

# ELECTRICAL AND COMPUTER ENGINEERING (GRADUATE FIELD)

Program Website (<https://www.engineering.cornell.edu/ece/>)

## Field Description

The Ph.D. program is intended to train students for leadership positions in teaching and research. Entering students are admitted directly to the Ph.D. program; a Master's Degree is not a requirement for admission. Before doctoral degree candidates begin the second year of study, they must take a Qualifying Examination, consisting of Subject Area Examinations that are administered by the ECE Faculty.

The Master of Engineering in Electrical and Computer Engineering is intended for students who hold a baccalaureate (or equivalent) in engineering or science. It is intended primarily for those who intend to go directly into industry to practice engineering. The M.Eng. degree consists of a thirty credit-hour program that is a combination of advanced level coursework and an engineering design project. It is not a research-based degree and does not require the defense of a thesis.

## Research and Study Opportunities

Ongoing research activities in electrical engineering involve both theory and experiment, and range from the atomic scale at which solid-state devices are studied to the global dimensions of geophysical plasmas. Projects currently underway concern the properties of materials, the fabrication of devices from these materials, the interconnection of devices to form systems, and the properties of systems, including control systems, computer systems, systems for transmitting power and information, and systems for processing signals and data.

## Signals, Systems, Learning and Control

Communications, networks, cyber-physical systems, energy conversion and power systems, biological and medical systems; coding and information theory, machine learning and statistical inference, adaptive control, image and video processing and compression.

## Computer Engineering and Robotics

Computer architecture, computer systems, parallel and distributed processing, cloud computing, embedded systems, and computer networks; VLSI design, hardware verification, CAD, and simulation; robotics, embodied computation, hardware/software co-design, and micro robotics.

## Plasma Physics, Space Science and Engineering, and Electromagnetics

Upper atmosphere, ionospheric and magnetospheric science, radar, satellites, and sounding rockets; fusion, solar system, and fundamental plasmas; pulsed power, electron and ion beams, and plasma radiation; plasma fabrication; electromagnetics.

## Solid-State Electronics and Optoelectronics

Electronic, magnetic and optoelectronic materials and devices; devices, circuits, and system integration; beyond-CMOS devices and circuits; power electronics; photonics; microwave and millimeter-wave devices

and systems; sensors and actuators, micro- and nanoelectromechanical systems.

## Data and Statistics

- Doctoral Program Statistics (<https://gradschool.cornell.edu/about/program-metrics-assessments-and-outcomes/doctoral-program-statistics/?SelectGradField=29>)

## Field Manual

- Manual (<https://www.ece.cornell.edu/ece/programs/graduate-programs/phd-program/ece-graduate-field-handbook/>)

## Subject and Degrees

### Electrical and Computer Engineering

- Electrical and Computer Engineering (M.Eng.) (Cornell Tech (NYC))
- Electrical and Computer Engineering (M.Eng.) (Ithaca) (<https://catalog.cornell.edu/programs/electrical-computer-engineering-meng/>)
- Electrical and Computer Engineering (Ph.D.) (Ithaca) (<https://catalog.cornell.edu/programs/electrical-computer-engineering-phd/>)

### Robotics

- Robotics (Ph.D.) (Ithaca) (<https://catalog.cornell.edu/programs/robotics-studies-phd/>)

## Concentrations by Subject

### Electrical and Computer Engineering

- computer engineering
- electrical engineering
- electrical systems
- electrophysics

### Robotics

- robotics

## Faculty

Mohamed Abdelfattah (<http://tech.cornell.edu/people/mohamed-abdelfattah/>)

- **Campus:** Cornell Tech (NYC)
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Computer architecture and systems, reconfigurable computing, machine learning efficiency

Jayadev Acharya (<http://www.ece.cornell.edu/faculty-directory/jayadev-acharya/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Information Theory, Algorithmic Statistics, Learning

Steven Adie (<http://www.bme.cornell.edu/faculty-directory/steven-graham-adie/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** Biomedical Imaging; Photonics; Signal and Image Processing; Holography; Inverse problems

