Curriculum Vitae: Peng YE （中文名：叶鹏）

CONTACT INFO

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EDUCATION EXPERIENCES

(*2003.9-2007.7*) **Undergraduate, Bachelor of Science, Physics major**
in National Base for Basic Sciences, Department of Physics, Sun Yat-sen University (SYSU), Guangzhou, China
Supervisor: Prof. Xiang-Qian LUO (leading theorist in Paticle Physics Group) ***GPA:*** Rank 2.

(*Since 2007.9*) **PhD program, Physics (condensed matter theory)**
in Institute for Advanced Study (IAS), Tsinghua University, Beijing, China
Supervisor: Prof. Zheng-Yu WENG (C. N. Yang Professorship in IAS)
Assistant Positions: RA (since 2007.9); TA: Course "*College Physics*" (fall 2008) and "*Quantum theory and Statistical Physics*" (spring 2009)
PhD Qualification Exam: The first rank in exam of modern theoretical physics.

HONORS / AWARDS

- Chen Ning Yang Fellowship (Tsinghua, 9/13/2007);
- SYSU Outstanding Undergraduate (Graduation Ceremony in 7/2007);
- Sumitomo Co. (Japan) Scholarship (9/2006);
- SYSU Excellent Student Scholarship (The First Grade Award) (9/2006);
- SYSU Excellent Student Scholarship (The Second Grade Award) (9/2005);
- SYSU Excellent Student Scholarship (The Third Grade Award) (9/2004).

RESEARCH INTERESTS

- Analytic theory of lattice quark action in Quantum Chromodynamics;
- Mechanism of High-temperature superconductivity (*High-Tc*);
- Topology and quantization of low dimensional gauge field theories.

ACADEMIC ACTIVITIES

- series of academic activities related to quantum field theories/condensed matter physics/cold atom physics, organized by Kavli Institute of Theoretical Physics of China (KITPC) since 2007;
- series of international conferences of cold atom and degenerate quantum gas physics (IAS);
- series of Summer Seminars of strongly correlated electron system (IAS).

RESEARCH STATEMENT / PROGRESS

My research interests currently cover quantum field theories of strongly correlated electron system. It is amazing that the global properties of gauge field theories govern great amounts of novel quantum phenomena in condensed matter physics. And the theories' topology and quantization give us a fascinating roadmap for explaining and predicting "unconventional" experimental phenomena, including the long-time mysterious problem: *High-Tc*. In collaboration with theorists from IAS Tsinghua, Universität zu Köln, and Stanford University, we indeed find that there is a topological gauge field theory which can capture the dominant physics of doped Mott insulators. We expect that *non*-Landau-Ginzburg-type order parameters in our theory are responsible for characterization of the complicated global phase diagram of cuprates.