James E. Hetrick

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Education

Ph.D. Theoretical High Energy Physics, University of Minnesota, 1990.

Thesis: "Chern-Simons Field Theory at Finite Temperature".

Advisor: Yutaka Hosotani

B.S. Physics, Case Western Reserve University, 1982.

Junior Year Abroad: Sussex University, 1980-81.

Experience

University of the Pacific, Physics Department, Professor and Department Chair, 2005–present

University of the Pacific, Physics Department, Associate Professor and Department Chair, 2001-2005

University of the Pacific, Physics Department, Assistant Professor and Department Chair, 1997-2001

Washington University, St. Louis, Physics Department, Research Associate, 1996-1997

Physics Department, University of Arizona, Research Associate, 1994-1996

Department of Physics, University of Arizona, Research Associate, 1994-1996

Institute for Theoretical Physics, University of Arizona, Postdoctoral Research Fellow, 1992-1994

Interdisciplinary Project for Supercomputing, ETH Zürich, Postdoctoral Research Fellow, 1990-1992

South Pole Station, Antarctica, Research Scientist, 1982-83 (wintered over)

Research

Fields of Research Interest

Lattice Gauge Theory, Computational Physics, Topological Aspects of Gauge Theories, Astrophysics, Data Science

Signi cant (>100 citations) Peer-Reviewed Publications

A. Bazavov et al. [MILC Fermilab Lattice Collaborations]. B- and D-meson decay constants from three-flavor lattice QCD. *Phys.Rev.*, D85:114506, 2012.

A. Bazavov et al. [MILC Collaboration]. Nonperturbative QCD simulations with 2+1 flavors of improved staggered quarks. *Rev.Mod.Phys.*, 82:1349–1417, 2010.

J. Bailey et al. [MILC Fermilab Lattice Collaborations]. The $B \to \pi \ell \nu$ semileptonic form factor from three-flavor lattice QCD: A Model-independent determination of $|V_{ub}|$. *Phys.Rev.*, D79:054507, 2009.

C. Bernard et al. [MILC Collaboration]. QCD equation of state with 2+1 flavors of improved staggered quarks. *Phys.Rev.*, D75:094505, 2007.

C. Aubin et al. [MILC Fermilab Lattice Collaborations]. Charmed meson decay constants in three-flavor lattice QCD. *Phys.Rev.Lett.*, 95:122002, 2005.

C. Aubin et al. [MILC Collaboration]. Light pseudoscalar decay constants, quark masses, and low energy constants from three-flavor lattice QCD.

National Science Foundation, Division of Information and Intelligent Systems, “High-Performance Computing Education at the University of the Pacific”, $34,626, 2012

National Science Foundation, Division of Theoretical Physics, “QCD Physics and Beyond the Standard Model on the Lattice”, $292,260, 2010

National Science Foundation, Division of Theoretical Physics, “Investigations in Lattice Gauge Theory”, $284,939, 2007

California Science Project, K-12 STEM Teacher Professional Development, “The Delta Sierra Science Project” $55,000/year, 2002-2014

National Science Foundation, Division of Undergraduate Education, “Action Through STEM Collaborations to Educate New Teachers (ASCENT)”, $345,220, *pending*

Professional Activities

Reviewer for: *Physical Review, Physical Review Letters*,

Member, American Physical Society (APS), American Association for the Advancement of Science (AAAS)