Department of Electrical and Computer Engineering

Education Outcomes and Objectives

The B.S. in Electrical and Computer Engineering is a broad and highly flexible degree program structured to provide students with a rich and comprehensive view of the profession. Minimal curriculum constraints enable every student to construct their own unique program of study that fits their professional goals. Students are encouraged to explore multiple areas of theory and application. Our program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org (http://www.abet.org). The Faculty of Electrical and Computer Engineering have adopted the following outcomes from ABET and have established the following objectives for the B.S. in Electrical and Computer Engineering curriculum:

Educational Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

ECE Education Objectives

The ECE program objectives are shown below. They represent our vision for what our students will be doing in their engineering careers five years after they have graduated. The principal behaviors we seek to foster in our students are expertise, innovation and leadership.

Our graduates will be:

Experts
- They will solve problems by applying ECE fundamentals
- Their solutions will reflect depth of understanding in their sophistication.
- Their solutions will reflect breadth of understanding by drawing on multiple disciplines.

Innovators
- They will demonstrate creativity in their engineering practice.
- They will consider holistic systems-oriented approaches in their designs.
- They will think strategically in their planning and execution.

Leaders
- They will take initiative, and demonstrate resourcefulness.
- They will collaborate in multidisciplinary teams.
- They will be leaders in their organizations, their profession and in society.

Three dimensions of objectives for our graduates.
Curriculum Overview
The B.S. in Electrical and Computer Engineering is a broad and highly flexible ABET-accredited (http://www.abet.org) degree program structured to provide students with the smallest set of constraints consistent with a rich and comprehensive view of the profession. Students are encouraged and stimulated to explore multiple areas of theory and application from across the 5 principal undergraduate areas (https://www.ece.cmu.edu/academics/bs-in-ece/academic-guide.html) of Electrical and Computer Engineering. The sample curriculum (http://coursecatalog.web.cmu.edu/schools-colleges/collegeofengineering/departmentofelectricalandcomputerengineering/#samplecurriculumtext) highlights the flexibility of our curriculum while meeting the requirements listed below.

Minimum total units required for B.S. in Electrical and Computer Engineering: 379

For detailed information and regulations along with the degree requirements consistent with a rich and comprehensive view of the profession, please refer to the ECE Academic Guide (https://www.ece.cmu.edu/academics/bs-in-ece/academic-guide.html).

University Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>99-101 Computing @ Carnegie Mellon</td>
<td>3</td>
</tr>
</tbody>
</table>

CIT Requirements (see CIT section of the catalog for specifics (http://coursecatalog.web.cmu.edu/schools-colleges/collegeofengineering/)):

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIT General Education</td>
<td>72</td>
</tr>
<tr>
<td>21-120 Differential and Integral Calculus</td>
<td>10</td>
</tr>
<tr>
<td>21-122 Integration and Approximation</td>
<td>10</td>
</tr>
<tr>
<td>One other introductory engineering course (generally taken during the freshman year)</td>
<td>12</td>
</tr>
<tr>
<td>33-141 Physics I for Engineering Students</td>
<td>12</td>
</tr>
<tr>
<td>33-142 Physics II for Engineering and Physics Students</td>
<td>12</td>
</tr>
<tr>
<td>15-112 Fundamentals of Programming and Computer Science</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>140</td>
</tr>
</tbody>
</table>

GENERAL TECHNICAL REQUIREMENTS:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two Math/Science electives</td>
<td>18</td>
</tr>
<tr>
<td>Probability Requirement</td>
<td></td>
</tr>
<tr>
<td>21-325 Probability</td>
<td>9</td>
</tr>
<tr>
<td>or 36-219 Probability Theory and Random Processes</td>
<td></td>
</tr>
<tr>
<td>or 36-225 Introduction to Probability Theory</td>
<td></td>
</tr>
<tr>
<td>18-202 Mathematical Foundations of Electrical Engineering</td>
<td>12</td>
</tr>
<tr>
<td>21-127 Concepts of Mathematics</td>
<td>12</td>
</tr>
<tr>
<td>15-122 Principles of Imperative Computation</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>61</td>
</tr>
</tbody>
</table>

1The Math/Science Electives may be satisfied by any course in The Mellon College of Science or the Department of Statistics except for: 100-level courses in Mathematics or Statistics, and courses designed for non-science or engineering majors, such as (but not limited to) 09-103, 09-104, 21-240, 21-257, 33-115, 33-120, 33-124, 36-201, 36-202, 36-203, 36-207, 36-208, 36-209, 36-210, 36-247, 36-309, 36-310. Mathematics courses of particular interest to students in ECE are: 21-228 Discrete Mathematics, 21-241 Matrices and Linear Transformations, 21-259 Calculus in Three Dimensions, 21-260 Differential Equations.

