and collective flow. We would like to invite
you to give the plenary overview talk (30+10 min.) on the status and open
issues of collective flow in heavy ion collisions. This talk is supposed
to pave the way for a detailed discussion in a breakout parallel session
on collective flow in the afternoon where the burning open issues will be
further discussed, realistic short term (~6 months) goals will be
identified, and a draft working plan for the TECHQM Collaboration, with
well-defined tasks to be completed by Collaboration members, will be
put together.

Let me try to explain a little our thinking about the role of your talk in
this workshop:

One of the goals of TECHQM is to coordinate activities from different
groups and to channel them into a coherent and comprehensive approach to
heavy-ion collision dynamics and data interpretation, combining the
expertise residing in the individual TECHQM members or member groups.
Your talk should therefore look at the issue of collective flow with a
sufficiently broad view, addressing initialization issues, the present
status of evolution algorithms (ideal vs. viscous hydro and cascades,
dimensionality of the codes), effects from shear and bulk viscosity,
transition to late-stage hadronic kinetics and freeze-out. What are the
presently open questions? Where and how can we, as a community, make
significant progress towards resolving some of these issues *now*, with
definitive and meaningful results to be expected within, say, half a year?
What needs to be done to interface the collective flow algorithms with
hard probe phenomena such as jet quenching, parton energy loss and the
possible generation of Mach cones? How do we achieve community consensus
on how we describe the collective flow? How do we extract reliable values
for the viscosity coefficients from RHIC data? These are some of the
questions driving the creation of TECHQM, for the discussion of which your
talk should help set the stage.

Preceding your talk will be a review of what was discussed and achieved at
the BNL/RBRC hydro workshop preceding the TECHQM meeting, so you can
assume that the audience is basically familiar with most of the important
results. You should see your role in using them to summarize our present
state of knowledge and uncertainty and to crystallize from this a set of
questions/tasks that TECHQM, as a trans-institutional collaboration,
should address during the next year. Of course, this will be further
discussed during the afternoon, but we are interested in your view on
this, as one of the intellectual leaders and most experienced
practitioners in the field.

We very much hope that you will accept our invitation and charge.
Your talk is an important cornerstone in the workshop program. Please
send your response to the entire mailing list in the header.

With kind regards,

Ulrich (on behalf of the TECHQM Workshop Organizing Committee)

invitation to TECHQM, item [57]


```
**********************************************************************
* Ulrich Heinz                      Tel: +41-22-767.2463  (office)    *
* CERN                                   +33-450-40.13.55 (home)      *
* Physics Department                Fax: +41-22-767.3850              *
* Theory Division                   email: heinz@mps.ohio-state.edu   *
* CH-1211 Geneva 23                 office: Bldg. 4, Rm. 1-014        *
* Switzerland                       (On sabbatical leave from Ohio    *
*                                    State until July 2008)           *
**********************************************************************
```


---------- Forwarded message ----------
Date: Fri, 07 Mar 2008 14:41:27 -0500 (EST)
From: Peter Petreczky <petreczk@quark.phy.bnl.gov>
To: techqm@quark.phy.bnl.gov
Cc: pmjacobs@lbl.gov
Subject: Theory meets Experiment: Theory-Experiment Collaboration for Hot QCD Matter (fwd)

Dear Colleagues,

We are pleased to announce the workshop
"Theory meets Experiment: Theory-Experiment Collaboration for Hot QCD Matter (TECHQM)"
which will be held at Brookhaven National Laboratory on May 6-7, 2008.

This workshop will initiate TECHQM ("Theory-Experiment Collaboration for Hot QCD Matter"), a new joint working group of theorists and experimentalists. The goal of TECHQM is to further the understanding of hot QCD matter through detailed, quantitative analysis of heavy ion collision experimental data and theory, together with the dynamical modeling which connects them.

The agenda of this meeting will focus on those aspects of heavy ion collisions that are at present most amenable to such a comprehensive approach: collective flow, high pT energy loss, and heavy quark dynamics. The meeting will establish the organizational structure of the TECHQM working group, and identify concrete tasks and a work plan for the near-term future. The first day will consist of a plenary session to discuss the scope and possible approaches of the working group, followed by a parallel session in which experts on each sub-topic develop a work plan. The work plans will be discussed in the plenary on the second day.

Contributed talks and suggestions for the workshop agenda are welcome. Attendance at the workshop does not imply or require membership in the working group.

For further information about the workshop and to register please visit
http://www.bnl.gov/TECHQM/

Sincerely,
Brian Cole, Ulrich Heinz, Peter Jacobs, Berndt Mueller,
Jamie Nagle, Peter Petreczky, Xin-Nian Wang and Urs Wiedemann
(The organizers)

--

Peter Petreczky
Brookhaven National Laboratory
Physics Department
Bldg. 510
Upton NY 11973-500
Tel: 631 344 3890
Fax: 631 344 7561
e-mail: petreczk@quark.phy.bnl.gov

---

invitation to BNL, items [58,59]

From petreczk@quark.phy.bnl.gov Tue Apr 8 21:27:25 2008
Date: Tue, 8 Apr 2008 21:27:13
From: Peter Petreczky <petreczk@quark.phy.bnl.gov>
To: Pasi Huovinen <phuovine@purdue.edu>
Subject: inviation

Dear Dr. Huovinen,

I would like to invite you to participate and give a talk
on your recent results in ideal and viscous hydrodynamics
at the upcoming RIKEN-BNL workshop "Hydrodynamics in Heavy Ion Collisions
and QCD Equation of State" to be held at Brookhaven National Laboratory
on April 20-21, 2008.
The main subject of the workshop is the application of hydrodynamic
models in heavy ion physics and their sensitivity to the equation of state.
I would like to take part also in the follow-up workshop
"Viscous Hydrodynamics and Transport Models" to be held on April 23- May 2,
2008 also at Brookhaven National Laboratory, which is dedicated to study
of the role of finite viscousity in relativistic hydrodynamics.
I expect you to give a one hour lecture
on application of viscous hydrodynamics in relativistic heavy-ion collisions
at this workshop.

We will be able
to cover your airfare and other travel expenses (up to $500), local housing
expenses and per diem ($25 a day)

I looking forward to see you at the workshop,
Peter Petreczky
(workshop organizer)

Peter Petreczky
Brookhaven National Laboratory
Physics Department
Bldg. 510
Upton NY 11973-500
Tel: 631 344 3890
Fax: 631 344 7561
e-mail: petreczk@quark.phy.bnl.gov

Awards

The American Physical Society

Certificate of Recognition

Pasi Huovinen

selected as an

Outstanding Referee

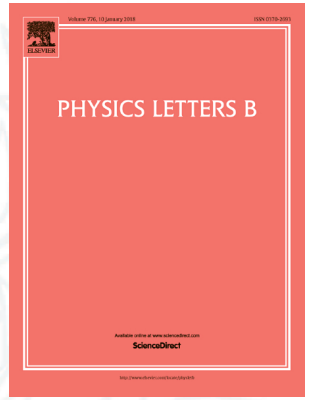
for the journals
of the American Physical Society

this 10th day of January, 2014

Gene D. Sprouse, *Editor In Chief*

Joseph W. Serene, *Publisher and Treasurer*

ELSEVIER



PHYSICS LETTERS B

Certificate of Outstanding Contribution in Reviewing

awarded August, 2017 to

PASI HUOVINEN

In recognition of the contributions made to the quality of the journal

The Editors of *PHYSICS LETTERS B*
Elsevier, Amsterdam, The Netherlands

Final report of the project "Dissipative properties of strongly interacting matter formed in heavy-ion collisions",

Polonez grant 2015/19/P/ST2/03333, National Science Center, Poland (NCN)

NATIONAL SCIENCE CENTRE

POLONEZ FELLOWSHIP REPORT

Report type	***FINAL***
Registration number *e.g. 2015/19/P/NZ1/00001*	2015/19/P/ST2/03333
Date of birth YYYY-MM-DD	1967-07-24

A. HOST INSTITUTION				*Have any changes been made in respect to the fellowship agreement?*
1. Name	Uniwersytet Wrocławski			NO
2. Address	pl. Uniwersytecki 1, 50-137 Wrocław			NO
3. Telephone	+48 71 375 22 70			NO
4. Fax	+48 71 343 68 48			NO
5. E-mail	prorektor.zagranica@uwr.edu.pl			YES
6. www	www.uni.wroc.pl			NO
7. Tax ID no. (NIP)	8960005408			NO
8. Statistical ID no. (REGON)	000001301			NO
9. Head of the Host Institution	prof.dr hab..	Jan Burdukiewicz	Vice Rector for International Relations and Projects	YES

10. Description of changes made *Describe all changes made, including those on the basis of an annex to the agreement*
New head of the Host Institution - Vice Rector for International Relations and Projects: prof. dr hab. Jan Burdukiewicz

B. FELLOW		*Have any changes been made in respect to the fellowship agreement?*
1. Degree/title	dr	NO
2. First and last name	Pasi Huovinen	NO
3. Gender *(please select)*	Male	
4. Telephone		
5. E-mail - valid within 5 years of the project completion	huovinen@fias.uni-frankfurt.de	YES
6. Current mailing address *where NCN can reach you in case of questions about the report. Do not give the Host Institution address.*	Institute of Physics Belgrade, Pregrevica 118, 11080 Belgrade, Serbia	YES

7. Description of changes made *Describe all changes made, including those on the basis of an annex to the agreement*
New contract, new place of work, new address and phone number. Knowing the FIAS policy, the FIAS email address is most probably valid after five years of all my email addresses.

