

## Hadron Spectrum and Quark Masses

*Monday 2:10 - 3:50 Hartmut Wittig*

Ting-Wai Chiu  
Craig McNeile

Claudio Rebbi

Urs Wenger

Michael Cheng

### Joly Lecture Theatre

Hadron Masses in Lattice QCD with Exact Chiral Symmetry  
Matrix elements and baryon spectroscopy from unquenched lattice QCD with improved staggered quarks  
Light hadron spectroscopy in quenched QCD with overlap quarks on a large lattice  
Lattice QCD with  $N_f=2$  light Wilson fermions: the phase structure and scaling  
Scaling test of the P4-improved staggered fermion action

*Monday 4:20 - 6:20 (i) TBA*

Oliver Baer

Jon Bailey

Derek Leinweber  
Chris Allton

Shinji Takeda  
Abdou Abdel-Rehim

### Joly Lecture Theatre

Determining the low energy parameters of Wilson Chiral Perturbation Theory  
Staggered Lattice Artifacts in 3-Flavor Heavy Baryon Chiral Perturbation Theory  
Power Counting Regime of Chiral Extrapolation and Beyond  
Chiral and Continuum Extrapolation of Partially-Quenched Hadron Masses  
Wilson chiral perturbation theory for 2+1 flavors  
Maximal twist and the spectrum of quenched twisted mass lattice QCD

*Monday 4:20 - 6:20 (ii) John Negele*

Pietro Faccioli

Biagio Lucini  
Konstantinos Orginos  
Andreas Schaefer  
Wolfram Schroers

Tomomi Ishikawa

### Maxwell Lecture Theatre

Studying diquark correlations in the nucleon by means of lattice QCD simulations  
Searching for diquarks in hadrons  
Diquark properties from lattice QCD  
Moments of Generalized Tensor Parton Distributions  
Hadron structure with light dynamical quarks: generalized parton distributions  
Light hadron spectrum and quark masses in 2+1 flavor QCD

*Tuesday 4:00 - 6:00 Christof Gattringer*

Johan Bijnens

Christoph Haefeli  
Kiyoshi Sasaki

Shoichi Sasaki  
Merritt Cook  
Dirk Pleiter

### Joly Lecture Theatre

Two Loop Partially Quenched and Finite Volume Chiral Perturbation Theory Results  
The pion mass in finite volume to two loops  
Excited Baryon Spectroscopy from Lattice QCD: Finite Size Effect and Hyperfine Mass Splitting  
Bound state spectrum in the finite volume  
Hybrid Exotic Meson Decay Width  
Meson decay constants from  $N_f=2$  clover fermions

*Wednesday 9:00 - 10:40 Steven Gottlieb*

Takumi Doi

Tung-Han Hsieh

Tamas G. Kovacs  
Ben Lasscock  
Nilmani Mathur

### Joly Lecture Theatre

Anisotropic lattice QCD study of pentaquark baryons in spin 3/2 channel  
Mass Spectra of Pentaquarks -- Overlap Fermion versus Wilson Fermion  
Pentaquark search with spatially non-trivial operators  
Spin-3/2 Pentaquark Resonance Signature  
A study of tetraquark mesonium on the lattice with overlap fermion

*Wednesday 10:55 - 11:55 Steven Gottlieb*

John Negele  
Hideo Suganuma  
Toru Takahashi

**Joly Lecture Theatre**

The Quark Structure of Pentaquarks  
Lattice QCD Evidence for Exotic Tetraquark Resonance  
Search for the  $S=+1$  pentaquarks in quenched lattice QCD

*Thursday 2:10 - 3:50 Roberto Frezzotti*

Federico Farchioni

**Joly Lecture Theatre**

Analysis of unquenched twisted-mass data with Wilson and DBW2 action  
Role of the Clover operator in lattice QCD at maximal twist close to the chiral limit  
Dynamical Wilson twisted mass fermions: a scaling analysis  
Baryon spectroscopy with spatially improved quark sources  
An Exploration of Extended Baryon Operators