2This course can also be substituted by a combination of two of the following courses: 21-254, 21-259, 21-260, 21-241, 21-242, 21-268. Note that the combined total will therefore be 18 units.

3Effective Fall 2022. Prior to Fall 2022, 21-127 was 10 units.

ECE COURSE requirements:

For detailed information and regulations along with the degree requirements and the most recent version of the ECE curriculum and course descriptions, please refer to the ECE Academic Guide (https://www.ece.cmu.edu/academics/bs-in-ece/academic-guide.html).

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECE CORE COURSES</strong></td>
<td></td>
</tr>
<tr>
<td>18-100 Introduction to Electrical and Computer Engineering</td>
<td>12</td>
</tr>
<tr>
<td>18-200 ECE Sophomore Seminar</td>
<td>1</td>
</tr>
<tr>
<td>18-213 Introduction to Computer Systems</td>
<td>12</td>
</tr>
<tr>
<td>18-220 Electronic Devices and Analog Circuits</td>
<td>12</td>
</tr>
<tr>
<td>18-240 Structure and Design of Digital Systems</td>
<td>12</td>
</tr>
<tr>
<td>18-290 Signals and Systems</td>
<td>12</td>
</tr>
<tr>
<td><strong>ECE AREA COURSES</strong></td>
<td></td>
</tr>
<tr>
<td>Two Area Courses from 1 of the 5 Areas within ECE</td>
<td>24</td>
</tr>
<tr>
<td>One additional Area Course from a second Area</td>
<td>12</td>
</tr>
<tr>
<td><strong>ECE COVERAGE COURSES</strong></td>
<td></td>
</tr>
<tr>
<td>One Coverage Course (any additional ECE course or Approved C5 course as listed on the ECE web site)</td>
<td>12</td>
</tr>
<tr>
<td><strong>ECE CAPSTONE DESIGN</strong></td>
<td></td>
</tr>
<tr>
<td>Any 18-Sxx course</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FREE ELECTIVES</strong></td>
<td>54</td>
</tr>
<tr>
<td>(typ)*</td>
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</tr>
</tbody>
</table>

*For most students, the curriculum above will result in a remainder of 54 units of free electives to achieve the 379 required total units.

A Free Elective is defined as any graded course offered by any academic unit of the university (including research institutes such as the Robotics Institute (http://www.ri.cmu.edu) and the Institute for Software Research (https://www.isri.cmu.edu/)).

Up to 9 units of Student Taught Courses (StuCO) and Physical Education courses, or other courses taken as Pass/Fail, may also be used toward Free Electives.

Transfer of courses from other high-quality universities may be accepted through submission of the Transfer Credit Request form on the CIT web page (https://engineering.cmu.edu/education/academic-policies/undergraduate-policies/transfer_credit/). Please see the CIT website (https://engineering.cmu.edu/education/academic-policies/transfer-credit.html) for further information regarding the process.

The large number of units without categorical constraints provides the student, in consultation with their Advisor or Mentor, with the flexibility to design a rich educational program.

Sample Curriculum

The table below shows a possible roadmap through our broad and flexible curriculum. The ECE Academic Guide (https://www.ece.cmu.edu/academics/bs-in-ece/academic-guide.html) provides further alternatives.

<table>
<thead>
<tr>
<th>First-Year</th>
<th>Second-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>18-100 Introduction to Electrical and Computer Engineering</td>
<td>18-200 ECE Sophomore Seminar</td>
</tr>
<tr>
<td>15-112 Fundamentals of Programming and Computer Science</td>
<td>15-112 Physics I for Engineering Students</td>
</tr>
<tr>
<td>33-141 Physics I for Engineering Students</td>
<td>18-202 Mathematical Foundations of Electrical Engineering</td>
</tr>
<tr>
<td>18-220 Mathematical Foundations of Electrical Engineering</td>
<td>21-122 Principles of Imperative Computation</td>
</tr>
<tr>
<td>33-142 Physics II for Engineering and Physics Students</td>
<td>15-122 Concepts of Mathematics</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td><strong>Fall</strong></td>
</tr>
<tr>
<td>18-240 Principles of Imperative Computation</td>
<td>36-219 Probability Theory and Random Processes</td>
</tr>
<tr>
<td>15-122 Principles of Imperative Computation</td>
<td>39-210 Experiential Learning I</td>
</tr>
<tr>
<td>18-100 Introduction to Electrical and Computer Engineering</td>
<td>39-220 Experiential Learning II</td>
</tr>
</tbody>
</table>