Khurram Khan Afridi (<http://www.ece.cornell.edu/faculty-directory/khurram-khan-afridi/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** power electronics, RF circuits, power semiconductor devices, wireless power transfer, electric vehicles, renewable energy systems

David H. Albonesi (<http://www.csl.cornell.edu/~albonesi/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** computer architecture, microprocessor design, adaptive architecture, power-aware architecture, multiprocessor systems, performance evaluation

Mohammad Alian (<http://www.ece.cornell.edu/faculty-directory/mohammad-alian/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Computer Architecture, Computer Systems, Systems and Networking, Computer Engineering

C. Lindsay Anderson (<http://cals.cornell.edu/c-lindsay-anderson/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Renewable Energy Integration, Optimization Under uncertainty

Alyssa B Apsel (<http://www.ece.cornell.edu/faculty-directory/alyssa-b-apsel/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrophysics
- **Research Interests:** electrical engineering; microelectronics; high speed CMOS design; optoelectronics

Siddhartha Banerjee (<http://www.engineering.cornell.edu/faculty-directory/sid-banerjee/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** stochastic modeling and control, network algorithms, market design

Carl A Batt (<http://www.bme.cornell.edu/faculty-directory/carl-batt/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** development of systems to integrate biological and inorganic components to effect signal transduction and sensing

Christopher Batten (<http://www.ece.cornell.edu/faculty-directory/christopher-batten/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** computer architecture; energy-efficient parallel processing; interconnection networks; digital VLSI; architectures for emerging technologies

Tapomayukh Bhattacharjee (<http://www.tapomayukh.com/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Robotics and Autonomy, Artificial Intelligence, Sensors

Eilyan Bitar (<http://bitar.engineering.cornell.edu/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical systems
- **Research Interests:** Stochastic optimization and control theory and their applications to the economics and operation of power systems with deep integration of renewable energy resources.

Mark Campbell (<http://www.engineering.cornell.edu/faculty-directory/mark-campbell/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical systems
- **Research Interests:** space systems; estimation and control; autonomy in aerospace systems; controlled structures

Hsiao-Dong Chiang (<http://www.ece.cornell.edu/faculty-directory/hsiao-dong-chiang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrical systems
- **Research Interests:** nonlinear circuits and systems; power systems; artificial neural networks; control systems; optimization theory

Thomas A. Cleland (<http://psychology.cornell.edu/thomas-cleland/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Neuroscience, Complex Systems and Computation, Signal and Image Processing, Artificial Intelligence / Machine Learning, Algorithms

Christopher Matthew De Sa (<http://www.engineering.cornell.edu/faculty-directory/chris-de-sa/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** artificial intelligence; machine learning systems; computer architecture

Sarah A Dean (<http://sdean.website/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Statistics and Machine Learning, Information Networks and Decisions Systems, Robotics and Autonomy

David Forbes Delchamps (<http://www.ece.cornell.edu/faculty-directory/david-forbes-delchamps/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrical systems
- **Research Interests:** dynamical systems; control theory; hybrid systems; cognitive science; evolutionary computations

Peter Doerschuk (<http://www.bme.cornell.edu/faculty-directory/peter-doerschuk/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** biological and biomedical imaging; statistical signal and image inference problems

Amal El-Ghazaly (<http://www.ece.cornell.edu/faculty-directory/amal-el-ghazaly/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrical systems; electrophysics
- **Research Interests:** Tunable devices; integrated thin-film magnetics; sensors and actuators; high-frequency electronics; haptics and tactile displays; precision agriculture

David Erickson (<http://www.mae.cornell.edu/faculty-directory/david-erickson/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** nanobio applications; optoelectronics; laser devices

Silvia Ferrari (<http://www.engineering.cornell.edu/faculty-directory/silvia-ferrari/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical systems
- **Research Interests:** control theory, information theory, sensor networks

John N. Foster (<http://www.cs.cornell.edu/~jnfoster/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Programming languages, networking, verification, architecture, security

Kyra Gan (<http://tech.cornell.edu/people/kyra-gan/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Adaptive trial design, Statistical inference, Causal discovery, Interpretable LLM

Ziv Goldfeld (<http://www.ece.cornell.edu/faculty-directory/ziv-goldfeld/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Information theory, statistical machine learning, high-dimensional and nonparametric statistic, applied probability, information-theoretic security, and interacting particle systems.

