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1870

Schaefer School of
Engineering and Science

2022-2023 ANNUAL REPORT

SCHAEFER SCHOOL OF ENGINEERING AND SCIENCE

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2022-2023 ANNUAL REPORT

Message from the Dean

It is with immense pride that I present the Charles V. Schaefer, Jr. School of Engineering and Science 2022-23 Annual Report. As I reflect upon another year of achievements, breakthroughs and contributions, it is clear that our school continues to be a beacon of excellence in education, research and innovation.

This annual report provides a snapshot of the journey we have embarked upon together, showcasing our school's steady upward trajectory. We tied our previous year's record for research funding at $35 million, broke our record for research expenditures and celebrated a record-breaking five young faculty members who won National Science Foundation (NSF) CAREER awards. We also achieved a record for graduate applications, master's student enrollment and a new record for total enrollment at 5,700 students.

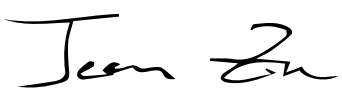
Throughout the past academic year, our faculty, including 23 enthusiastic new full-time members, have continued to push the boundaries of discovery, delving into new realms of knowledge and uncovering solutions to some of the most pressing challenges facing society today. Their research, spanning a wide spectrum of disciplines, bolsters our rapidly expanding research enterprise. Additionally, we made significant strides in increasing our teaching quality with strategic hiring initiatives, class size reduction and the continuation of the ATEAM faculty training initiative, which aims to enhance student learning and instructor efficiency through workshops and one-on-one mentoring in education, teaching and pedagogy.

As we navigate an ever-evolving landscape of science and technology, the Schaefer School remains committed to our goal of being a renowned, top-tier research university. Over the course of the past year, we established numerous new collaborations with external partners through sponsored research, capstone design projects and joint programs with other institutions. Our partnerships with industry, government agencies and research institutions further amplify the impact of our work, allowing us to transform innovative ideas into tangible solutions that address real-world challenges.

I am confident that, with the continued effort and dedication of the Schaefer School community, we will continue to achieve greatness and inspire generations to come.

Thank you for your unwavering commitment to the Schaefer School and its mission. Your collective efforts are what make our institution a beacon of knowledge, progress and hope.

Best wishes,



Jean Zu
Lore E. Feiler Dean

STUDENTS

Enrollment at a Glance AY 22-23

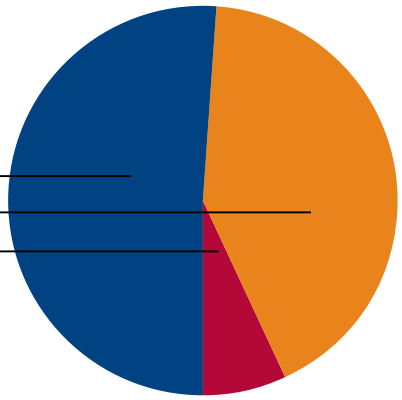
Total Students:

5,653

Total Undergraduate Enrollment: **2,898**

Total Master's Enrollment: **2,367**

Total Ph.D. Enrollment: **388**



Gender Diversity AY 22-23

% of female undergraduate students

Fall 2022: **31%**
Fall 2021: **29%**
Fall 2020: **28%**
Fall 2019: **28%**
Fall 2018: **28%**

% of female master's students

Fall 2022: **23%**
Fall 2021: **22%**
Fall 2020: **23%**
Fall 2019: **23%**
Fall 2018: **22%**

% of female Ph.D. students

Fall 2022: **28%**
Fall 2021: **26%**
Fall 2020: **29%**
Fall 2019: **29%**
Fall 2018: **27%**

Underrepresented Minorities AY 22-23

Undergraduate: **18.8%** Master's: **4.2%** Ph.D.: **1.3%**

Undergraduate Enrollment by Department

	BME	CCB	CEMS	CEOE	CS	ECE	ME	MS	PHY	UND*	SES (Total)	YOY Growth
2022	250	138	157	259	917	369	609	61	33	105	2,898	-2.4%
2021	266	135	188	247	859	382	647	47	49	149	2,969	7.46%
2020	233	110	218	223	745	368	600	41	49	176	2,763	3.76%
2019	239	96	220	243	611	388	579	38	61	188	2,663	4.51%
2018	227	79	233	249	503	402	599	38	52	166	2,548	7.51%

