

**Frontiers of Hadronic Physics: Brain Circulation Kick off Workshop  
With BNL Nuclear, Lattice Gauge, and High Energy Theory Groups  
Thursday, March 21, 2013. Large Seminar Room, Physics, Bldg. 510.**

<b>Introduction and Overview. Chair: Taku Izubuchi (BNL)</b>		
<b>9:00-9:10 a.m.</b>	Welcome and introduction	Tom Ludlam (BNL)
<b>9:10-9:20 a.m.</b>	Overview of Brain workshop	Tetsuo Hatsuda (RIKEN)
<b>9:20-9:30 a.m.</b>	Extreme glue states: through a colored glass, darkly	Raju Venugopalan (BNL)
<b>Morning Session I, "QCD on a Lattice at Zero Temperature." Chair: Amarjit Soni (BNL)</b>		
<b>9:30-9:40 a.m.</b>	B physics with non-perturbatively tuned relativistic heavy quarks	Christoph Lehner (BNL)
<b>9:40-10:00 a.m.</b>	Progress Towards the First Measurement of Direct CP-Violation in $K \rightarrow \pi\pi$ Decays From First Principles	Christopher Kelly (Columbia)
<b>10:00-10:20 a.m.</b>	Heavy quarkonium potential with almost physical quark masses from lattice QCD	Taichi Kawanai (RIKEN)
<b>10:20-10:30 a.m.</b>	Hosotani mechanism redux	Tatsuhiko Misumi (BNL)
<b>10:30-11:00 a.m.</b>	Coffee Break	
<b>Morning Session II, "Perturbative QCD and spin physics." Chair: Raju Venugopalan (BNL)</b>		
<b>11:00-11:20 a.m.</b>	The story behind a half	Marco Stratmann (BNL)
<b>11:20-11:40 a.m.</b>	Recent theoretical developments in twist-3 physics	Shinsuke Yoshida (RIKEN)
<b>11:40-11:50 a.m.</b>	QCD at low, and no so low, $x$	Martin Hentschinki (BNL)
<b>11:50-12:00 p.m.</b>	Factorization methods for heavy quarkonium production	Yan-Qing Ma (RIKEN)
<b>12:00-12:20 p.m.</b>	Resummation of nonglobal logarithms at finite $N_c$	Yoshitaka Hatta (Kyoto)
<b>12:20—2:00 p.m.</b>	Lunch (Berkner Hall, Bldg. 488)	

<b>Afternoon Session I, "Quark-Gluon Plasma, from Lattice to Experiment." Chair: Peter Petreczky (BNL)</b>		
<b>2:00-2:20 p.m.</b>	Exploration of strongly interacting matter under extreme conditions	Swagato Mukherjee (BNL)
<b>2:20-2:40 p.m.</b>	Symmetry breaking of QCD in a strong magnetic field	Yoshimasa Hidaka (RIKEN)
<b>2:40-3:00 p.m.</b>	Classical fields in heavy ion collisions	Vladimir Skokov (BNL)
<b>3:00-3:20 p.m.</b>	Ultrasoft Fermion Mode at Finite Temperature and Density	Daisuke Satow (RIKEN)
<b>3:20-3:30 p.m.</b>	Making sense of the ridge in pp and pA	Adam Bzdak (BNL)
<b>3:30-4:00 p.m.</b>	Coffee Break (Large Seminar Lobby, Bldg. 510)	
<b>Afternoon Session II, "More Quark-Gluon Plasma." Chair: Dima Kharzeev (BNL &amp; Stony Brook)</b>		
<b>4:00-4:20 p.m.</b>	Net baryon number probability distribution along the phase boundary	Kenji Morita (RIKEN)
<b>4:20-4:30 p.m.</b>	QCD phase diagram and imaginary chemical potential	Koji Kashiwa (RIKEN)
<b>4:30-4:45 p.m.</b>	Estimation of electric conductivity of the quark gluon plasma via asymmetric heavy-ion collisions	Yuji Hirono (RIKEN)
<b>4:45-5:00 p.m.</b>	Functional renormalization group and cold atoms	Yuya Tanizaki (RIKEN)

**\*\*END OF WORKSHOP\*\***

The workshop dinner will be held the evening of March 21, 2013 at 7pm:

Orto Restaurant  
90 N Country Road, Miller Place, NY 11764  
(631) 473-0014

Further information and directions can be found in the physics lobby.

*(If you require assistance, please contact Kerry Kirchhoff, (631) 344-3102 (onsite x3102)  
or zendzian@bnl.gov)*

***Thank you for your participation in the 2013 Brain Circulation Kick off Workshop.***