Udit Gupta (<http://tech.cornell.edu/people/udit-gupta/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Computer Architecture, Systems for AI, Sustainable Computing, Hardware/software co-design

Joseph Yehuda Halpern (<http://infosci.cornell.edu/content/halpern/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** reasoning about knowledge and uncertainty, qualitative reasoning, belief revision, fault-tolerant distributed computation, modal logic, game theory, decision theory, security langtons

David A Hammer (<http://www.ece.cornell.edu/faculty-directory/david-hammer/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** plasma physics; controlled fusion; intense ion beams; plasma radiation sources

Jack Davies Hare (<http://fusionandthings.eu/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** Astrophysics, Fusion and Plasma Physics, High Energy Density Plasma Physics, Electromagnetics, Physical Electronics, Devices, Plasma Science

Elizabeth Farrell Helbling (<http://www.ece.cornell.edu/faculty-directory/elizabeth-farrell-helbling/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Robotics

James C. Hwang (<http://www.mse.cornell.edu/faculty-directory/james-hwang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Advanced Materials, Integrated Circuits, Materials Synthesis and Processing, Nanotechnology, Semiconductor Physics and Devices, Solid State, Electronics, Optoelectronics and MEMS

David Lee Hysell (<http://www.engineering.cornell.edu/faculty-directory/david-lee-hysell/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrophysics
- **Research Interests:** radar and remote sensing; upper atmospheric physics; plasma physics; numerical simulations

Mohamed I. Ibrahim (<http://www.ece.cornell.edu/faculty-directory/mohamed-i-ibrahim/>)

- **Campus:** Ithaca
- **Concentrations:** Electrical and Computer Engineering: electrical engineering
- **Research Interests:** Integrated Circuits, Solid State Electronics, Optoelectronics and MEMS, Circuits and Electronic Systems, Physical Electronics, Devices and Plasma Science, Optical Physics, Nanotechnology

Debdeep Jena (<http://www.ece.cornell.edu/faculty-directory/debdeep-jena/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** electronic and photonic materials and devices

Yu Jiang (<http://cals.cornell.edu/yu-jiang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering; electrical systems
- **Research Interests:** Agricultural and field robotics, high throughput plant phenotyping, artificial intelligence, sensors and actuators

Edwin Chihchuan Kan (<http://www.ece.cornell.edu/faculty-directory/edwin-chihchuan-kan/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** VLSI process, devices, and circuits; technology CAD; functional nanostructures; scientific computing

Cindy Hsin-Liu Kao (<http://www.human.cornell.edu/people/hk932/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** wearable and ubiquitous computing, on-skin electronics, on-body robotics, electronic textiles, human-computer interaction

Hadas Kress-Gazit (<http://www.engineering.cornell.edu/faculty-directory/hadas-kress-gazit/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** robotics; hybrid systems; formal methods for robotics and automation; language and robotics

Vikram Krishnamurthy (<http://www.ece.cornell.edu/faculty-directory/vikram-krishnamurthy/>)

- **Campus:** Cornell Tech (NYC)
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Statistical Signal Processing, Stochastic Control, Stochastic Optimization, Applications in Social Networks, Biosensing, Radars

Amy Frances Kuceyeski (<http://stat.cornell.edu/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Image Processing, Statistics and Machine Learning, Biomedical Image Analysis, Neuroscience

Amit Lal (<http://www.ece.cornell.edu/faculty-directory/amit-lal/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** microelectromechanical systems; physical acoustics; ultrasonic engineering; microsurgical MEMS; microfluidics; analog and digital circuit design