Based on Fall enrollment numbers

Master's Enrollment by Department

	BME	CCB	CEMS	CEOE	CS	ECE	ME	MS	PHY	OTHER	SES (Total)	YOY Growth
2022	52	31	25	209	1,330	242	213	255	10	0	2,367	46.6%
2021	55	28	25	155	763	221	172	182	13	1	1,615	35.3%
2020	48	39	36	170	390	248	161	85	15	2	1,194	-6.8%
2019	41	33	44	224	475	268	129	44	21	2	1,281	3.3%
2018	40	25	56	251	444	250	131	18	22	3	1,240	-11.1%

Based on Fall enrollment numbers

Ph.D. Enrollment by Department

	BME	CCB	CEMS	CEOE	CS	ECE	ME	MS	PHY	OTHER	SES (Total)	YOY Growth
2022	21	22	27	70	46	47	70	24	56	5	388	4.3%
2021	14	25	34	59	51	51	62	25	48	3	372	12.4%
2020	13	24	33	44	50	46	60	18	40	3	331	0.0%
2019	17	29	35	44	42	46	57	18	39	4	331	17.4%
2018	16	28	33	36	27	37	47	19	34	5	282	1.8%

Based on Fall enrollment numbers

Undergraduate Student Career Outcomes by Major

AY 21-22. Data for AY 22-23 not yet available.

MAJOR	EMPLOYMENT RATE 6 Mo. Post Grad	AVERAGE SALARY
Biology*	100%	$60,700
Biomedical Engineering	98%	$74,800
Chemical Biology*	100%	$60,700
Chemical Engineering	95%	$78,400
Chemistry*	100%	$60,700
Civil Engineering*	98%	$69,700
Computer Engineering	96%	$88,600
Computer Science	98%	$106,300
Cybersecurity	94%	$82,700
Electrical Engineering	94%	$84,800
Environmental Engineering*	98%	$69,700
Mechanical Engineering	96%	$72,100
Naval Engineering*	98%	$69,700
Optical Engineering*	100%	$65,300
Physics*	100%	$65,300
Pure & Applied Mathematics	100%	$77,300

*Department average

STUDENTS

Student Accomplishment Highlights

BME undergraduate student Bertila Bruka was one of three Stevens students selected as a 2022-23 Governor's STEM Scholar by the Research & Development Council of New Jersey.

BME undergraduate students Andre Faubert, **Susan George**, **Matthew Halvorsen**, **Rachel Pinho** and **Carter Rosen** won the third prize of $2,500 at the 2023 Ansary Entrepreneurship Competition for their project titled "VoFix."

BME Ph.D. student Rana Ibrahim was selected to receive a 2023 National Institute of Health Travel Award for her poster presentation at the 2023 TERMIS-AM Conference in Boston.

CCB undergraduate student Jenna Booth was selected to present her research at the Independent Colleges and Universities of New Jersey Undergraduate Research Symposium in March 2023.

CCB undergraduate student Lilya Eid was one of three Stevens students selected as a 2022-23 Governor's STEM Scholar by the Research & Development Council of New Jersey.

CEMS Ph.D. candidates Yi Feng and **Ruhao Li** presented their research projects funded by the National Science Foundation during the 2023 American Physical Society March meeting.

CEMS undergraduate student Isabella Furrick won first place in the research presentation competition at the 2023 Mid-Atlantic Regional American Institute of Chemical Engineers Conference for her research project titled "Enabling Carbon-Free Energy Production via Computer-Aided Design of Nickel-Based Bimetallic Catalysts."

CEOE Ph.D. student Erfan Amini was named the "2022 Clean Energy Student of the Year" by the Cleanie Awards for his high-quality research in the area of ocean renewable energy conversion and optimization.

CEOE undergraduate and co-op student Amanda Beltre received the Professional Engineers in Construction of New Jersey 2022-23 Sol Seid Award for Excellence. Recipients were selected based on academic excellence, extracurricular activities, work experience, an ability to express ideas and an interest in career opportunities in the construction industry. She also received a 2023-24 Moles Scholarship, awarded to academically qualified students with an interest in a career in the heavy construction industry.