FINAL POLONEZ FELLOWSHIP REPORT

Registration number **2015/19/P/ST2/03333**

C. INFORMATION ON THE FELLOWSHIP		*Have any changes been made in respect to the fellowship agreement?*
1. Title	Dissipative properties of strongly interacting matter formed in heavy-ion collisions	NO
2. Grant agreement number	UMO-2015/19/P/ST2/03333	
3. Fellowship budget *(in compliance with the agreement*	699 216,00 zł	NO
4. Fellowship duration *(in months)*	24	NO
5. Starting date (YYYY-MM-DD) *(in compliance with the agreement*	2016-10-01	NO
6. End date (YYYY-MM-DD) *(in compliance with the agreement*	2018-09-30	NO
7. Key words *(in compliance with the proposal)*	heavy-ion collisions, quark-gluon plasma	NO
8. Auxiliary NCN Review Panels *(in compliance with the proposal)*	ST2_2 - Particle physics	NO
	ST2_3 - Nuclear physics	NO
		NO

9. Description of changes made
Describe all changes made, including those on the basis of an annex to the agreement

FINAL POLONEZ FELLOWSHIP REPORT

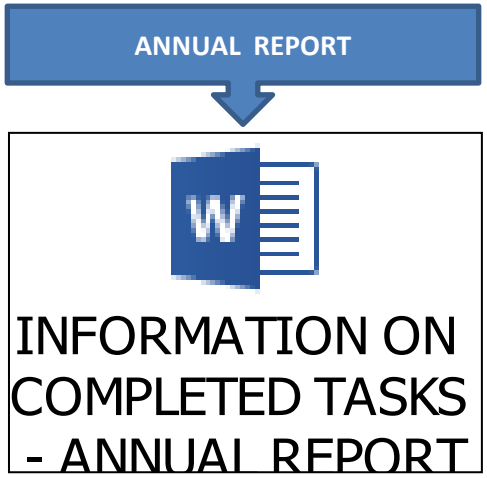
Registration number 2015/19/P/ST2/03333

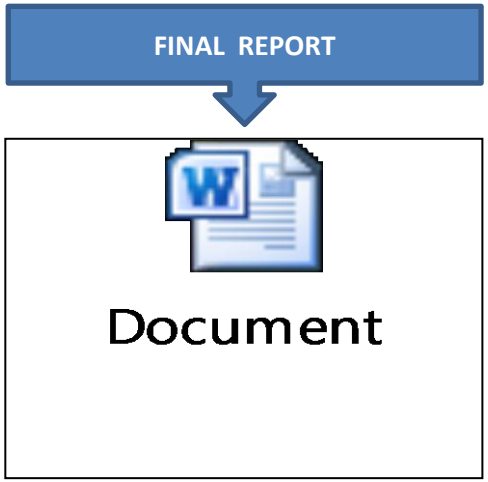
INFORMATION ON COMPLETED TASKS

The templates below are Microsoft Word files inserted into this spreadsheet. To display and edit the relevant document, double-click on the icon.

The content of the Word document will be saved automatically - just remember to save the spreadsheet.

When you print the Excel workbook, this spreadsheet will only show the icons - the report has to be printed separately and attached to the print-out of the Excel workbook. Please, print this file to PDF as well.





FINAL POLONEZ FELLOWSHIP REPORT

Registration number **2015/19/P/ST2/03333**

F. PUBLICATIONS SUBMITTED, ACCEPTED OR PUBLISHED AS A RESULT OF THE PROJECT
Every publication must be accompanied by a link or the DOI number (if assigned). If a publication is reported as submitted to or accepted by an editor/publisher (i.e. unpublished material for which no DOI/link can be given), the PDF of such publication should be saved to the CD/DVD with the electronic version of the report.
The publication must contain information that the research was funded by NCN (in compliance with the fellowship agreement).
The year of publication cannot precede *2016*

PAPERS IN JOURNALS

1	Publication status *please select*	Paper title *in the original publication language*	Author(s)
	published	Dynamical freeze+out criterion in a hydrodynamical description of Au+Au collisions at sqrt(s)=200 GeV and Pb+Pb collisions at sqrt(s)=2760 GeV	Saeed Ahmad, Hannu Holopainen and Pasi Huovinen
	Journal title	Publisher	Journal IF
	Phzsical Review	American Physical Society	3.82
	Volume	Year	Pages
	C95	2017	54911
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
	http://dx.doi.org/10.1103/PhysRevC.95.054911	- zł	green
	Link to the full text of the publication	https://arxiv.org/pdf/1608.03444.pdf	

2	Publication status *please select*	Paper title *in the original publication language*	Author(s)
	published	Effects of rho-meson width on pion distributions in heavy-ion collisions	Pasi Huovinen, Pok Man Lo, Michal Marczenko, Kenji Morita, Krzysztof Redlich and Chihiro Sasaki
	Journal title	Publisher	Journal IF
	Physics Letters B	Elsevier	4.807
	Volume	Year	Pages
	769	2017	509-512
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
	http://dx.doi.org/10.1016/j.physletb.2017.03.060	- zł	gold
	Link to the full text of the publication	https://arxiv.org/pdf/1608.06817	

For subsequent papers add 9 rows and copy the table

3	Publication status *please select*	Paper title *in the original publication language*	Author(s)
	published	Hadron resonance gas with repulsive interactions and fluctuations of conserved charges	Pasi Huovinen and Peter Petreczky
	Journal title	Publisher	Journal IF
	Physics Letters B	Elsevier	4.807
	Volume	Year	Pages
	777	2018	125-130
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
	http://dx.doi.org/10.1016/j.physletb.2017.12.001	- zł	gold
	Link to the full text of the publication	https://arxiv.org/pdf/1708.00879.pdf	

BOOKS/CHAPTERS IN BOOKS

1	Publication status *please select*	Chapter title(s) *in the original publication language*	Author(s)
	Book title *in the original publication language*	Publisher	Place of publication
	Volume	Year	Pages
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
		- zł	
	Link to the full text of the publication		

2	Publication status *please select*	Chapter title(s) *in the original publication language*	Author(s)
	Book title *in the original publication language*	Publisher	Place of publication
	Volume	Year	Pages
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
		- zł	
	Link to the full text of the publication		

For subsequent books/book chapters add 9 rows and copy the table

PAPERS IN CONFERENCE PROCEEDINGS

1	Publication status *please select*	Publication title *in the original publication language*	Author(s)
	published	Hydrodynamic flow in heavy-ion collisions at RHIC and LHC	Pasi Huovinen
	Conference title	Publisher	Place of publication
	2nd International Conference on Particle Physics and Astrophysics (ICPPA 2016)	IOP Publishing	Bristol, UK
	Date of the conference	Year	Pages
	Oct 10-14, 2016	2017	12063
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
	http://dx.doi.org/10.1088/1742-6596/798/1/012063	- zł	gold
	Link to the full text of the publication	http://iopscience.iop.org/article/10.1088/1742-6596/798/1/012063/pdf	

2	Publication status *please select*	Publication title *in the original publication language*	Author(s)
	published	Hadron resonance gas with repulsive interactions and baryon rich matter	Pasi Huovinen and Peter Petreczky
	Conference title	Publisher	Place of publication
	11th International Workshop on Critical Point and Deconfinement (CPOD 2017)	SISSA	Trieste, Italy
	Date of the conference	Year	Pages
	August 7-11, 2017	2018	34
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
	http://dx.doi.org/10.22323/1.311.0034	- zł	gold
	Link to the full text of the publication	https://pos.sissa.it/311/034/pdf	