Eric Sander Lavine (<http://www.lps.cornell.edu/faculty-staff/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** Astrophysics, Fusion and Plasma Physics, High Energy Density Plasma Physics and Electromagnetics, Physical Electronics, Devices, and Plasma Science, Condensed Matter and Material Physics

Daniel Dongyuel Lee (<http://www.ece.cornell.edu/spotlights/welcome-daniel-leehttp://www.ece.cornell.edu/spotlights/welcome-daniel-lee/>)

- **Campus:** Cornell Tech (NYC)
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** machine learning, robotics, computational neuroscience

Andreas Malikopoulos (<http://www.cee.cornell.edu/faculty-directory/andreas-malikopoulos/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Robotics and Autonomy Information, Networks and Decision Systems

Stephen Robert Marschner (<http://www.cs.cornell.edu/%7Esrm/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** computer graphics, including rendering, simulation and fabrication, with a focus on the appearance and mechanics of materials

Jose Martinez (<http://www.ece.cornell.edu/faculty-directory/jose-f-martinez/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** computer architecture

Peter McMahon (<http://www.aep.cornell.edu/faculty-directory/peter-mcmahon/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Complex Systems, Network Science and Computation, Advanced Materials, Condensed Matter and Material Physics, Nanotechnology, Optical Physics and Quantum Information Science, Algorithms, Artificial Intelligence, Computer Architecture, Semiconductor Physics and Devices, Statistics and Machine Learning, Scientific Computing, Data Science, Nonlinear Dynamics, Optimization

Karan Kartik Mehta (<http://www.engineering.cornell.edu/faculty-directory/karan-mehta/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** Optical Physics and Quantum Information Science, Solid State, Electronics, Optoelectronics and MEMs, Nanotechnology, Advanced Materials

Alyosha C. Molnar (<http://www.engineering.cornell.edu/faculty-directory/alyosha-christopher-molnar/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrical systems
- **Research Interests:** circuit design; RF/analog circuit design; neural interfaces; retinal neuroscience

Francesco Monticone (<http://www.ece.cornell.edu/faculty-directory/francesco-monticone/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrophysics
- **Research Interests:** applied electromagnetics, metamaterials, plasmonics, and nanophotonics,

Andrew C Myers (<http://www.engineering.cornell.edu/faculty-directory/andrew-c-myers/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** computer security, compilers

Nils Napp (<http://www.ece.cornell.edu/faculty-directory/nils-napp/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** Algorithms, Artificial Intelligence, Complex Systems/Network Science and Computation, Computer Systems, Robotics, Statistics and Machine Learning

Cara Mae Nunez (<http://www.mae.cornell.edu/faculty-directory/cara-m-nunez/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** Computer engineering and robotics Signals, systems, learning and control

Francesca Parise (<http://www.engineering.cornell.edu/faculty-directory/francesca-parise/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Network, Control and Game Theory, Large Scale Systems, Social and Economic Networks, Information Dynamics, Contagion and Epidemic Models, Distributed Optimization and Variational Inequalities, Learning

Kirstin Hagelskjaer Petersen (<http://www.ece.cornell.edu/faculty-directory/kirstin-hagelskjaer-petersen/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Bio-Inspired Robotics, Robotic Collectives, Algorithms, Artificial Intelligence, Social Insects, and (real) Architecture

Farhan Rana (<http://www.ece.cornell.edu/faculty-directory/farhan-rana/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics
- **Research Interests:** semiconductor optoelectronics; quantum electronics and quantum optics; ultrafast optics; integrated micro- and nano-optics; spectroscopy



Anthony P Reeves (<http://www.engineering.cornell.edu/faculty-directory/anthony-p-reeves/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering; electrical systems
- **Research Interests:** computer vision; biomedical image analysis; image processing; parallel processing

Richard D. Robinson (<http://www.engineering.cornell.edu/faculty-directory/richard-douglas-robinson/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrophysics

Mert Sabuncu (<http://sabuncu.engineering.cornell.edu/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** image processing; machine learning; biomedical image analysis

Adrian Lewis Dequine Sampson (<http://www.engineering.cornell.edu/faculty-directory/adrian-sampson/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** computer architecture; compilers; approximate computing

Jae-sun Seo (<http://www.tech.cornell.edu/people/jae-sun-seo/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Digital VLSI, Mixed-signal Circuits, ASIC/FPGA Hardware Accelerator, AI Hardware Design, Hardware-aware Algorithm

Gennady Shvets (<http://www.aep.cornell.edu/faculty-directory/gennady-shvets/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrophysics
- **Research Interests:** optics and nanophotonics, metamaterials, biophotonics, integration of plasmonics and 2D materials, plasma physics

Keith N. Snavely (<http://www.cs.cornell.edu/~snavely/>)

- **Campus:** Cornell Tech (NYC)
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** computer vision

Ao Tang (<http://www.ece.cornell.edu/faculty-directory/kevin-tang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering

- **Research Interests:** communication networks; control and dynamic systems; optimization and game theory and their applications

Lang Tong (<http://www.ece.cornell.edu/faculty-directory/lang-tong/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrical systems
- **Research Interests:** DSP; statistical signal processing; communication systems and networking; adaptive receiver design-estimation theory

Aaron B. Wagner (<http://www.ece.cornell.edu/faculty-directory/aaron-b-wagner/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering; electrical systems
- **Research Interests:** information theory and coding; communication networks; data compression

Fei Wang (<http://wcm-wanglab.github.io/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** Artificial Intelligence and Machine Learning, Biomedical Data Analysis

Yi Wang (<http://www.engineering.cornell.edu/faculty-directory/yi-wang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** bio-electrical engineering; bio signal, systems and applications; image analysis; information systems and networks; signal and image processing

Michelle D Wang (<http://physics.cornell.edu/michelle-wang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Nanophotonics, nanophotonic tweezers, optical trapping, advanced biophysical instrumentation, microelectronics, microfluidity, single molecule manipulation, biomechanics, mechanobiology, biotechnology, transcription, replication, chromatin dynamics, gene editing, genomics.

Hakim Weatherspoon (<http://www.engineering.cornell.edu/faculty-directory/hakim-weatherspoon/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** distributed systems; cloud computing; fault-tolerance; reliability; security; and performance of Internet-scale systems

Mark McMahon Wilde (<http://www.ece.cornell.edu/faculty-directory/mark-wilde/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** Optical Physics and Quantum Information Science, Information Theory and Communications, Statistics and Machine Learning

Huili (Grace) Xing (<http://www.ece.cornell.edu/faculty-directory/huili-grace-xing/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** electronic materials and devices

Fengqi You (<http://www.atkinson.cornell.edu/about/people/fellows/view.php?NetID=fy86>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering; electrical engineering
- **Research Interests:** computational optimization, process control, smart systems, industrial big data analytics and machine learning, data-driven decision making, smart manufacturing

Ramin Zabih (<http://infosci.cornell.edu/content/zabih/>)

- **Campus:** Cornell Tech (NYC)
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** computer vision; image processing; medical imaging

Zhiru Zhang (<http://www.ece.cornell.edu/faculty-directory/zhiru-zhang/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* computer engineering
- **Research Interests:** Computer-aided design (CAD) for heterogeneous computing; high-level synthesis, hardware/software co-optimization for system-on-chips, reconfigurable and accelerated computing, and algorithmic design for CAD.

Qing Zhao (<http://www.ece.cornell.edu/faculty-directory/qing-zhao/>)

- **Campus:** Ithaca
- **Concentrations:** *Electrical and Computer Engineering:* electrical engineering
- **Research Interests:** sequential decision theory and stochastic optimization in complex systems; machine learning, statistical inference, algorithmic theory and computational techniques; infrastructure networks, communication systems, social economic networks