CEOE undergraduate student Adrian Castellanos received a $3,000 graduate scholarship from the New Jersey American Society of Civil Engineers North Jersey Branch.

continued

Highlights *Continued*

CEOE undergraduate and co-op student Mel Colella received a 2023-24 Moles Scholarship, awarded to academically qualified students with an interest in a career in the heavy construction industry.

CEOE undergraduate student Taylor Danson received a $3,000 graduate scholarship from the New Jersey American Society of Civil Engineers North Jersey Branch.

CEOE undergraduate student Emily Leiby received the Department of Defense Science, Mathematics and Research for Transformation (SMART) Scholarship. This award provides students with full tuition for up to five years, mentorship, summer internships, a stipend and full-time employment with the DoD after graduation.

CEOE undergraduate and co-op student Emma McCann received the Department of Defense Science, Mathematics and Research for Transformation (SMART) Scholarship. This award provides students with full tuition for up to five years, mentorship, summer internships, a stipend and full-time employment with the DoD after graduation.

CEOE undergraduate student Robert Stepien, Jr. was awarded the 2023-24 Arline F. Gallagher Memorial Scholarship from the Moles Education Committee.

CS doctoral candidate Devharsh Kartikey Trivedi won the first place award of $700 at the Red Team CTF Challenge, hosted by Trend Micro and ISACA New York Metropolitan Chapter at VR WORLD NYC.

CS postdoctoral scholar Abdul Rafae Khan and CS master's students Girish Budhrani, **Preet Jhanglani** and **Hrishikesh Kanade** participated in the Seventh Conference on Machine Translation (WMT22), the largest annual worldwide machine translation competition, and won a shared subtask in code-mixed machine translation.

CS neurolinguistic programming team members João Luís Lins Rodrigues Cruz, **Abhijeet Gusain**, **Preet Jhanglani**, **Md Kowsher**, **Xuting Tang and Mengjiao Zhang** were selected for the Amazon Alexa Prize SocialBot Grand Challenge 5, one of the most prestigious prizes in AI.

ECE undergraduate student Megan Dion received the 2022-23 Institute of Electrical and Electronics Engineers Power and Energy Society Scholarship Plus, which awards students up to three years of scholarship money and connects them to internships and networking opportunities within the power and energy engineering industry.

continued

Highlights *Continued*

ECE undergraduate students Jacqueline Castro, **Thomas Fisher** and **Eli Shtindler** won the first place prize of $1,000 at the 2023 Gallois Autonomous Robot Competition.

ECE undergraduate students Sankalp Patel, **Pawan Perera**, **Mitchell Reiff**, **Peter Shikhman**, **Thomas Wang** and **Justin Young** received the David and GG Farber Societal Impact Award for their project titled "Psyche: The Stress Evaluator."

ECE undergraduate students Emily Aguirre and **Mariam Elnaggar** and **ME undergraduate student Lillian Go** won the third place prize of $250 at the 2023 Gallois Autonomous Robot Competition.

ME undergraduate students Matthew Franklyn and **Alex Wu** and **ECE undergraduate student Elizabeth O'Connor** won the second place prize of $500 at the 2023 Gallois Autonomous Robot Competition.

ME undergraduate students Murray Elinson, **Marcel Grygo**, **Kristina Sunada**, **Joseph Tsui and Steven Zheng** and **ECE undergraduate students Anthony Paolantonio** and **Kalani Pigao** received the John Barnes Senior Design Award for their project titled "Djembot."

ME undergraduate students Dolcinea Carroll, **Justine Schleuss**, **Stephen Schmidt**, **Jack Staub**, **Aaron Stultz** and **Peter White** won the second prize of $5,000 at the 2023 Ansary Entrepreneurship Competition for their project titled "No-Till Drill."

MS undergraduate student Julieta Caroppo was the recipient of the $5,000 inaugural In*Sight: Talks That Drive Change Provost Scholarship.

PHY undergraduate student Amir Ibrahim was selected to present his research at the Independent Colleges and Universities of New Jersey Undergraduate Research Symposium in March 2023.

PHY/MS undergraduate student Gabriel Sorci was selected to present his research at the Independent Colleges and Universities of New Jersey Undergraduate Research Symposium in March 2023.

