



复旦大学物理系 物质科学报告

Time: 2:00pm, Tuesday, 2018.7.03

Location: Physics Building(Jiangwan), Room C108

The social life of heavy quarks

Marek Karliner

Tel Aviv University, Israel

I will discuss recent developments regarding new types of hadrons involving heavy quarks: hadronic molecules, doubly heavy baryons, stable tetraquarks and others. I will also explain how the discovery of the doubly heavy baryon leads to quark-level analogue of nuclear fusion, with energy release per reaction an order of magnitude greater than in ordinary fusion.



Marek Karliner,

Education:

- B.Sc. In Physics (magna cum laude) Tel Aviv University, 1979
- Ph.D. In Physics, Tel-Aviv University, 1984

Academic Appointments:

- Research Associate, SLAC National Laboratory, Stanford University, 1984-1988
- Senior Lecturer of Physics, Tel Aviv University, 1987-1990
- Scientific Advisor, Faculty of Physics, Weizmann Institute of Science, 1988-Present
- Associate Professor of Physics, Tel Aviv University, 1990-1995
- Professor of Physics, Tel Aviv University, 1995-Present

- Visiting Professor of Physics, Cavendish Laboratory, University of Cambridge, 2003-2005
- Head, Particle Physics Department, Tel Aviv University, 2006-2010

Awards and Prizes:

- Outstanding Physics Student Award, Israel Physical Society, 1977
- Italian Government Young Scientist Scholarship, 1981
- Best Student Award, International School of Subnuclear Physics, Erice, Italy, 1981
- French Government Young Scientist Scholarship, 1982
- Fulbright Graduate Fellowship Award, US-Israel Educational Foundation, 1983
- Weizmann Post-Doctoral Fellowship for Scientific Research, 1984
- Alon Fellowship for Outstanding Young Faculty, Israel Higher Education Council, 1987
- Bat Sheva de Rothschild Fellowship for Outstanding Young Researchers, 1988
- Edouard and Francoise Jaupart Chair of Theoretical Physics of Particles and Fields, 2007-Present
- Foreign Member of the Polish Academy of Arts and Sciences, 2017

Research:

- Quantum Chromodynamics and strong interactions
- Internal structure of hadrons, forces between quarks and gluons
- Hadron spectroscopy
- Exotic hadrons containing heavy quarks
- Solitons and their applications in strong interactions
- Asymptotic properties of perturbation series in quantum field theory

