NYU SHANGHAI PHYSICS

Founders of NYU Shanghai include New York University, China, and East China Normal University (ECNU). NYU Shanghai is designed to cultivate globally-minded graduates through innovative teaching and learning environments, a vibrant community of scholars and students, and extensive research opportunities across disciplines. NYU Shanghai's mission is to advance knowledge and understanding through research, to develop innovative educational programs, and to promote economic development and social welfare through collaboration with local and international partners.

EDUCATION & TRAINING

Undergraduate Studies

NYU Shanghai offers a comprehensive curriculum in Physics, providing students with a strong theoretical training and emphasizing the applications of physics in various fields. The Department of Physics offers a Bachelor of Arts degree in Physics, which can be paired with majors in Mathematics, Computer Science, or any other field. Students can also choose to specialize in areas such as Biophysics, Condensed Matter Physics, High Energy Physics, and Theoretical Physics.

Graduate Training

NYU Shanghai provides a unique research environment for graduate students, offering a variety of opportunities to explore cutting-edge research at the forefront of physics. The Department of Physics offers a Master of Science degree in Physics, a Ph.D. degree in Physics, and several joint degree programs with ECNU. Graduate students have access to state-of-the-art facilities and world-class faculty, and opportunities for international collaboration.

RESEARCH

NYU-ECNU Institute of Physics at NYU Shanghai

The NYU-ECNU Institute of Physics at NYU Shanghai is an internationally recognized center for research and collaboration in fundamental physics and its applications. The Institute is home to a vibrant community of scholars with expertise in a wide range of fields, from quantum information science to high energy physics. The Institute is also a hub for international collaboration, hosting visiting scholars and students from around the world.
The opportunity to actively participate in research projects under the mentorship of a professor who is active at the forefront of his field. Students apply for positions in a 3-month summer program with a flexible starting date. During the program, students will have the chance to foster entry into physics research-centered careers for highly motivated undergraduate students with a strong interest in the field.

The NYU-ECNU Institute of Physics at NYU Shanghai provides a number of research experiences for students everywhere. One such program is the NYU Shanghai Summer Undergraduate Research Experience Program in Physics (SRPP). SRPP is designed to offer students a unique opportunity to engage in cutting-edge research projects under the guidance of experienced mentors. The program aims to provide students with hands-on experience in various aspects of physics, including experimental research, theoretical analysis, and computational modeling.

Student Internship Opportunities: SRPP

Student Internship Opportunities: SRPP

**Faculty Advisors**

- **Professor Zhang**
  - **Education:**
    - Ph.D., Physics, Yale University, 2012
    - B.S., Physics, Peking University, 2004
  - **Research Interests:**
    - Quantum photonics
    - Quantum information processing
    - Quantum entanglement
    - Quantum thermodynamics
  - **Publications:**
    - Physical Review Letters, 2016
    - Nature Communications, 2017

- **Professor Huang**
  - **Education:**
    - Ph.D., Mathematics, Courant Institute, New York University, 2008
    - B.S., Applied Physics & Applied Mathematics, Zhiyuan College, Shanghai Jiao Tong University, 2002
  - **Research Interests:**
    - Fluid dynamics
    - Turbulence
    - Geophysical flows
  - **Publications:**
    - Journal of Fluid Mechanics, 2010
    - Geophysical Research Letters, 2012
    - Annual Review of Fluid Mechanics, 2014

- **Professor Chen**
  - **Education:**
    - Ph.D., Materials Science and Engineering, Seoul National University, 2009
    - B.S., Materials Science and Engineering, Seoul National University, 2001
  - **Research Interests:**
    - Numerical simulations
    - Fluid-structure interaction
    - Applied mathematics
  - **Publications:**
    - Computers & Fluids, 2009
    - Journal of Computational Physics, 2013

**Student Internship Opportunities: SRPP**

- **Recent Publications:**
  - Physical Review Letters, 2016
  - Nature Communications, 2017

- **Homepage Link:**
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**Student Internship Opportunities: SRPP**

- **Recent Publications:**
  - Journal of Fluid Mechanics, 2010
  - Geophysical Research Letters, 2012
  - Annual Review of Fluid Mechanics, 2014

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**Student Internship Opportunities: SRPP**

- **Recent Publications:**
  - Computers & Fluids, 2009
  - Journal of Computational Physics, 2013

- **Homepage Link:**
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**Professor Zhang’s research interests include the physics of fluids, which covers biomechanics and bio-locomotion of organisms (swimming, walking, and flying), geophysical fluids (thermal convection, continental dynamics), solid-on-solid interfaces (organizational swimming, walking, and flying), geophysical fluids (thermal convection, continental dynamics), solid-on-solid interfaces (organizational swimming, walking, and flying), and quasicrystals. He is a member of the American Physical Society (APS).

**Professor Huang**

**Professor Chen**

**Professor Moon**

**Professor Byrnes**

**Professor Zhang**

**Professor Huang**

**Professor Chen**

**Professor Moon**

**Professor Byrnes**