177 SES engineering graduates were inducted into the Order of the Engineer upon graduation on May 23, 2023.

STUDENTS

FACULTY

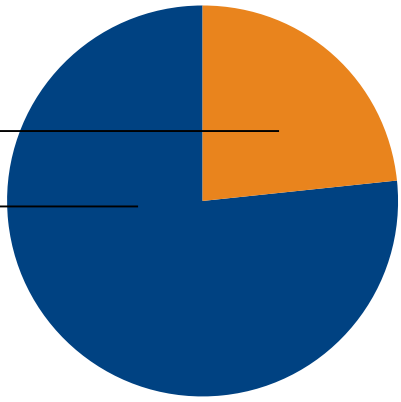
Faculty Distribution

Department	T/TT	NTT/Lecturer	Faculty
Biomedical Engineering	10	3	13
Chemical Engineering & Materials Science	9	2	11
Chemistry & Chemical Biology	6	12	18
Civil, Environmental & Ocean Engineering	17	13	30
Computer Science	22	13	35
Electrical & Computer Engineering	17	7	24
Mathematical Sciences	8	12	20
Mechanical Engineering	26	10	36
Physics	12	6	18
Grand Total	**127**	**78**	**205**

Faculty Gender Distribution

Female **23.4%,** 48 women

Male **76.6%,** 157 men



Faculty Growth

	T	TT	NTT	Lecturer	TOTAL
AY 18-19	71	44	56	10	181
AY 19-20	76	50	53	16	195
AY 20-21	76	48	49	13	186
AY 21-22	74	51	54	15	194
AY 22-23	77	50	56	22	205

23 New Hires

Abrar Alrumayh, Teaching Assistant Professor, Computer Science
Ph.D., Temple University
Specialization: Security and privacy of audio-based systems; smart health systems

Denver Baptiste, Lecturer, Chemistry and Chemical Biology
Ph.D., Howard University

Matthew Coleman, Lecturer, Physics
Ph.D., University of California, Santa Barbara

Paola DiMarzio, Teaching Associate Professor, Chemistry and Chemical Biology
Ph.D., State University of Rome
Specialization: Viral-host interactions; immunopathogenesis

Sarah Goodman, Teaching Assistant Professor, Chemical Engineering and Materials Science
Ph.D., Massachusetts Institute of Technology
Specialization: Electron microscopy; organic optoelectronics

Patrick Hill, Lecturer, Computer Science
Recent affiliation: Stevens Institute of Technology

Jonggi Hong, Assistant Professor, Computer Science
Ph.D., University of Maryland, College Park
Specialization: Human-computer interaction; machine learning; accessibility

Jennifer Kang-Mieler, Professor and Chair of the Department of Biomedical Engineering
Ph.D., Northwestern University
Specialization: Blood flow, drug delivery, and imaging related to retinal vascular diseases

Karim Karam, Teaching Associate Professor, Civil, Environmental and Ocean Engineering
Ph.D., Massachusetts Institute of Technology
Specialization: Infrastructure planning; infrastructure construction engineering and management

Benjamin Leinwand, Assistant Professor, Mathematical Sciences
Ph.D., University of North Carolina, Chapel Hill
Specialization: Networks (temporal; dense weighted; multilayer)

Monika, Lecturer, Mathematical Sciences
Ph.D., University of Memphis

Nikhil Muralidhar, Assistant Professor, Computer Science
Ph.D., Virginia Tech
Specialization: Artificial intelligence; machine learning; data science and analytics; cybersecurity and privacy

continued

New Hires *Continued*

Jacek Ossowski, Teaching Associate Professor, Computer Science
Ph.D., New York University
Specialization: Machine/deep learning; reinforcement learning; probability; stochastic processes

Reza Peyrovian, Senior Lecturer, Computer Science
Ph.D., University of Miami

Zahra Pournorouz, Teaching Assistant Professor, Mechanical Engineering
Ph.D., University of Texas, Arlington
Specialization: Nanofluid technology; synthetic oil thermal performance enhancement; molecular dynamics simulation

Jeffrey Raab, Lecturer, Chemistry and Chemical Biology
Ph.D., Seton Hall University

Eve Riskin, Stevens Dean for Undergraduate Education and Professor, Electrical and Computer Engineering
Ph.D., Stanford University
Specialization: Image processing; signals and systems; communications

Paul Schwartz, Lecturer, Mathematical Sciences
Ph.D., University of Florida

Yong Meng Sua, Research Assistant Professor, Physics
Ph.D., Michigan Technological University
Specialization: Integrated quantum photonics; quantum-inspired sensing and imaging

