

Domain Wall Fermions at 10 Years

March 14 – 17, 2007

Physics Department
Large Seminar Room

Wednesday, March 14

Welcome Reception – 6:00 to 7:30 – Berkner Hall Lobby

Thursday, March 15

08:00 **Registration / Continental Breakfast / Collection of Proceedings Pkgs (Large Seminar Room Lounge)**

(Chairperson: Mike Creutz)

08:30 Welcome (*Nicholas Samios, Director, RBRC; Thomas Blum; Amarjit Soni*)

08:40 TBA (*David Kaplan*)

09:20 2+1 Flavor DWF QCD: Zero & Finite Temperature Ensembles and $\Delta S = 1$ Physics (*Robert Mawhinney*)

10:00 Dynamical QCD with Exact Chiral Symmetry --- from the p-Regime to the ϵ -Regime (*Shoji Hashimoto*)

10:40 **Coffee Break**

(Chairperson: Sinya Aoki)

11:10 QCD Simulations at Realistic Quark Masses: Probing the Chiral Limit (*Gerrit Schierholz*)

11:50 Chiral Phase Transition in Large N QCD with Overlap Fermions (*Rajamani Narayanan*)

12:30 **Lunch**

(Chairperson: Tetsuya Onogi)

02:00 Domain Wall Fermions and Other Five-Dimensional Algorithms (*Anthony Kennedy*)

Speeding up Domain Wall Fermion Algorithms using QCDCOLLAB (*Artan Borici*)

Moebius Domain Wall Fermion (*Richard Brower*)

3:00 Gap Domain Wall Fermions (*Pavlos Vranas*)

Approaching the Chiral Limit with Dynamical Overlap Fermions (*Takashi Kaneko*)

Topological Susceptibility in the Trivial Sector with Dynamical Overlap (*Ting-Wai Chiu*)

04:00 **Coffee Break**

(Chairperson: Chris Allton)

04:30 Baryons from 2+1 Flavor DWF QCD (*Christopher Maynard*)

Spectrum Study of $N_f=2$ QCD with Overlap Fermions (*Junichi Noaki*)

Isospin Breaking Study with $N_f=2$ Domain-Wall QCD + Quenched QED Simulation (*Takumi Doi*)

05:30 Chiral Extrapolations for Domain Wall Fermions (*Meifeng Lin*)

Quark Condensate from Finite-Size Study (*Silvia Necco*)

Friday, March 16

08:00 Continental Breakfast

(Chairperson: Norman Christ)

08:30 Domain Wall Filters (**Herbert Neuberger**)

09:10 Low-Energy Couplings from Lattice Simulations in the ε Regime (**Pilar Hernandez**)

09:50 Fat Links for Dynamical Chiral Fermions (**Stefan Schaefer**)

10:30 Coffee Break

(Chairperson: Rajamani Naryanan)

11:00 Hadron Structure with Domain Wall Fermions on a Staggered Sea (**John Negele**)

11:40 Status of the 2+1 Flavor Wilson-Clover Simulation of QCD by PACS-CS Collaboration (**Yoshinobu Kuramashi**)

12:20 Lunch

(Chairperson: Stephen Sharpe)

02:00 Hadron Scattering from Lattice QCD (**Kostas Orginos**)

Semileptonic Hyperon Decay in Full Lattice QCD (**Huey-Wen Lin**)

Nucleon Structure from 2+1 Flavor DWF Simulations (**Takeshi Yamazaki**)

03:00 Domain Wall Fermions, Approximate Chiral Symmetry and Weak Matrix Elements (**Norman Christ**)

B_K with two Flavors of Dynamical Overlap Fermions (**Norikazu Yamada**)

B_K with 2+1-Flavour Domain Wall Fermions (**Saul Cohen**)

04:00 Coffee Break

(Chairperson: Urs Heller)

04:30 Update on B_K with a Mixed Action (**Jack Laiho**)

K13 Form Factor with 2+1 Flavours of Domain Wall Fermions (**James Zanotti**)

Chiral Violations in Perturbative Domain Wall QCD (**Stefano Capitani**)

05:30 Electroweak Theory on the Lattice (**Yoshio Kikukawa**)

Should We Change the Topology at All? (**Tetsuya Onogi**)

Chiral Behavior in Mixed Action Calculations with 2+1 Sea Quark Flavors (**Laurent Lellouch**)

Workshop Dinner – 7:00 to 9:00 – Brookhaven Center South Room

Saturday, March 17

08:00 Continental Breakfast

(Chairperson: Pilar Hernandez)

08:30 Tunneling HMC Algorithm (**Yigal Shamir**)

09:10 Simulation of Gauge Action from the Overlap Operator (**Keh-Fei Liu**)

09:50 Spectral Sum Rules, Duality Violations and Low-Energy Constants (**Maarten Golterman**)

10:30 Coffee Break

(Chairperson: Zoltan Fodor)

- 11:00 Schrodinger Functional Boundary Conditions for Domain Wall Quarks (*Stefan Sint*)
- 11:20 Non-Perturbative Renormalization of 4 Fermi Operator with Schroedinger Functional Scheme (*Yusuke Taniguchi*)
- 11:40 Future of Chiral Extrapolations with DWF (*Stephen Sharpe*)
- 12:20 Meeting Adjourns