Please refer to the CIT website (https://www.isri.cmu.edu/) for further information regarding the process.
and Capstone Design courses with a minimum QPA of 2.0 to graduate. When more than one possibility exists for meeting a specific requirement (e.g., Area Course), the courses used for calculating the ECE QPA will be chosen so as to maximize the QPA. Similarly, when an ECE course is retaken, the better grade will be used in the computation of the minimum QPA for the ECE QPA requirement to graduate.

**Other Opportunities in ECE**

**ECE Cooperative Education Program**

Our Cooperative Education Program invites students to gain valuable experience in employment that relates directly to their major and career goals. At the same time, it provides employers with opportunities to evaluate students as potential full-time employees, while having them complete meaningful projects. Participation in this program is voluntary, and obtaining a cooperative education assignment is competitive.

**Due to federal restrictions on student work experiences, international students are not eligible for co-ops.** Please visit the ECE CPT page (http://www.ece.cmu.edu/programs-admissions/bachelors/cpt.html) for information regarding international student internships.

The co-op experience

We require a minimum of eight months of co-op experience to identify the work experience as a co-op. Students must have minimally completed their sophomore year to qualify for application to a co-op and should connect with their Academic Advisor for information on how to apply. While on co-op assignment, students are participating in a recognized CIT educational program, retaining their full-time student status, akin to our students who study abroad in established exchange programs (such as EPFL) for one or two semesters. The Cooperative Education Program agreement may be discontinued if the employers do not provide the students with career-related work experience or if the students do not meet the accepted level of performance as defined by the employers.

Upon returning to Carnegie Mellon, the students are required to submit for approval the following two documents to the ECE Undergraduate Office: a three to five page technical report of the Co-Op work, and a one page assessment and evaluation of the Co-Op experience.

Students may obtain more detailed information through the ECE department (http://www.ece.cmu.edu/programs-admissions/bachelors/cooperative-education-program.html) or the Career and Professional Development Center (http://www.cmu.edu/career/).

**Integrated M.S./B.S. Degrees Program**

The Integrated Master’s/Bachelor’s program (http://www.ece.cmu.edu/programs-admissions/integrated/) (otherwise known as the IMB program) is an exciting opportunity for students who excel academically to achieve not just a Bachelor’s degree in ECE, but also a Master’s degree through our Professional MS degree program—without needing to apply separately. This means no application fee, and no need to take the GRE (Graduate Record Exam). In order to be awarded the MS degree in the IMB program, the student must also earn their BS degree, either simultaneously with the MS degree or at least one semester prior to the awarding of the MS degree. If a course is eligible for the MS degree but must be used to complete the BS degree, the BS degree takes priority over the MS degree.

If a student is at least a 2nd semester junior, has completed at least 270 units and has at least an overall 3.00 QPA, or she or he is guaranteed admission into the Professional MS degree in ECE through the IMB program. To be officially admitted, the student must complete the IMB Program form. If a student does not meet the exact overall 3.00 QPA requirement, he or she is eligible to petition for his or her admission into the IMB program during his or her senior year. Students may obtain the petition forms through a meeting with their assigned academic advisor.

**Professional MS Degree Requirements:**

Please see the ECE web site for the requirements for the Professional MS degree (http://www.ece.cmu.edu/programs-admissions/masters/ms-requirements.html). For students in the ECE IMB program, all requirements for the Professional MS degree in addition to the requirements for the BS in ECE. No requirements for the MS degree may be used in any way toward the BS degree, including minors, additional majors or dual degrees.

**Residency requirements and financial impacts:**

Once a student in the IMB program has completed all of the requirements for the BS degree, he or she may become a graduate (Masters) student. To do this, the student’s undergraduate degree is certified, and that student officially graduates with the BS degree. Once a student’s undergraduate
degree has been certified, no more courses may then be applied toward the BS degree. This includes courses toward minors and additional majors, although students pursuing an undergraduate dual degree with another department may still continue to apply additional coursework toward that second degree. If a student takes more than 8 semesters to complete both the BS and MS degrees, then he or she must be a graduate student for at least one semester before graduating with the MS degree. To determine the most appropriate time for an undergraduate student to become a graduate student, he or she should consult with Enrolment Services to understand how becoming a graduate student will affect financial aid, and with his or her academic advisor to determine a course schedule. When a student is a graduate student through the IMB program, the department is able to provide some financial assistance through Teaching Assistantships. Please see the ECE web site (http://www.ece.cmu.edu/programs-admissions/integrated/) for further information regarding this financial assistance.