For subsequent conference proceedings copy the table

3	Publication status *please select*	Publication title *in the original publication language*	Author(s)
	published	Freeze-out at Constant Knudsen Number in Event-by-event hydrodynamics	Pasi Huovinen and Hannu Holopainen
	Conference title	Publisher	Place of publication
	10th International Workshop on Critical Point and Onset of Deconfinement (CPOD 2016)	Jagellonian University	Cracow, Poland
	Date of the conference	Year	Pages
	May 30 - June 4, 2016	2017	913-914
	DOI *(Digital Object Identifier)*	Costs incurred to ensure open access to the publication	Open access model *please select*
	http://dx.doi.org/10.5506/APhysPolBSupp.10.913	- zł	gold
	Link to the full text of the publication	https://www.actaphys.uj.edu.pl/findarticle?series=Sup&vol=10&page=913	

4	Publication status *please select*	Publication title *in the original publication language*	Author(s)
	published	Hadron resonance gas with repulsive interactions	Pasi Huovinen and Peter Petreczky
	Conference title	Publisher	Place of publication
	34th Winter Workshop on Nuclear Dynamics (WWND 2018)	IOP Publishing	Bristol, UK
	Date of the conference	Year	Pages
	March 25-31, 2018	2018	12004

FINAL POLONEZ FELLOWSHIP REPORT

Registration number **2015/19/P/ST2/03333**

G. ZESTAWIENIE KOSZTÓW PLANOWANYCH I PONIESIONYCH (zł) - SPRAWOZDANIE FINANSOWE

G. STATEMENT OF PLANNED AND INCURRED COSTS (PLN) - FINANCIAL REPORT

W części G należy przedstawić zestawienie kosztów planowanych i poniesionych od dnia rozpoczęcia realizacji stażu do zakończenia okresu, którego dotyczą.

Present a statement of planned and incurred costs from the fellowship start date to the end of the reporting period.

Zestawienie kosztów planowanych i poniesionych przedstawiane w raporcie końcowym stanowi sprawozdanie finansowe z realizacji stażu.

A statement of costs planned and incurred included in the final report constitutes the financial report from fellowship realisation.

Czy zostały zawarte z Narodowym Centrum Nauki **aneksy korygujące kosztorys**? Proszę wybrać TAK lub NIE. *Have any **annexes** been concluded with the National Science Centre to adjust the project budget? Select YES or NO.*	NIE / NO

No.	L.p Item	Koszty poniesione ze środków przeznaczonych na realizację stażu / *Costs incurred with fellowship funds* proszę wprowadzać kwoty w formacie liczbowym lub księgowym z przecinkiem dziesiętnym, nie jako tekst / *make sure the costs are entered as NUMBERS with a decimal comma, not as text*							
		Rok/Year 2016		**Rok/Year 2017**		**Rok/Year 2018**		**Razem/Total**	
		Planowane (zgodne z umową) / Planned (compliant with the fellowship agreement)	Poniesione Actual	Planowane (zgodne z umową) / Planned (compliant with the fellowship agreement)	Poniesione Actual	Planowane (zgodne z umową) / Planned (compliant with the fellowship agreement)	Poniesione Actual	Planowane (zgodne z umową) / Planned (compliant with the fellowship agreement)	Poniesione Actual
1	Środki finansowe dla wnioskodawcy, w tym: / *Funds for the applicant, including:*	**69 780,00 zł**	**48 231,67 zł**	**209 340,00 zł**	**191 043,83 zł**	**139 560,00 zł**	**171 500,35 zł**	**418 680,00 zł**	**410 775,85 zł**
	– wynagrodzenie / *living allowance*	**42 108,00 zł**	**29 104,82 zł**	**126 324,00 zł**	**114 626,30 zł**	**84 216,00 zł**	**102 900,21 zł**	**252 648,00 zł**	**246 631,33 zł**
	– dodatek z tytułu zmiany miejsca zamieszkania / *mobility allowance*	**27 672,00 zł**	**19 126,85 zł**	**83 016,00 zł**	**76 417,53 zł**	**55 344,00 zł**	**68 600,14 zł**	**166 032,00 zł**	**164 144,52 zł**
	– dodatek rodzinny / *family allowance*							**- zł**	**- zł**
2	Koszty bezpośrednie realizacji badań naukowych, w tym: / *Direct research costs, including:*	**44 000,00 zł**	**25 526,32 zł**	**92 000,00 zł**	**59 758,98 zł**	**28 000,00 zł**	**30 329,74 zł**	**164 000,00 zł**	**115 615,04 zł**
	– wynagrodzenia / *personnel costs*	**4 000,00 zł**	**3 000,00 zł**	**12 000,00 zł**	**11 999,97 zł**	**4 000,00 zł**	**4 999,98 zł**	**20 000,00 zł**	**19 999,95 zł**
	– pozostałe koszty bezpośrednie / *other direct costs*	**40 000,00 zł**	**22 526,32 zł**	**80 000,00 zł**	**47 759,01 zł**	**24 000,00 zł**	**25 329,76 zł**	**144 000,00 zł**	**95 615,09 zł**
3.	Koszty pośrednie / *Indirect costs*	**22 756,00 zł**	**14 751,60 zł**	**60 268,00 zł**	**50 160,56 zł**	**33 512,00 zł**	**40 366,02 zł**	**116 536,00 zł**	**105 278,18 zł**
4.	Łączne koszty realizacji stażu / *Total fellowship costs*	136 536,00 zł	88 509,59 zł	361 608,00 zł	300 963,37 zł	201 072,00 zł	242 196,11 zł	**699 216,00 zł**	**631 669,07 zł**

Czy koszty poniesione w trakcie realizacji stażu są zgodne z kosztami planowanymi w załączniku nr 1 do umowy o finansowanie stażu? Proszę wybrać TAK lub NIE. *Are the costs incurred during the fellowship compliant with the budget given in attachment 1 to the fellowship agreement? Select YES or NO.* *W przypadku zaznaczenia odpowiedzi NIE w komentarzu poniżej proszę opisać zakres wprowadzonych zmian.* *If the answer is NO, please describe and explain the changes below, specifying items/cost categories affected by the transfer of funds and the amounts of such transfer.*	NIE / NO
Proszę wybrać "NIE", jeżeli: • wprowadzono zmiany kosztorysu w drodze o aneks do umowy, • wprowadzono zmiany kosztorysu za zgodą kierownika Jednostki Przyjmującej, • *suma kosztów poniesionych w kategorii "środki finansowe dla wykonawcy"* jest niższa niż suma kosztów planowanych w okresie sprawozdawczym. • suma kosztów poniesionych w którejkolwiek kategorii nie przekracza 50% kosztów planowanych w okresie sprawozdawczym.	*Select „NO" if:* • *fellowship budget was changed based on an annex to the fellowship agreement,* • *fellowship budget was changed by consent of the Head of the Host Institution,* • *the sum of the costs incurred in* "Funds for the applicant" *is lower than the sum of the costs planned for the reporting period.* • *the sum of the costs incurred in any category is lower than 50% of the costs planned for the reporting period.*
Regarding the fellow's remuneration, the difference between the planned and the spent money comes from the fact that remuneration for October, November and December 2017 as well as for September 2018 differs from the previous ones because the annual pension contribution basis had been exceeded, and therefore these contributions were not paid. Similarly, the additional annual remuneration paid in 2018 did not include any pension contributions. The difference between budgeted and spent indirect costs is mostly due to fewer visitors than planned. Due to their changing schedules and obligations, the foreign collaborators were unable to visit as often as originally planned. Some of the fellow's travel money was not spent either beacuse it was difficult to plan the visits.	

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H. PROJECT TEAM

Please specify all persons participating in the project, including those not listed in the proposal. Please specify collective investigators, e.g. survey interviewers, or research participants jointly as groups.

Please fill in the data on the planned remuneration for the project investigators, in compliance with the budget given in the proposal.