Vittorio Lubicz

Ines Wetzorke  
Christian Hagen  
Adam Lichtl

*Thursday 4:20 - 6:20 (i) Norman Christ*

Martin Gürtler  
Roger Horsley

**Joly Lecture Theatre**

Quark masses from quenched overlap fermions  
A determination of the strange quark mass for unquenched clover fermions using the AWI  
Non-perturbatively Renormalized Light Quark Masses with Two Dynamical Fermions  
Light meson and strange quark masses in 2+1 flavour Domain Wall QCD from QCDOC  
Operator product expansion and quark condensate from LQCD in coordinate space  
Double poles in Lattice QCD with mixed actions

Cecilia Tarantino

Robert Tweedie

Valentina Porretti

Maarten Golterman

*Thursday 4:20 - 6:20 (ii) Keh-fei Liu*

Eric Gregory  
Alan O'Caia  
Sasa Prelovsek

**Maxwell Lecture Theatre**

Pseudoscalar Singlet Physics with Staggered Fermions  
Isovector and Isoscalar Scalar Mesons with All-to-all Propagators  
Effects of partial quenching and staggered fermions on the scalar correlator  
Charmonium Spectrum with all-to-all propagators  
Interaction studies of a heavy-light meson-baryon system  
A comprehensive search for the  $\Theta^{++}$  pentaquark on the lattice (II)

Mehmet Oktay  
H. Rudolf Fiebig  
Balint Toth

*Friday 2:10 - 3:50 TBA*

Christopher Aubin  
Yusuke Namekawa  
Antonios Tsapalis  
Norikazu Yamada

**Joly Lecture Theatre**

Lowest Order Hadronic Contribution to the Muon  $g-2$   
Electromagnetic mass difference on the lattice  
The  $N$  to  $\Delta$  transition form factors with light dynamical fermions  
Electromagnetic properties of hadrons with the two flavor dynamical domain wall fermions  
Analysis of  $N^{*}$  spectra using improved interpolating field operators

Subhasish Basak

*Friday 4:20 - 6:20 Tom Blum*

Koichi Hashimoto

**Joly Lecture Theatre**

The static quark potential in 2+1 flavour Domain Wall QCD from QCDOC  
Probing the chiral limit of  $m_{\pi}$  and  $f_{\pi}$  in 2+1 flavor QCD with domain wall fermions from QCDOC  
Gauge Action Effects on 3 Flavor QCD with Domain Wall Fermions

Meifeng Lin

Robert Mawhinney

Shigemi Ohta  
Tommy Burch  
Chris Maynard

Heavy-light mesons with domain wall fermions  
Excited meson spectroscopy with chirally improved fermions  
Baryons in 2+1 flavour Domain Wall QCD from QCDOC

### *Posters*

Constantia Alexandrou

Examining whether the volume dependence of spectral weights can distinguish between a resonance and a scattering state

Ronald Babich

Light baryon spectroscopy and diquark correlations in quenched QCD with overlap quarks on a large lattice

Claude Bernard

Update on  $\pi$ , K physics

Dieter Hierl

The Exotic Baryon  $\Theta^{+}(1540)$  on the Lattice

Alan Irving

Scalar glueball and meson spectroscopy in unquenched lattice QCD with improved staggered quarks

Taku Izubuchi

Study of Flavour singlet meson in two-flavour Domain Wall QCD

Jimmy Juge

Exotic Spectroscopy on Dynamical Anisotropic Lattices

Giannis Koutsou

Density-density correlators using all to all propagators

Randy Lewis

The hadron spectrum from twisted mass QCD with a strange quark

Frank Lee

Magnetic polarizability of hadrons in the background field method

Jenny Pickavance

Twisted mass fermions: neutral pion masses from disconnected contributions

Motoo Sekiguchi

$I=1/2$  Scalar and Axial Vector Mesons

Yukinari Sumino

OPE Analysis of QCD Potential and Determination of  $\Lambda_{\overline{MS}}$

Aurora Trivini

Asymptotic Scaling and Monte Carlo Data

Naoya Ukita

Scaling test of dynamical Wilson twisted mass fermions with DBW2 gauge action

Georg von Hippel

Automated Methods in Chiral Perturbation Theory on the Lattice

Walter Wilcox

Disconnected Loops with Twisted Mass Lattice QCD

Anthony Williams

Light-Quark FLIC Fermion Simulations of the  $1^{-+}$  Exotic Meson