Edmund Synakowski, Vice Provost for Research and Innovation and Professor, Physics
Ph.D., University of Texas at Austin
Specialization: Fusion and plasma physics

Chaitanya Krishna Vallabh, Lecturer, Mechanical Engineering
Ph.D., Clarkson University

Ronghuan Xu, Lecturer, Civil, Environmental and Ocean Engineering
Ph.D., New Mexico State University

Tewodros (Teddy) Zewde, Teaching Associate Professor, Electrical and Computer Engineering
Ph.D., Syracuse University
Specialization: Wireless communication and networking; PMU and smart grid security

Internal Honors & Awards

Alumni Association Award

CS Teaching Professor **Sandeep Bhatt** received the 2023 Stevens Alumni Association Outstanding Teacher Award.

Stevens Employee Recognition Awards

ME Adjunct Professor and Associate Dean of Undergraduate Academics **Erol Cesmebasi** received the 2022-23 Stevens Employee Recognition Award for Lifetime Contribution.

Faculty Awards

CS Assistant Professor **Yue Ning** received the Early Career Award for Research Excellence.

PHY Teaching Assistant Professor **Ting Lu** received the Harvey N. Davis Distinguished Teaching Assistant Professor Award.

ECE Professor and Anson Wood Burchard Chair Professor **Lei Wu** received the Award for Research Excellence.

ME Professor **EH Yang** received a Master of Engineering (*honoris causa*).

BME Professor and Director of the Semcer Center for Healthcare Innovation **Hongjun Wang** received the Inaugural Distinguished Scholar-Teacher Award.

MS Teaching Associate Professor and Associate Chair for Undergraduate Studies **Jan Cannizzo** received the Inaugural Distinguished Teacher-Mentor Award.

CEMS Associate Professor **Simon Podkolzin**, BME Professor and Director of the Semcer Center for Healthcare Innovation **Hongjun Wang** and CS Associate Professor **Hui (Wendy) Wang** each received the 2022 Schaefer School Doctoral Advisor Award.

CEOE Professor **Christos Christodoulatos**, BME Assistant Professor **Shang Wang** and CCB Assistant Professor **Abhishek Sharma** each received the 2022 Schaefer School Research Funding Award.

MS Teaching Professor **Pavel Dubovski** and BME Teaching Associate and Associate Chair of Undergraduate Studies **Sally Shady** each received the 2022 Schaefer School Education Innovation and Impact Award.

CEMS Emeritus Professor **Keith Sheppard** received the 2022 Schaefer School Lifetime Achievement Award.

External Honors & Awards

Young Investigator Awards

National Science Foundation (NSF) CAREER Award Winners:

Elnaz Banan Sadeghian, Department of Electrical and Computer Engineering
Yu Gan, Department of Biomedical Engineering
Raviraj Nataraj, Department of Biomedical Engineering
Igor Pikovski, Department of Physics
Jie Shen, Department of Computer Science

Other External Honors and Awards

Xiaojiang (James) Du (ECE), selected as an IEEE ComSoc Distinguished Lecturer for the class of 2023-24

Negar Ebadi (ECE), work featured as the cover article for the January 2023 issue of *IEEE Journal of Biomedical and Health Informatics*

Jennifer Kang-Mieler (BME), elected Chair of the NIH panel Brain Imaging, Vision, Bioengineering and Low Vision Technology Development (BIVT)

Reza Marsooli (CEOE), received the 2022 New Jersey American Society of Civil Engineers (ASCE) North Jersey Branch Educator of the Year award and an Early-Career Research Fellowship, Gulf Research Program, National Academies of Sciences, Engineering and Medicine award

Jason Rabinovitch (ME), selected to serve on the newly established Venus Science Coordination group (VeSCoor), a joint committee of NASA and the European Space Agency (ESA)

Abhishek Sharma (CCB), appointed as a member of the Early Career Advisory Board of two international journals: *Tetrahedron* and *Tetrahedron Letters*

Stefan Strauf (PHY), work featured on the August 2022 cover of *Optica*

EH Yang (ME), appointed as a Distinguished Lecturer of the IEEE Sensors Council for the period 2023-25

Shucheng Yu (ECE), elevated to IEEE Fellow for his contributions to information and network security