1. Planned number of investigators	4

2. Fellow and other investigators

	Academic degree/ title	First and last name	Gender *(please select)*	Personal ID. No. 'PESEL' or citizenship if PESEL not available	New investigator	Role in the project
1	dr	Pasi Huovinen	Male	Finnish	YES	Fellow
	Scope of work in the project					Form of employment
	Development of all research tasks given in the description of the project. Supervision of the students, coordinating the work of the research team.					employment agreement

Total remuneration planned *in the proposal budget*	Remuneration costs incurred			
	Year 2016	Year 2017	Year 2018	TOTAL
418 680,00 zł	48 231,67 zł	191 043,83 zł	171 500,35 zł	410 775,85 zł

	Academic degree/ title	First and last name	Gender *(please select)*	Personal ID. No. 'PESEL' or citizenship if PESEL not available	New investigator	Role in the project
2	prof. dr hab. czł. koresp. PAN	Krzysztof Redlich	Male	53040603890	NO	Research Partner
	Scope of work in the project					Form of employment
	Scientific conclusions, comparison with the data, supervision of students involved in the project					not applicable

Total remuneration planned *in the proposal budget*	Remuneration costs incurred			
	Year 2016	Year 2017	Year 2018	TOTAL
				- zł

	Academic degree/ title	First and last name	Gender *(please select)*	Personal ID. No. 'PESEL' or citizenship if PESEL not available	New investigator	Role in the project
3	mgr	Michal Naskret	Male	90042605697	YES	other investigator
	Scope of work in the project					Form of employment
	Writing a new code to sample particle phase space distributions at the end of hzdrodynamic evolution to create a set of particle ensembles for further analysis. Updating the list of resonances with predicted and recently observed states.					contract for specific work/umowa o dzieło

Total remuneration planned *in the proposal budget*	Remuneration costs incurred			
	Year 2016	Year 2017	Year 2018	TOTAL
10 000,00 zł	1 500,00 zł	6 000,00 zł	2 500,00 zł	10 000,00 zł

For subsequent project team members add 6 rows and copy the table.

	Academic degree/ title	First and last name	Gender *(please select)*	Personal ID. No. 'PESEL' or citizenship if PESEL not available	New investigator	Role in the project
4	mgr	Maciej Lewicki	male	92020204319	YES	other investigator
	Scope of work in the project					Form of employment
	Writing a new faster code to calculate and analzse the distribution of particles and resonances at the end of hydrodynamic evolution. Exploring possible constraints to badly known branching ratios of the decays of heavy resonances.					contract for specific work/umowa o dzieło

Total remuneration planned *in the proposal budget*	Remuneration costs incurred			
	Year 2016	Year 2017	Year 2018	TOTAL
10 000,00 zł	1 500,00 zł	5 999,97 zł	2 499,98 zł	9 999,95 zł

TOTAL remuneration for the project team planned (Fellow + personnel)	TOTAL costs incurred			
	Year 2016	Year 2017	Year 2018	TOTAL
438 680,00 zł	51 231,67 zł	203 043,80 zł	176 500,33 zł	430 775,80 zł

Describe and explain changes introduced in respect to the amount of the remuneration, form of employment and changes to the composition of the research team.

The project started 01.10.216 instead of 01.09.2016 (with consent of the NCN dated 31.08.2016), consequently, the planned remunerations shifted one month. Regarding the fellow's remuneration, the difference between the planned and the spent money comes from the fact that remuneration for October, November and December 2017 as well as for September 2018 differs from the previous ones because the annual pension contribution basis had been exceeded, and therefore these contributions were not paid. Similarly, the additional annual remuneration paid in 2018 did not include any pension contributions.

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INFORMATION, DECLARATIONS AND SIGNATURES

1. Narodowe Centrum Nauki na podstawie art. 14 ust. 1 i 2 ogólnego rozporządzenia o ochronie danych (Dz. Urz. UE L 2016, Nr 119, s. 1) informuje, że: / *1. Pursuant to Article 14(1) and (2) of the General Data Protection Regulation (Official Journal of the European Union L 2016, No. 119, p. 1), the National Science Centre informs that:*

a) Narodowe Centrum Nauki z siedzibą w Krakowie przy ul. Królewskiej 57, 30-081 Kraków jest administratorem danych osobowych przekazywanych Jednostce przez członków zespołu projektowego, a pozyskiwanych przez Centrum na etapie raportowania.

a) National Science Centre with its registered office in Kraków at ul. Królewska 57, 30-081 Kraków, is the controller of personal data provided by team members to the Host Institution (employer), which were collected by the Centre during the reporting process.

b) Kontakt z wyznaczonym Inspektorem Ochrony Danych w Centrum jest możliwy za pomocą poczty elektronicznej pod adresem iod@ncn.gov.pl, telefonicznie pod numerem +48 12 341 91 13 lub bezpośrednio w siedzibie administratora danych osobowych.

b) The Centre's designated Data Protection Officer can be contacted via electronic mail at iod@ncn.gov.pl, by phone at +48 12 341 9113 or directly at the registered office of the controller.

c) Podstawę prawną przetwarzania danych osobowych przez Centrum, w celu wypełnienia obowiązków prawnych na nim ciążących stanowi art. 6 ust. 1 lit. c) ogólnego rozporządzenia o ochronie danych w zw. z art. 20 Ustawy z dnia 30 kwietnia 2010 r. o Narodowym Centrum Nauki (t.j. Dz. U. 2018 r., poz. 947 z późn.zm.).

c) In order to fulfil its legal obligations, the Centre processes your personal data based on Article 6(1)(c) of General Data Protection Regulation in conjunction with Article 20 of the Act of 30 April 2010 on the National Science Centre (consolidated text Journal of Laws of 2018, item 947, as amended).

d) Dane osobowe dotyczące roli, rodzaju, zakresu prac oraz wynagrodzenia w projekcie będą przetwarzane w celu: nadzoru, obsługi finansowo-księgowej, kontroli w trakcie jak i po zakończeniu projektu, oceny jego realizacji i rozliczenia umowy o realizację i finansowanie, a także w celu ustalenia, dochodzenia lub obrony przed roszczeniami. Ponadto dane osobowe będą przetwarzane w celu: przeprowadzania ewaluacji realizacji zadań Centrum, sprawozdawczości, oraz w celach archiwalnych.

d) Your personal data regarding your role, type, scope of work and remuneration in the project will be processed for the purpose of supervision, financial and accounting operations, audits performed in the course of and after the completion of the project, evaluation of its implementation and settlement of funding agreements and to investigate, pursue or defend against possible related claims. In addition, your personal data will be processed for the purpose of evaluating the Centre's own tasks, reporting and for archiving purposes.

e) Od momentu pozyskania, dane osobowe będą przetwarzane przez okres niezbędny do realizacji celów wskazanych w lit. d) oraz okres przechowywania zgodny z instrukcją kancelaryjną Centrum i Jednolitym Rzeczowym Wykazem Akt.

e) Your personal data will be processed from the moment they have been collected as long as it is necessary to achieve the purposes indicated in point d) above and for the period of storage as defined by the Centre's records management procedures and the Uniform File Classification System.

f) Odbiorcami danych osobowych będą wyłącznie podmioty uprawnione do uzyskania danych osobowych na podstawie przepisów prawa powszechnie obowiązującego.

f) The recipients of your personal data may only be entities authorised to collect personal data on the basis of generally applicable laws.

g) Dane osobowe mogą być powierzone do przetwarzania podmiotom zewnętrznym w ramach realizowanych przez nie usług na podstawie umów o powierzenie danych osobowych, a podmioty te są zobowiązane do zachowania poufności przetwarzanych danych.

g) Your personal data may be transferred for processing to third party companies or individuals commissioned to provide services. Such third parties process data based on personal data transfer contracts and are also obliged to keep the data being processed confidential.

h) Osobie, której dane dotyczą, przysługuje prawo dostępu do treści swoich danych osobowych, sprostowania swoich danych osobowych oraz ograniczenia przetwarzania swoich danych osobowych.

h) You have the right to access your personal data, correct your personal data and restrict the processing of your personal data.

i) Osobie, której dane dotyczą, przysługuje prawo wniesienia skargi do Prezesa Urzędu Ochrony Danych Osobowych w przypadku, gdy uzna, że przetwarzanie narusza przepisy ogólnego rozporządzenia o ochronie danych.

i) You have the right to lodge a complaint with the President of the Office of Personal Data Protection if the General Data Protection Regulation is violated.