Faculty

GEORGE AMVROSIOUDIS, Assistant Research Professor of Electrical and Computer Engineering – Ph.D., University of Toronto, Canada; Carnegie Mellon, 2018–

JIM BAIN, Associate Department Head for Academic Affairs and Professor of Electrical and Computer Engineering and Materials Science Engineering; Associate Director, DSSC – Ph.D., Stanford University; Carnegie Mellon, 1993–

LUJO BAUER, Professor of Electrical and Computer Engineering – Ph.D., Princeton University; Carnegie Mellon, 2005–

THEO BENSON, Assistant Professor of Electrical and Computer Engineering – Ph.D., University of Wisconsin-Madison; Carnegie Mellon, 2022–

VIJAYAKUMAR BHAGAVATULA, U.A. and Helen Witaker Professor of Electrical and Computer Engineering, Affiliated Faculty, DSSC – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1982–

SHAWN BLANTON, Associate Department Head for Research; Joseph F. and Nancy Keithley Professor of Electrical and Computer Engineering – Ph.D., University of Michigan; Carnegie Mellon, 1995–

DAVID BRUMLEY, Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2008–

MARK BUDNIK, Teaching Professor of Electrical and Computer Engineering – Ph.D., Purdue University; Carnegie Mellon, 2021–

L. RICHARD CARLEY, Professor of Electrical and Computer Engineering; Affiliated Faculty, DSSC – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 1984–

MAYSAM CHAMANZAR, Dr. William D. and Nancy W. Strecker Career Development Associate Professor, Electrical and Computer Engineering – Ph.D., Georgia Institute of Technology; Carnegie Mellon, 2015–

VANESSA CHEN, Assistant Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2019–

YUEJIE CHI, Professor of Electrical and Computer Engineering – Ph.D., Princeton University; Carnegie Mellon, 2018–

MARC DANDIN, Assistant Professor of Electrical and Computer Engineering – Ph.D., University of Maryland, College Park; Carnegie Mellon, 2019–

HAKAN ERODLAGUS, Teaching Professor of Electrical and Computer Engineering; Carnegie Mellon University Silicon Valley – Ph.D., Université du Québec; Carnegie Mellon, 2018–

GIULIA FANTI, Assistant Professor of Electrical and Computer Engineering – Ph.D., University of California at Berkeley; Carnegie Mellon, 2017–

GARY FEDDER, Howard M. Wikoff Professor of Electrical and Computer Engineering; Co-Director, MEMS, Affiliated Faculty, DSSC – Ph.D., University of California at Berkeley; Carnegie Mellon, 1994–

FRANZ FRANCHETTI, Kavčić-Moura Professor, Electrical and Computer Engineering, Associate Dean for Research, College of Engineering Director, Engineering Research Accelerator – Ph.D., Vienna University of Technology; Carnegie Mellon, 2001–

GREGORY R. GANGER, Jatras Professor of Electrical and Computer Engineering and Computer Science; Director Parallel Data Lab – Ph.D., University of Michigan; Carnegie Mellon, 1997–

AMINATA GARBA, Associate Teaching Professor of Electrical and Computer Engineering; Carnegie Mellon University Africa – Ph.D., McGill University; Carnegie Mellon, 2013–

PHILLIP GIBBONS, Professor of Electrical and Computer Engineering and Computer Science – Ph.D., University of California at Berkeley; Carnegie Mellon, 2015–

VIRGIL GLIGOR, Professor of Electrical and Computer Engineering; Co-Director CyLab – Ph.D., University of California at Berkeley; Carnegie Mellon, 2008–

PULKIT GROVER, Angel Jordan Professor of Electrical and Computer Engineering – Ph.D., University of California at Berkeley; Carnegie Mellon, 2013–

QUANNAN GU, Assistant Professor of Electrical and Computer Engineering – Ph.D., Harvard University; Carnegie Mellon, 2021–

ASSANE GUEYE, Assistant Teaching Professor of Electrical and Computer Engineering; Carnegie Mellon University Africa – Ph.D., University of California at Berkeley; Carnegie Mellon, 2020–

