

ECT* workshop: Chiral dynamics with Wilson fermions

Dates: October 24. - October 28. 2011

Organizers:

Kim Splittorff (*Co-ordinator*)

Poul Henrik Damgaard

Jac Verbaarschot

The Niels Bohr Institute

The Niels Bohr International Academy

Stony Brook

Program:

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 - 9:30	Welcome + Sharpe	Verbaarschot	Wenger	Pena	Lüscher
09:30 - 10:00	Sharpe	Kieburg	Giusti	Necco	Lüscher
10:00 - 11:00	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>
11:00 - 11:30	Aoki	Deuzeman	Akemann	Osborn	Bloch
11:30 - 12:00	Aoki	Heller	Rummukainen	Sommer	Golterman
12:00 - 14:00	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>
14:00 - 14:30	Creutz	Gattringer	Schaefer	Shindler	
14:30 - 15:00	Svetitsky	Schierenberg	Jansen	Bruckmann	
15:00 - 16:00	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	<i>Coffee</i>	
16:00 - 16:30	Lehner	Kanazawa	Herdoiza	Lombardo	
16:30 - 17:00		Wettig	Bergner		
20:00 - 23:00				Workshop dinner	

Titles:

Gernot Akemann

Random Matrix Theory for the Hermitian Wilson Dirac Operator

Sinya Aoki

*Lattice QCD with Wilson quarks and chiral perturbation theory
– From introduction to recent topics –*

Georg Bergner

*Real eigenmodes of the non-Hermitian Wilson-Dirac operator
and simulations of supersymmetric Yang-Mills theory*

Jacques Bloch

The sign problem in random matrix simulations

Falk Bruckmann

Dirac spectra at high temperature: Poisson statistics and Anderson localization

Mike Creutz

Isospin breaking and the Aoki phase

Albert Deuzeman

Exploring the Wilson Dirac spectrum with RMT

Christof Gattringer

Canonical determinants with Wilson fermions

Leonardo Giusti

Thermodynamic potentials from twisted boundary conditions

Maarten Golterman

Transfer Matrix for Partially Quenched QCD

Urs M. Heller

Eigenvalues of the Hermitian Wilson-Dirac operator and random matrix theory

Gregorio Herdoiza

Overlap Valence Quarks on a Wilson Twisted Mass Sea

Karl Jansen

Chiral perturbation theory analysis of four flavour twisted mass simulation results

Takuya Kanazawa

Singular values of the Dirac operator in dense QCD-like theories: Part 1

Mario Kieburg

Eigenvalue densities of the Wilson Dirac operator in the infrared limit and RMT

Christoph Lehner

Anisotropic Wilson fermions and heavy quarks on the lattice

Maria Paola Lombardo

*Equation of state, and chiral condensate renormalization
in $N_f=2$ QCD with twisted mass Wilson fermions*

Martin Lüscher

*Renormalization and continuum limit of the gradient flow
in non-Abelian gauge theories*

Silvia Necco (with Hernandez and Pena)

Probing the mixed regime of ChPT with mixed actions: meson correlators

James Osborn

Random Matrix Theory at higher order

Carlos Pena (with Necco and Hernandez)

Probing the mixed regime of ChPT with mixed actions: spectral observables

Kari Rummukainen

Infrared fixed point in $SU(2)$ gauge theory with fundamental and adjoint representation fermions

Stefan Schaefer

Open boundary conditions and the scaling of the HMC algorithm

Sebastian Schierenberg

Wigner surmises for mixed ensembles in random matrix theory

Stephen Sharpe

Using chiral perturbation theory to study Wilson fermions: introduction and open questions

Andrea Shindler

The spectral density of the Wilson operator away and close to the threshold

Rainer Sommer

Fundamental parameters of $N_f=2$ QCD

Benjamin Svetitsky

In the conformal window

Jac Verbaarschot

Wilson Fermions, Topology and Low Energy Constants

Urs Wenger

Topology and Random Matrix Theory for $N_f=1$ QCD

Tilo Wettig

Singular values of the Dirac operator in dense QCD-like theories: Part 2