2. Narodowe Centrum Nauki na podstawie art. 14 ust. 1 i 2 ogólnego rozporządzenia o ochronie danych informuje osoby uczestniczące w przygotowywaniu dokumentacji w projekcie, że: / *Pursuant to Article 13(1) and (2) of the General Data Protection Regulation, the National Science Centre informs persons participating in the preparation of project documentation that:*

a) Narodowe Centrum Nauki z siedzibą w Krakowie przy ul. Królewskiej 57, 30-081 Kraków jest administratorem danych osobowych przekazywanych Jednostce przez osobę uczestniczącą w przygotowywaniu dokumentacji w projekcie, a pozyskiwanych przez Centrum na etapie raportowania.

a) National Science Centre with its registered office in Kraków at ul. Królewska 57, 30-081 Kraków, is the controller of personal data you provided to your employer, which was collected by the Centre during the proposal or reporting process.

b) Kontakt z wyznaczonym Inspektorem Ochrony Danych w Centrum jest możliwy za pomocą poczty elektronicznej pod adresem iod@ncn.gov.pl, telefonicznie pod numerem +48 12 341 91 13 lub bezpośrednio w siedzibie administratora danych osobowych.

b) The Centre's designated Data Protection Officer can be contacted via electronic mail at iod@ncn.gov.pl, by phone at +48 12 341 9113 or directly at the registered office of the data controller.

c) Podstawę prawną przetwarzania przez Centrum danych osobowych osoby uczestniczącej w przygotowywaniu dokumentacji w projekcie, w celu wypełnienia obowiązków prawnych na nim ciążących stanowi art. 6 ust. 1 lit. c) ogólnego rozporządzenia o ochronie danych w zw. z art. 20 Ustawy z dnia 30 kwietnia 2010 r. o Narodowym Centrum Nauki (t.j. Dz. U. 2018 r., poz. 947 z późn. zm.).

c) In order to fulfil its legal obligations, the Centre processes your personal data based on Article 6(1)(c) of General Data Protection Regulation, in conjunction with Article 20 of the Act of 30 April 2010 on the National Science Centre (consolidated text Journal of Laws of 2018, item 947, as amended).

d) Dane osobowe osoby uczestniczącej w przygotowywaniu dokumentacji w projekcie, tj. dane służbowe będą przetwarzane w celu: nadzoru, obsługi finansowo-księgowej, kontroli w trakcie jak i po zakończeniu projektu, oceny jego realizacji i rozliczenia umowy o finansowanie projektu badawczego, a także w celu ustalenia, dochodzenia lub obrony przed roszczeniami. Ponadto dane osobowe będą przetwarzane w celach archiwalnych.

d) Your personal data, i.e. contact details will be processed for the purpose of supervision, financial and accounting operations, audits performed in the course of and after the completion of the project, evaluation of its implementation and settlement of funding agreements and to investigate, pursue or defend against possible related claims. In addition, your personal data will be processed for archiving purposes.

e) Od momentu pozyskania, dane osobowe osoby uczestniczącej w przygotowywaniu dokumentacji w projekcie będą przetwarzane przez okres niezbędny do realizacji celów wskazanych w pkt. d), oraz przez okres przechowywania zgodny z instrukcją kancelaryjną Centrum i Jednolitym Rzeczowym Wykazem Akt.

e) Your personal data will be processed from the moment they have been collected as long as it is necessary to achieve the purposes indicated in point d) above and for the period of storage as defined by the Centre's records management procedures and the Uniform File Classification System.

f) Odbiorcami danych osobowych osoby uczestniczącej w przygotowywaniu dokumentacji w projekcie będą wyłącznie podmioty uprawnione do uzyskania danych osobowych na podstawie przepisów prawa powszechnie obowiązującego.

f) The recipients of your personal data may only be entities authorised to collect personal data on the basis of generally applicable laws.

g) Dane osobowe osoby uczestniczącej w przygotowywaniu dokumentacji w projekcie mogą być powierzone do przetwarzania podmiotom zewnętrznym w ramach realizowanych przez nie usług na podstawie umów o powierzenie danych osobowych, a podmioty te są zobowiązane do zachowania poufności przetwarzanych danych.

g) Your personal data may be transferred for processing to third party companies or individuals commissioned to provide services. Such third parties process data based on personal data transfer contracts and are also obliged to keep the data being processed confidential.

h) Osobie uczestniczącej w przygotowywaniu dokumentacji w projekcie przysługuje prawo dostępu do treści swoich danych osobowych, sprostowania swoich danych osobowych oraz ograniczenia przetwarzania swoich danych osobowych.

h) You have the right to access your personal data, correct your personal data and restrict the processing of your personal data.

i) Osobie uczestniczącej w przygotowywaniu dokumentacji w projekcie przysługuje prawo wniesienia skargi do Prezesa Urzędu Ochrony Danych, w przypadku, gdy uzna ona, że przetwarzanie narusza przepisy ogólnego rozporządzenia o ochronie danych.

i) You have the right to lodge a complaint with the President of the Office of Personal Data Protection if the General Data Protection Regulation is violated.

3. Oświadczam, że osoby wykazane w niniejszym raporcie zostały zapoznane z treścią obowiązku informacyjnego wskazanego w pkt. 1 i 2 sekcji „informacje i oświadczenia i podpisy" (obowiązek informacyjny wynikającego z art. 14 ust. 1 i 2 ogólnego rozporządzenia o ochronie danych), (Dz. Urz. UE L 2016, Nr 119, s. 1).

3. I confirm that the persons whose personal data have been given in this report have read the information in points 1 and 2 of this section (obligation to provide information under Article 14 (1) and (2) of the General Data Protection Regulation) (Official Journal of the European Union L 2016, No. 119, p. 1).

3A. Jednostka oraz stażysta wyrażają zgodę na nieodpłatną publikację w materiałach informacyjnych NCN opisu zamieszczonego w części I raportu, a także załączonego na płycie CD/DVD materiału graficznego.

3A. The Host Institution and the Fellow agree to the publication of the description given in Section I. of the report and the visual materials enlosed on the CD/DVD by NCN, free of charge.

4. Dokumentacja potwierdzająca realizację stażu znajduje się do wglądu w: /
The documentation supporting the fellowship implementation is available for viewing at:

host institution, address:	Uniwersytet Wrocławski, Kwestura, pl. Uniwersytecki 1, 50-137 Wrocław
person responsible:	mgr Beata Tyszecka, Zastępca Kwestora
telephone number:	0048 71 3752116
e-mail:	serp@uwr.edu.pl

5. Dokumentacja dotycząca wyników realizacji stażu jest dostępna w jednostce przyjmującej: /
Documentation on the fellowship results is available at the host institution:

institution, address:	Uniwersytet Wrocławski, Wydział Fizyki i Astronomii, Instytut Fizyki Teoretycznej
person responsible:	prof. dr hab. Antoni Ciszewski, Dziekan Wydziału Fizyki i Astronomii
telephone number:	0048 71 3759310
e-mail:	antoni.ciszewski@uwr.edu.pl

6. Osoba odpowiedzialna za przygotowanie raportu: / *Person responsible for report preparation:*

first and last name	Pasi Huovinen
telephone/fax number:	+48 73 202 84 74
e-mail:	pasi.huovinen@ift.uni.wroc.pl

THE REPORT WAS MADE ON: **2018-11-26**

Stamp of the institution

Head of the Host Institution
signature(s) and seal(s)

Chief Accountant/Bursar
signature and seal

Fellow
signature

Uniwersytet Wrocławski

Umowa nr UMO-2015/19/P/ST2/03333
do wniosku nr 2015/19/P/ST2/03333

pt. Dissipative properties of strongly interacting matter formed in heavy-ion collisions

Agreement No. UMO-2015/19/P/ST2/03333
to the application No. 2015/19/P/ST2/03333

entitled: Dissipative properties of strongly interacting matter formed in heavy-ion collisions

Niniejszym oświadczam, że dane zawarte w załączonym wydruku raportu są całkowicie zgodne z danymi wprowadzonymi do arkusza excel i zapisanymi na płycie CD/DVD w postaci pliku pdf.

I hereby represent that the data provided in the enclosed printout fully comply with the data entered in the spreadsheet and saved on the CD/DVD as pdf.