JAMES HOE, Professor of Electrical and Computer Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 2000–

ASSANE GUEYE, Assistant Teaching Professor of Electrical and Computer Engineering; Affiliated Faculty CyLab – Ph.D., Princeton University; Carnegie Mellon, 2013–

CARLEE JOE-WONG, Associate Professor of Electrical and Computer Engineering – Ph.D., Princeton University; Carnegie Mellon, 2016–

GAURI JOSHI, Assistant Professor of Electrical and Computer Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 2017–

SOUMYYA KAR, Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2011–

GREGORY KESDEN, Associate Teaching Professor of Electrical and Computer Engineering – MCS, Clemson University; Carnegie Mellon, 2017–

HYONG S. KIM, Drew D. Perkins Professor of Electrical and Computer Engineering; Director CMU-Thailand – Ph.D., University of Toronto; Carnegie Mellon, 1990–

PHILIP J. KOOPMAN, Associate Professor of Electrical and Computer Engineering and Computer Science – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1989–

SWARUN S. KUMAR, Associate Professor of Electrical and Computer Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 2015–

QING LI, Assistant Professor of Electrical and Computer Engineering – Ph.D., Georgia Institute of Technology; Carnegie Mellon, 2018–

TZE MENG LOW, Assistant Research Professor of Electrical and Computer Engineering – Ph.D., University of Texas at Austin; Carnegie Mellon, 2013–

BRANDON LUCIA, Sathaye Family Foundation Career Development Professor of Electrical and Computer Engineering – Ph.D., University of Washington; Carnegie Mellon, 2014–

KEN MAI, Principal Systems Scientist of Electrical and Computer Engineering – Ph.D., Stanford University; Carnegie Mellon, 2005–

CRAIG MILLER, Research Professor of Electrical and Computer Engineering – Ph.D., University of Michigan; Carnegie Mellon, 2020–

M. GRANGER MORGAN, Professor of Electrical and Computer Engineering; Hamerschlag University Professor of Engineering and Public Policy – Ph.D., University of California at San Diego; Carnegie Mellon, 1974–

JOSE M. F. MOURA, Philip L. and Marsha Dowker Professor of Electrical and Computer Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 1986–

TAMAL MUKHERJEE, Associate Department Head for Students and Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1996–

WILLIAM NACE, Teaching Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2008–

YORIE NAKAHIRO, Assistant Professor of Electrical and Computer Engineering – Ph.D., California Institute of Technology; Carnegie Mellon, 2020–

PRIYA NARASIMHAN, Professor of Electrical and Computer Engineering – Ph.D., University of California at Santa Barbara; Carnegie Mellon, 2001–

ROHIT NEGI, Professor of Electrical and Computer Engineering – Ph.D., Stanford University; Carnegie Mellon, 2000–

DAVID O‘HALLARON, Professor of Electrical and Computer Engineering and Computer Science – Ph.D., University of Virginia; Carnegie Mellon, 1989–
AMRITANSHU PANDEY, Systems Scientist of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2019–

BRYAN PARNO, Associate Professor of Electrical and Computer Engineering and Computer Science – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2017–

GIANLUCA PIAZZA, STMicroelectronics Professor of Electrical and Computer Engineering; Director of Nanofab – Ph.D., University of California at Berkeley; Carnegie Mellon, 2012–

LAWRENCE T. PILEGGLI, Coraluppi Head and Tanoto Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1996–

CECILE PERAIRE, Teaching Professor of Electrical and Computer Engineering, Carnegie Mellon University Silicon Valley – Ph.D., Ecole polytechnique fédérale de Lausanne; Carnegie Mellon, 2014–

RAGUNATHAN RAJKUMAR, George Westinghouse Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1992–

BARRY RAWN, Associate Teaching Professor of Electrical and Computer Engineering – Ph.D., University of Toronto, Canada; Carnegie Mellon, 2018–

ANTHONY ROWE, Siewiorek and Walker Family Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2009–

WILLIAM SANDERS, Dr. William D. and Nancy W. Strecker Dean, College of Engineering Professor for Electrical and Computer Engineering – Ph.D., University of Michigan; Carnegie Mellon, 2020–

ASWIN SANKARANARAYANAN, Associate Professor of Electrical and Computer Engineering – Ph.D., University of Maryland; Carnegie Mellon, 2013–

