NYUAD Global PhD Student Fellowship in Engineering
New York University Abu Dhabi

The Division of Engineering at New York University Abu Dhabi (NYUAD) invites applications for the NYUAD Global PhD Student Fellowship in the fields of engineering related to Information, Communication, Electronics Systems Engineering; Urban Systems Engineering; and Biomedical and Health Systems Engineering. Global PhD Students are enrolled in NYU Polytechnic School of Engineering doctoral programs, advised by an NYUAD standing faculty member, and conduct their doctoral research at NYUAD. The PhD degree will be granted by the NYU Polytechnic School of Engineering in one of the following disciplines that is relevant to the scope of research conducted: Electrical, Computer, Mechanical, Civil, Chemical, or Biomedical Engineering.

Below are the main features of this Fellowship:

- NYU Polytechnic School of Engineering PhD degree upon graduation
- One year of graduate coursework at the School of Engineering in New York (http://engineering.nyu.edu)
- Cutting edge research opportunities in one of the research labs at NYU Abu Dhabi
- Tuition, fees, and health insurance throughout doctoral studies, for a maximum of four years and contingent upon satisfactory progress
- Competitive stipend while in New York
- Competitive stipend, with additional housing support and home-travel allowance, while in Abu Dhabi
- Conference travel support
- Career development support at NYU Abu Dhabi

New York University is a Global Network University, a multi-site, organically connected network encompassing key global cities and idea capitals. The network has three foundational, degree-granting campuses: New York, Abu Dhabi, and Shanghai, complemented by a network of over 15 research and study-away sites across five continents. Faculty and students circulate within this global network in pursuit of common research interests and solutions for pressing issues, both local and global.

Entering its fifth year, NYU Abu Dhabi currently has over 200 faculty, including 80 standing faculty, who are distinguished in their research and teaching. Research activities are strongly supported by the new Experimental Research Center, outfitted with instruments and equipment worth over $20M, as well as a state of the art Supercomputer Center. For more information about the NYUAD Global PhD Student Fellowship, please visit http://nyuad.nyu.edu/academics/graduate-programs.html.
Global PhD Student Fellowships are available in various engineering research labs at NYU Abu Dhabi, and descriptions are found below. In order to apply to the Global PhD Student Fellowship in Engineering, please follow the instructions provided at the end of this document.

**PhD Global Fellow Positions**

**Engineering**

**New York University Abu Dhabi**

- **Design-for-Excellence Lab (Electrical and Computer Engineering):** Research activities in this lab involve VLSI reliability and security. Computer Aided Design tools are developed to facilitate the design of reliable and trustworthy hardware. A background in VLSI design and algorithms is required. Good programming skills are also a must. More information can be found on the web-site of the lab: [http://nyuad.nyu.edu/academics/faculty/ozgur-sinanoglu/](http://nyuad.nyu.edu/academics/faculty/ozgur-sinanoglu/)

- **NYUAD Biomechanics Laboratory:** The research in this group focuses on how biological variation in nature should be accounted for in the field of biomechanics. Specific projects include crop biomechanics: understanding the strengths and weaknesses of crops to aid in the development of stronger varieties of crops; voice biomechanics: modeling and simulation of human speech vibrations; saxophone mechanics: experimentation and modeling of saxophone vibrations and acoustics. For more information, contact Professor Douglas Cook (douglascook(at)nyu.edu) or visit the website: [http://biomechanics.wix.com/home](http://biomechanics.wix.com/home)

- **Micro- and Nanoscale Bioengineering Lab (Mechanical and Biomedical Engineering):** We are seeking for PhD students interested in working at the interface between engineering and biology and making an impact on human health through translational research. Our group's main research objective is to develop micro- and nanofluidic platforms for ultrasensitive and high-throughput assays of genetic and neuronal diseases. For more information, please visit our group's website: [https://sites.google.com/a/nyu.edu/rafael-song-research-group/](https://sites.google.com/a/nyu.edu/rafael-song-research-group/)

- **Applied Interactive Multimedia (AIM) Research Lab (Electrical and Computer Engineering):** Research activities in the AIM lab involve interactive multimodal multimedia, virtual and 3D environments, and tangible interfaces. The team focuses on the production, authoring, communication, and display of multimedia haptics. A background in multimedia and human computer interaction is recommended. Good programming skills are also a must. More information can be found on the website of the lab: [http://nyuad.nyu.edu/research/centers-institutes/AIMLab.html](http://nyuad.nyu.edu/research/centers-institutes/AIMLab.html)

- **Modern Microprocessor Architectures (MoMA) Lab (Electrical and Computer Engineering):** MoMA Lab is seeking PhD students interested in performing cutting-edge research on modern processing architectures. Topics of interest include crypto-processors, heterogeneous architectures, hardware security, cloud computing, low-power computing, microprocessor support for forensics, on-line test and post-silicon debug of microprocessors. Recommended skills: Computer architecture, digital design, hardware security and programming skills. For more information about the lab and the current projects
please visit:  
nyuad.nyu.edu/momalab

• **Nanoscale Science and Engineering Laboratory (Materials Science and Biomedical Engineering):** We are looking for PhD candidates interested in the development of nanomaterials for energy, environmental, and biomedical applications. Our research is focused on the development of novel supercritical CO$_2$-based processes for the synthesis of nanomaterials. Our modified RESS process is capable of producing organic nanoparticles in the size range 1-10 nm from a variety of organic and polymeric molecules. Another process developed for water soluble materials can be used for the fabrication of metal oxide nanowires and membranes. For more information about our research, please visit:  
http://nyuad.nyu.edu/academics/faculty/ramesh-jagannathan.html

• **Computer Vision Graphics and Image Processing (VGA) Lab:** VGA Lab carries out research on state-of-the-art techniques on computer vision, graphics and image processing technologies for a broad range of practical applications. The good candidates with background in machine learning and computer vision are encouraged to apply. The ideal candidates are expected to be active in conducting cutting edge research, and also enthusiastic about turning research into high-end publications on top-tier conferences and highly recognized journals. We also encourage candidates to innovate the original ideas to establish leadership in the research community and pursue research collaborative relationships with top universities world widely. For more details, please refer to the website of the lab:  
http://www.fanglab.com/

• **Advanced Microfluidics and Microdevices Lab:** The Advanced Microfluidics and Microdevices Laboratory (AMML) is working with various aspects of miniaturization and integration in biology, life sciences, and medicine, which includes the conception, engineering and utilization of novel micro and nanotechnologies to manipulate, stimulate and study biological objects:  
http://nyuad.nyu.edu/research/centers-institutes/microengineering-lab.html
NYUAD Global PhD Student Fellowship
in Engineering
New York University Abu Dhabi

Interested students should apply to the relevant doctoral program in NYU Polytechnic School of Engineering via http://engineering.nyu.edu/admissions/graduate. They should indicate their campus preference as Abu Dhabi in their statement of purpose, and outline why their research and academic aspirations are in line with the ongoing research activities at the Abu Dhabi campus.