. . . . . .

podpis i pieczęć pracownika jednostki odpowiedzialnego za przygotowanie plyty CD/DVD
signature and stamp of the Host Institution officer responsible for preparing the CD/DVD

Organised workshops:

- Printout of the webpage of "Workshop on Sampling Particles on the Cooper-Frye Transition Surface (2013)"
  `https://fias.institute/en/events/conferences/2013/sampling/`
- Printout of the webpage of "Workshop on Transport Theory in Heavy Ion Collisions (2013)"
  `https://fias.institute/en/events/conferences/2013/transport/`
- Printout of the webpage of "Modeling of the Parton-Hadron Phase Transition" symposium
  `https://itp.uni-frankfurt.de/~huovinen/hadronization.html`
- Extract from the annual report of ECT*: scientific report of the workshop "Flow and dissipation in ultrarelativistic Heavy Ion Collisions"

Workshop on Sampling Particles on the Cooper-Frye Transition Surface (2013)

Goal of the Workshop

The topic of the workshop is our present understanding of sampling particles on a fluid-Cooper Frye hypersurface. There are a lot of different algorithms on the market with different features concerning e.g. conservation laws in a local or global fashion. There are also still open issues concerning the viscous corrections to the distribution functions, the applicability of a hybrid framework to anisotropic hydrodynamics and how to preserve momentum correlations in the context of event-by-event fluctuations. The goal of the workshop is to define the status and potentially set up a taskforce to put together a community wide standard on how to perform the particle sampling in the most efficient way.

Organizers

- H. Petersen
- P. Huovinen
- M. Bleicher
- E. Bratkovskaya

Questions to be addressed

- How is the hypersurface determined? Which switching criterion is used and why?
- which EoS are you using? To which hadron transport model are you matching?
- Do you first sample momentum space and then coordinate space or the other way round?
- How are the momentum distributions sampled and in which frame?
- What criterion stops the sampling, i.e. how the number of sampled particles is fixed, how the chemical composition of the sampled ensemble is fixed?
- Are conservation laws obeyed? Which and how? Conservation of momentum in particular?
- How do you cope with negative contributions?
- How are viscous corrections to distribution function treated?
- Which programming language and why?

The workshop will be held from July 19 20 – 2013 at Martin-Niemöller-Haus in Schmitten, Germany. It is located roughly 35 minutes by car from Frankfurt airport in the Taunus. Surrounded by smaller mountains like the Feldberg and nice forest we expect a great working atmosphere.

Cost for accommodation in single rooms is: ~50 EUR per night

The hotel can be paid by VISA or Mastercard (no American Express).

We will take care of booking the rooms for you according to the arrival/departure information provided in the registration.

How to get there

Information in german by the Martin-Niemöller-Haus can be found here.

Public Transport:

From the airport:

1) S- Bahn S8/9 direction Frankfurt City to 'Hauptwache' ~15 minutes

2) U-Bahn (subway) U3 from 'Hauptwache' to the end station 'Oberursel Hohemark' ~45 minutes

3) Bus number 50 direction 'Graevenwiesbach' to the stop 'Schmitten-Arnoldshain Forsthaus' ~15 minutes

From the main train station ('Hauptbahnhof'):

1) Any S-Bahn direction south or east Frankfurt to the station 'Hauptwache' ~3 minutes

Steps 2) and 3) as mentioned above.

You can check timetables for the route from 'Flughafen Regionalbahnhof' to 'Arnoldshain-Forsthaus' here.

If you arrive late in the evening or need to catch a flight in the early morning or public transport is inconvenient for any other reason, please send us an email to sampling2013@fias.uni-frankfurt.de with your arrival and departure details (flight/train number and time). According to your needs, we will arrange transportation from the airport, train station or 'Oberursel Hohemark'.

Address: Am Eichwaldsfeld 3, 61389 Schmitten

By Taxi:

If you plan to take a taxi from the airport, there is the option to get a flat rate of 70 EUR per ride, if we organise it ahead via the Martin-Niemöller-Haus.

Please contact the taxi company 'Albert' directly via phone +49-6082-4444 and mention the workshop at the Martin-Niemöller-Haus, if you want to reserve one.

Conference Fee

The fee covers all local expenses and is: 150 EUR

The fee has to be paid by bank transfer before the meeting (deadline July 10th 2013) to this account:

Account holder name: FIAS

Account number: 0444224 00

Routing number: 50070010

IBAN: DE86500700100044422400

BIC/SWIFT-Code: DEUTDEFFXXX

Please make sure to indicate your name and the workshop identifier 'TRASA' on the transfer.

If you do not have a bank account in Europe, it will be possible to pay the fee in cash at the conference site to avoid large bank transfer fees.

Program Outline

found here. The presentation slides are available here.

Participant List

A list of participants can be found here.

Adjacent Workshop

A second workshop dedicated to transport theory in heavy ion collisions will be held from July 15th-17th 2013 at the same location. Please adjust the arrival dates in your registration email accordingly, if you plan to attend the second workshop as well.

Supported by:

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Workshop on Transport Theory in Heavy Ion Collisions (2013)

Goal of the Workshop

The goal of the workshop is to collect the current status of different hadron and parton transport approaches and to define open questions concerning e.g. the importance of multi-particle collisions, microscopic treatment of hadronization, self-consistent connection to potentials and fields, medium modification of particle properties. In addition, more technical questions in terms of implementation of the collision criterion, different ensemble techniques and their advantages and disadvantages, causality problem, ... shall be discussed.

Organizers

- H. Petersen
- M. Bleicher
- E. Bratkovskaya
- P. Huovinen

Question to be addressed

Physics:

- Which degrees of freedom are treated?
- Purely classical or are quantum effects treated?
- Are more than binary collisions treated? If yes, how?
- How is the high density phase treated?
- Are resonances/quasi-particles modified by the medium? If yes, how?
- How is hadronization treated, if at all?

- Which programming language? And why?
- How is the particle list organized? Which ensemble technique is used?
- How is the time ordering of collisions achieved, which collision criterion is used?

Location and Accommodation

The workshop will be held from July 15-17th 2013 at Martin-Niemoeller-Haus in Schmitten, Germany. It is located roughly 35 minutes by car from Frankfurt airport in the Taunus. Surrounded by smaller mountains like the Feldberg and nice forest we expect a great working atmosphere.

Cost for accommodation in single rooms is: ~50 EUR per night

The hotel can be paid by VISA or Mastercard (no American Express).

We will take care of booking the rooms for you according to the arrival/departure information provided in the registration.

How to get there

Information in german by the Martin-Niemöller-Haus can be found here.

Public Transport:

From the airport:

1) S- Bahn S8/9 direction Frankfurt City to 'Hauptwache' ~15 minutes

2) U-Bahn (subway) U3 from 'Hauptwache' to the end station 'Oberursel Hohemark' ~45 minutes

3) Bus number 50 direction 'Graevenwiesbach' to the stop 'Schmitten-Arnoldshain Forsthaus' ~15 minutes

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If you arrive late in the evening or need to catch a flight in the early morning or public transport is inconvenient for any other reason, please send us an email to transport2013@fias.uni-frankfurt.de with your arrival and departure details (flight/train number and time). According to your needs, we will arrange transportation from the airport, train station or 'Oberursel Hohemark'.

By Car:

Address: Am Eichwaldsfeld 3, 61389 Schmitten

By Taxi:

If you plan to take a taxi from the airport, there is the option to get a flat rate of 70 EUR per ride, if we organise it ahead via the Martin-Niemöller-Haus.

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BIC/SWIFT-Code: DEUTDEFFXXX

Please make sure to indicate your name and the workshop identifier 'TRASA' on the transfer.

If you do not have a bank account in Europe, it will be possible to pay the fee in cash at the

The program will consist of 2 1/2 days starting on Monday morning until Wednesday afternoon. One additional discussion sessions of 1 ½ hours length is foreseen.

The schedule can be found here. The presentation slides are available here.

Participant list

A list of participants can be found here.

Adjacent Workshop

A second workshop dedicated to our present understanding of sampling particles on a fluid-Cooper Frye hypersurface will be held from July 18th-20th 2013 at the same location. Please adjust the departure dates in your registration email accordingly, if you plan to attend the second workshop as well.

Supported by

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Modeling of the Parton-Hadron Phase Transition

HICforFAIR Symposium at Villasimius, Sardinia, Italy
The workshop venue is the ATAHOTEL Tanka Village Resort

Thursday September 23 - Friday September 24, 2010

Organisers:
Marcus Bleicher, Frankfurt
Carsten Greiner, Frankfurt
Pasi Huovinen, Frankfurt

click here for the workshop schedule

Scientific background:

The process how partonic matter formed in relativistic heavy-ion collisions hadronizes is basically unknown in microscopic level. Statistical hadronization and coalescence models have been successful in describing certain aspects of the data, but neither of them provides a consistent microscopic description for hadronization of the bulk matter. A description which is essential if we want to describe the collision from beginning to end using

microscopic models - partonic and hadronic cascades.