MARIOS SAVVIDES, Bossa Nova Robotics Professor of Artificial Intelligence for Electrical and Computer Engineering; Director CyLab Biometrics Center – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2005–

VYAS SEKAR, Tan Family Professor of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2013–

JOHN SHEN, Professor of Electrical and Computer Engineering – Ph.D., University of Southern California; Carnegie Mellon, 2015–

ELAINE SHI, Associate Professor of Electrical and Computer Engineering and Computer Science – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2020–

ASIM SMALLAGIC, Research Professor of Electrical and Computer Engineering – Ph.D., University of Sarajevo, Bosnia and Herzegovina; Carnegie Mellon, 1988–

LEONARDO DA SILVA SOUSA, Assistant Teaching Professor of Electrical and Computer Engineering; Carnegie Mellon University Silicon Valley – Ph.D., Pontificia Universidade Católica do Rio de Janeiro; Carnegie Mellon, 2020–

AKSHITHA SRIRAMAN, Assistant Professor of Electrical and Computer Engineering – Ph.D., University of Michigan; Carnegie Mellon, 2021–

PETER STEENKISTE, Professor of Electrical and Computer Engineering and Computer Science – Ph.D., Stanford University; Carnegie Mellon, 1987–

RICHARD STERN, Professor of Electrical and Computer Engineering, Language Technologies Institute, Computer Science, and BioMedicall Engineering; Lecturer Music – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 1997–

THOMAS SULLIVAN, Teaching Professor of Electrical and Computer Engineering; Lecturer Music – Ph.D., Carnegie Mellon University; Carnegie Mellon, 1996–

OZAN TONGUZ, Professor of Electrical and Computer Engineering – Ph.D., Rutgers University; Carnegie Mellon, 2000–

ELIAS TOWE, Professor of Electrical and Computer Engineering; Groebstein Professor of Materials Science and Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 2001–

RIAD WAHBY, Assistant Professor of Electrical and Computer Engineering – Ph.D., Stanford University; Carnegie Mellon, 2022–

RAFAL WLODARSKI, Assistant Teaching Professor of Electrical and Computer Engineering; Carnegie Mellon University Silicon Valley – Ph.D., Lodz University of Technology, Poland; Carnegie Mellon, 2022–

OSMAN YAGAN, Associate Research Professor of Electrical and Computer Engineering – Ph.D., University of Maryland at College Park; Carnegie Mellon, 2013–

ZIAD YOUISSI, Associate Professor of Electrical and Computer Engineering – Ph.D., Michigan State University; Carnegie Mellon, 2022–

BYRON YU, Professor of Electrical and Computer Engineering; Gerard G. Elia Career Development Professor of Biomedical Engineering – Ph.D., Stanford University; Carnegie Mellon, 2009–

TOM ZAJDELA, Assistant Teaching Professor of Electrical and Computer Engineering – Ph.D., University of California at Berkeley; Carnegie Mellon, 2021–

XU ZHANG, Assistant Professor of Electrical and Computer Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 2019–

SIYANG ZHENG, Professor of Electrical and Computer Engineering and Biomedical Engineering – Ph.D., California Institute of Technology; Carnegie Mellon, 2019–

JIAN-GANG ZHU, ABB Professor of Electrical and Computer Engineering; Director DSSC; Professor of Materials Science and Engineering – Ph.D., University of California at San Diego; Carnegie Mellon, 1997–

courtesy

YURVRAJ AGARWAL, Assistant Professor of Computer Science; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., University of California at San Diego; Carnegie Mellon, 2013–

NATHAN BECKMANN, Assistant Professor of Computer Science; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., Massachusetts Institute of Technology; Carnegie Mellon, 2017–

SARAH BERGBREITER, Professor of Mechanical Engineering; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., University of California at Berkeley; Carnegie Mellon, 2018–

MARIO BERGES, Assistant Professor of Civil and Environmental Engineering; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., Carnegie Mellon University; Carnegie Mellon, 2017–

TIMOTHY X. BROWN, Distinguished Service Professor of Engineering and Public Policy, Civil and Environmental Engineering; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., California Institute of Technology; Carnegie Mellon, 2013–

KATHLEEN CARLEY, Professor of Computer Science and Institute for Software Research; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., Harvard University; Carnegie Mellon, 2011–

STEVE CHASE, Associate Professor of BioMedical Engineering and Center for the Neural Basis of Cognition; Courtesy Faculty of Electrical and Computer Engineering – Ph.D., Harvard University; Carnegie Mellon, 2022–

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