In this workshop our aim is to map what is known about hadronization processes and what might be the most promising approaches for the description of the hadronization of bulk partonic matter. In particular we want to address hadronization in vacuum and in cold nuclear matter on one hand, and the statistical hadronization and coalescence models on the other.

Practicalities:

- The organisers can be contacted at: huovinen(meow)th.physik.uni-frankfurt.de (Pasi Huovinen).
- Registration is now closed
- Local expenses (i.e. lodging and meals) will be covered by the organisers.
- The workshop will start Thursday September 23 at 9am.
- The workshop will end Friday September 24 at 6.30pm.
- click here for the workshop schedule
- We plan 20 min talks followed by 10 min discussion

List of participants:

1. Joerg Aichelin
2. Max Beitel
3. Rene Bellwied
4. Christopher Bignamini
5. Tamas Biro
6. Marcus Bluhm
7. Ioannis Bouras
8. Wolfgang Cassing
9. Yun Cheng
10. Laszlo Csernai
11. Andrej El
12. Lorenzo Ferroni
13. Kai Gallmeister
14. Vincenzo Greco
15. Christoph Herold

16. Szabolcs Horvát
17. Rudy Marty
18. Marlene Nahrgang
19. Claudia Ratti
20. Krzysztof Redlich
21. Felix Reining
22. Stefan Schramm
23. Giorgio Torrieri
24. Klaus Werner
25. Christian Wesp
26. Zhe Xu

Presentations:

1. Max Beitel, "Implementation of Hagedorn States into UrQMD"
2. Rene Bellwied, "The formation of hadrons inside the deconfined matter at RHIC & LHC"
3. Christopher Bignamini, "MCSTHAR++, implementation of the Statistical Hadronization Model in Herwig - Preliminary results"
4. Tamas Biro, "Hadronization in nonextensive models"
5. Wolfgang Cassing, "Dynamical hadronization within PHSD"
6. Yun Cheng, "Matching stages in heavy ion collision models" (pdf)
7. Lorenzo Ferroni, "The statistical hadronization model and the microcanonical ensemble of the hadron gas"
8. Kai Gallmeister, "Hadronization in Cold Nuclear Matter"
9. Vincenzo Greco, "Coalescence models for hadronization in uRHIC"
10. Carsten Greiner, "Hadronization at the phase boundary...?"
11. Szabolcs Horvat, "Entropy change during the final stages of expansion in relativistic fluid dynamics calculations"
12. Rudy Marty, "Simulation of the expansion and the phase transition of a quark plasma with the Nambu-Jona-Lasinio model"
13. Marlene Nahrgang, "Non-equilibrium fluctuations at the QCD phase transition"
14. Claudia Ratti, "Recent results on QCD thermodynamics: lattice QCD versus Hadron Resonance Gas model"
15. Krzysztof Redlich, "Probing phase diagram with fluctuations"
16. Stefan Schramm, "Hot and dense matter and the phase

transition in quark-hadron approaches "
17. Giorgio Torrieri, "Strangeness fluctuations as hadronization dynamics tests"
18. Klaus Werner, "Hydrodynamical evolution and hadronization in heavy ion collisions and pp scatterings"
19. Zhe Xu, "The Summary"

ECT*

Annual Report 2009

European Centre for Theoretical Studies in Nuclear Physics and Related Areas
Trento

Institutional Member of the European Science Foundation Expert Committee NuPECC

FONDAZIONE BRUNO KESSLER

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3.3.12 FLOW AND DISSIPATION IN ULTRARELATIVISTIC HEAVY ION COLLISIONS

DATE: September, 14 – 18, 2009

ORGANIZERS:

Pasi Huovinen *(Co-ordinator) (Frankfurt)*
Marcus Bleicher *(Frankfurt)*
Carsten Greiner *(Frankfurt)*
Peter Petreczky *(BNL)*
Raimond Snellings *(NIKHEF)*

NUMBER OF PARTICIPANTS: 41

MAIN TOPICS:

- Transport coefficients and equation of state
- Relativistic viscous hydrodynamics
- Parton and hadron cascades
- Measurement of flow
- Measurement of two- and three-particle correlations
- Ridges and Mach cones

SPEAKERS:

Barbara Betz *(Frankfurt)*
Marlene Nahrgang *(Frankfurt)*
Ante Bilandzic *(Nikhef)*
Harri Niemi *(Frankfurt)*
Ioannis Bouras *(Frankfurt)*
Chiho Nonaka *(Nagoya)*
Piotr Bozek *(Krakow)*
Robert Peschanski *(Saclay)*
Laszlo Csernai *(Bergen)*
Robert Peschanski *(Saclay)*
Gabriel Denicol *(Frankfurt)*
Andre Peshier *(Frankfurt)*
Andrej El *(Frankfurt)*
Hannah Petersen *(Frankfurt)*
ShinIchi Esumi *(Tsukuba)*
Peter Petreczky *(BNL)*
Francois Gelis *(Saclay)*
Scott Pratt *(MSU)*
Clement Gombeaud *(Saclay)*
Dirk Rischke *(Frankfurt)*

Ulrich Heinz *(OSU)*
Yuri Sinyukov *(Kiev)*
Tomoi Koide *(Frankfurt)*
Huichao Song *(OSU)*
Roy Lacey *(Stony Brook)*
Derek Teaney *(Stony Brook)*
Mike Lisa *(OSU)*
Giorgio Torrieri *(Frankfurt)*
Matt Luzum *(Saclay)*
Josh Vredevoogd *(MSU)*
Mauricio Martinez *(Frankfurt)*
Sergei Voloshin *(Wayne State)*
Denes Molnar *(Purdue)*
Fuqiang Wang *(Purdue)*
Akihiko Monnai *(Tokyo)*
Klaus Werner *(Subatech)*
Azwinndini Muronga *(Cape Town)*
Zhe Xu *(Frankfurt)*

SCIENTIFIC REPORT:

Aim and Purpose

The success of ideal-fluid hydrodynamics in reproducing the observed azimuthal anisotropy of particles produced in heavy-ion collisions at RHIC gave rise to the notion of quark-gluon plasma as a perfect fluid. As a matter with extremely low shear viscosity coefficient to entropy ratio. Since then there has been a great interest in the heavy-ion physics community to measure and determine how large the shear viscosity coefficient actually is, and the there has been a tremendous effort to develope viscous hydrodynamical and parton cascade models capable of describing dissipative processes in heavy ion collisions. In this workshop we aim to summarise what we do know from theory and experiment about the matter at high temperature: degrees of freedom, EoS and transport coefficients. What the present state of development of dissipative hydro and parton cascade is and what we can expect to learn in the near future, especially what are the prospects of achieving quantitative instead of qualitative understanding of hot QCD matter.

Results and Highlights

A general opinion among the participants was that the workshop was very successful with many excellent talks, which provided a state-of-the-art view of the theory and experiment. Among the recurring themes in the talks and discussions were

- The necessity to model thermalization and the possible buildup of flow during thremalization
- The need to check the different formalisms of relativistic dissipative hydrodynamics against kinetic theory, i.e. transport model calculations

• The urgent need to understand the dissipative corrections to thermal distribution functions
• The poorly understood mechanism of hadronization

Conclusions

There has been tremendous development in the viscous hydrodynamics and transport models, but a lot of work still remains to be done before the uncertainties of our models are under control and it is possible to extract the shear viscosity to entropy ratio of strongly interacting matter from the data. Nevertheless, the general opinion was that this task is doable and many new projects and collaborations were initiated.
The talks are available at the websites http://www.ect.it and http://th.physik.uni-frankfurt.de/huovinen/ect.html

Република Србија
Агенција за квалификације
Број: 612-01-03-3-429/2019
Датум: 07.02.2020. године
Мајке Јевросиме 51
Београд
јк

На основу члана 38. и члана 5. став 1. тачка 10. Закона о националном оквиру квалификација Републике Србије („Сл. гласник РС”, бр. 27/18 и 6/20), члана 131. став 1. Закона о високом образовању („Сл. гласник РС”, бр. 88/17, 27/18 – др. Закон, 73/18,67/19 и 6/20-др.Закон), и члана 136. став 1. Закона о општем управном поступку („Сл. гласник РС”, бр. 18/16 и 95/18 – Аутентично тумачење), решавајући по захтеву: Паси Ерки Хуовинен из Земуна, Република Србија, за признавање високошколске исправе издате у Финској Републици, ради запошљавања,

директор Агенције за квалификације доноси

Р Е Ш Е Њ Е

1. Диплома издата 18.06.1999. године од стране Универзитета Јивескиле (University of Yuvaskyla, Faculty of Mathematics and Natural Sciences), Јиваскила, Финска Република, на име Паси Ерки Хуовинен, рођен 24.07.1967. године у месту Варкаус, Финска Република, о завршеним докторским академским студијама високог образовања, студијски програм: Физика, дисертација:“Ограничења Хадроновог спектра термичке електромагнетне емисије у сударима тешких јона на CERN SPS”, звање/квалификација: Doctor of Philosophy/ Доктор наука, Доктор наука – физичке науке, **признаје се** као диплома докторских академских студија трећег степена високог образовања (180 ЕСПБ), у оквиру образовно-научног поља: Природно-математичке науке, научна, уметничка односно стручна област: Физичке науке, која одговара нивоу 8. НОКС-а, ради запошљавања.
2. Ово решење омогућава имаоцу општи приступ тржишту рада у Републици Србији, али га не ослобађа од испуњавања посебних услова за бављење професијама које су регулисане законом или другим прописом.
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О б р а з л о ж е њ е

Агенцији за квалификације обратио се Паси Ерки Хуовинен из Земуна, Република Србија, захтевом од 31.10.2019. године за признавање дипломе Универзитета Јивескиле (University of Yuvaskyla, Faculty of Mathematics and Natural Sciences), Јиваскила, Финска Република, докторске академске студије високог образовања, студијски програм: Физика, дисертација:“ Ограничења Хадроновог спектра термичке електромагнетне емисије у сударима тешких јона на CERN SPS”, звање/квалификација: Doctor of Philosophy/ Доктор наука, Доктор наука – физичке науке, ради запошљавања.

Уз захтев, подносилац захтева доставио је:

1) оверену копију дипломе 18.06.1999. године од стране Универзитета Јивескиле (University of Yuvaskyla, Faculty of Mathematics and Natural Sciences), Јиваскила, Финска Република, студијски програм: Физика, звање/квалификација: Doctor of Philosophy;
2) примерак докторске дисертације на изворном језику;
3) оверену копију транскрипта испита на енглеском и српском језику;
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5) пријавни формулар;
6) доказ о уплати таксе за професионално признавање.

Одредбом члана 136. став 1. Закона о општем управном поступку прописано је да се решењем одлучује о праву, обавези или правном интересу странке.

Одредбом члана 38. став 1. Закона о националном оквиру квалификација Републике Србије прописано је да захтев за професионално признавање заинтересовано лице подноси Агенцији. Ставом 2. наведеног члана прописано је да професионално признавање врши ENIC/NARIC центар, као организациони део Агенције, по претходно извршеном вредновању страног студијског програма, у складу са овим и законом који уређује високо образовање. Ставом 3. наведеног члана прописано је да вредновање страног студијског програма из става 2. овог члана, уколико међународним уговором није предвиђено другачије, врши се на основу врсте и нивоа постигнутих компетенција стечених завршетком студијског програма, узимајући у обзир систем образовања, односно систем квалификација у земљи у којој је високошколска исправа стечена, услова уписа, права која проистичу из стране високошколске исправе у земљи у којој је стечена и других релевантних чињеница, без разматрања формалних обележја и структуре студијског програма, у складу са принципима Конвенције о признавању квалификација из области високог образовања у европском региону ("Службени лист СЦГ - Међународни уговори", број 7/03), као што је уређено и одредбом члана 131. став 1. Закона о високом образовању. Ставом 4. наведеног члана прописано је да решење о професионалном признавању посебно садржи: назив, врсту, степен и трајање (обим) студијског програма, односно квалификације, који је наведен у страној високошколској исправи - на изворном језику и у преводу на српски језик и научну, уметничку, односно стручну област у оквиру које је остварен студијски програм, односно врсту и ниво квалификације у Републици Србији и ниво НОКС-а којем квалификација одговара. Ставом 5. наведеног члана прописано је да директор Агенције доноси решење о професионалном признавању у року од 60 дана од дана пријема уредног захтева. Ставом 6. наведеног члана прописано је да решење из става 4. овог члана не ослобађа имаоца од испуњавања посебних услова за обављање одређене професије прописане посебним законом. Ставом 7. наведеног члана прописано је да је решење о професионалном признавању коначно. Ставом 8. наведеног члана прописано је да изузетно од става 3. овог члана, уколико је високошколска исправа стечена на једном од првих 500 универзитета рангираних на једној од последње објављених међународних листа рангирања универзитета у свету Shanghai ranking consultancy (Шангајска листа), US News and World Report Ranking (листа рејтинга US News and World Report) или The Times Higher Education World University Rankings (Тајмсова листа рејтинга светских универзитета) решење о професионалном признавању доноси се без спровођења поступка вредновања страног студијског програма из става 2. овог члана у року од осам дана од дана пријема уредног захтева. Ставом 9. наведеног члана прописано је да се уколико није другачије прописано, на поступак професионалног признавања примењује закон којим се уређује општи управни поступак. Ставом 10. наведеног члана прописано је да решење о професионалном признавању има значај јавне исправе. Ставом 11. наведеног члана прописано је да ближе услове у погледу начина спровођења поступка професионалног признавања прописује министар надлежан за послове образовања.

Одредбом члана 5. став 1. тачка 10. Закона о националном оквиру квалификација Републике Србије, прописано је да се осми ниво стиче завршавањем докторских студија обима 180 ЕСПБ бодова (уз претходно завршене интегрисане академске, односно мастер академске студије).

Одлучујући о захтеву подносиоца, извршено је вредновање страног студијског програма на основу врсте и нивоа постигнутих компетенција стечених завршетком студијског програма, узимајући у обзир систем образовања, односно систем квалификација у земљи у којој је високошколска исправа стечена, услова уписа, права која проистичу из стране високошколске исправе у земљи у којој је стечена и других релевантних чињеница, без разматрања формалних обележја и структуре студијског програма и одлучено је да се диплома Универзитета Јивескиле (University of Yuvaskyla, Faculty of Mathematics and Natural Sciences), Јиваскила, Финска Република, признаје као диплома докторских академских студија трећег степена високог образовања (180 ЕСПБ), која одговара нивоу 8. НОКС-а.

Са напред наведених разлога директор Агенције је нашао да су у конкретном случају испуњени претходно наведени сви законом прописани услови да се призна диплома Универзитета Јивескиле (University of Yuvaskyla, Faculty of Mathematics and Natural Sciences), Јиваскила, Финска Република, као диплома докторских академских студија трећег степена високог образовања (180 ЕСПБ), у оквиру образовно-научног поља: Природно-математичке науке, научна, уметничка односно стручна област: Физичке науке, која одговара нивоу 8. НОКС-а, ради запошљавања.

Одредбама члана 14. Закона о изменама и допунама Закона о Националном оквиру квалификација Републике Србије („Сл. гласник РС“,бр. 60/2020) прописано је да ће се поступци професионалног признавања стране високошколске исправе започети до ступања на снагу овог закона, окончати према одредбама овог закона.

Такса за решење по захтеву, по тарифном броју 172. тачка 3, подтачка 4а) Закона о републичким административним таксама ("Службени гласник РС", бр. 43/03, 51/03-испр., 61/05, 101/05-др.закон, 5/09, 54/09, 50/11, 70/11- усклађени дин.изн., 55/12- усклађени дин.изн., 93/12, 47/13 - усклађени дин.изн, 65/13-др.закон, 57/14- усклађени дин.изн, 45/15- усклађени дин.изн, 83/15, 112/15, 50/16- усклађени дин.изн., 61/17- усклађени дин.изн., 113/17, 3/18, 50/18, 95/18 и 38/19), плаћена је и поништена.

Сходно претходно наведеном, донета је одлука као у диспозитиву решења.

Упутство о правном средству: Ово решење је коначно у управном поступку и против истог може се покренути управни спор. Тужба се подноси Управном суду у року од 30 дана од дана пријема овог решења.

Решење доставити:
- Душица Вучковић Стоиљковић – лично преузимање;
- Архиви.

ДИРЕКТОР

проф. др Часлав Митровић