Xian (Annie) Zhang (ME), work featured on the March 2023 cover of *Small*

FACULTY

UNDERGRADUATE

Types of Programs Offered AY 22-23

Total Bachelor's Programs **15**

Total Engineering Programs **8**

Total Math & Science Programs **5**

Total Computer Science Programs **2**

Number of Programs Offered by Department AY 22-23

Degree	BME	CCB	CEMS	CEOE	CS	ECE	E*	ME	MS	PHY	TOTAL
B.Eng.	1	-	1	2	-	2	1	1	-	-	8
B.S.	-	3	-	-	2	-	-	-	1	1	7
Total	**1**	**3**	**1**	**2**	**2**	**2**	**1**	**1**	**1**	**1**	**15**

*Engineering & Science

Number of Undergraduate Degrees Awarded by Department AY 22-23

	B.Eng. BME	B.S. CCB	B.Eng. CEMS	B.Eng. CEOE	B.S. CS	B.Eng. ECE	B.Eng. E*	B.Eng. ME	B.S. MS	B.S. PHY	Total	B.S.	B.E.
AY 22-23	64	22	51	46	167	103	10	180	8	12	**663**	209	454
AY 21-22	65	27	47	50	152	100	16	159	9	12	**637**	200	437
AY 20-21	31	18	60	41	117	89	7	124	13	15	**515**	163	352
AY 19-20	46	17	55	52	87	93	6	141	10	8	**515**	122	393
AY 18-19	41	13	59	55	88	115	3	183	5	6	**568**	112	456

E* Computational Science interdisciplinary program now retired
AY includes both Fall and Spring graduates, e.g., 2018-19 AY = Fall 18 + Spring 19.

Undergraduate Student Profile

	Fall 2021	Fall 2022
Underrepresented Minorities	**18.3%**	**18.8%**
Female Undergraduates	**29%**	**31.3%**

First-Time, Full-Time Student Retention

2021F cohort, retained in 2022F	86.4%
2020F cohort, retained in 2021F	90.0%
2019F cohort, retained in 2020F	89.0%
2018F cohort, retained in 2019F	87.8%
2017F cohort, retained in 2018F	89.6%

Applications & Enrollment

	2018F	2019F	2020F	2021F	2022F
Undergraduate Applications	7,593	8,440	8,388	9,051	9,877
New Undergraduate Enrolled	798	748	729	832	736

Undergraduate Student Distribution Across Departments Fall 2022

	BME	CCB	CEMS	CEOE	CS	ECE	ME	MS	PHY	Undecided
Undergraduate Enrollment	9%	5%	6%	8%	29%	13%	22%	2%	2%	4%

UNDERGRADUATE

GRADUATE

Number of Programs Offered by Department AY 22-23

Degree	BME	CCB	CEMS	CEOE	CS	ECE	ME	MS	PHY	DEAN	Total
Ph.D.	1	2	2	3	2	2	1	1	1	1	**16**
Engineer	1	0	1	1	1	2	1	0	0	0	**7**
Master	2	2	2	5	4	3	4	4	2	1	**29**
Online	0	0	0	1	2	3	2	1	0	0	**9**
Dual-Degree MBAs	0	0	1	2	0	3	2	0	0	0	**8**
TOTAL	**4**	**4**	**6**	**12**	**9**	**13**	**10**	**6**	**3**	**2**	**69**

Number of Graduate Degrees Awarded by Department AY 22-23

Degree	BME	CCB	CEMS	CEOE	CS	ECE	ME	MS	PHY	DEAN	Total
Ph.D.	2	3	4	9	6	12	7	0	8	1	**52**
Engineer	0	0	0	0	0	0	0	0	0	0	**0**
Master of Science	12	19	8	92	624	59	30	113	8	0	**965**
Master of Engineering	26	0	11	34	0	68	79	0	0	0	**218**
TOTAL	**40**	**22**	**23**	**135**	**630**	**139**	**116**	**113**	**16**	**1**	**1,235**

Graduate Student Profile

	2018F	2019F	2020F	2021F	2022F
Full-Time	82%	84%	79%	79%	82%
Ph.D.	19%	21%	22%	19%	14%
Domestic	30%	29%	38%	35%	27%
Online	1%	4%	8%	12%	12%
Female New Ph.D.	25%	33%	29%	27%	23%
Female New Master	22%	22%	27%	22%	23%

GRADUATE

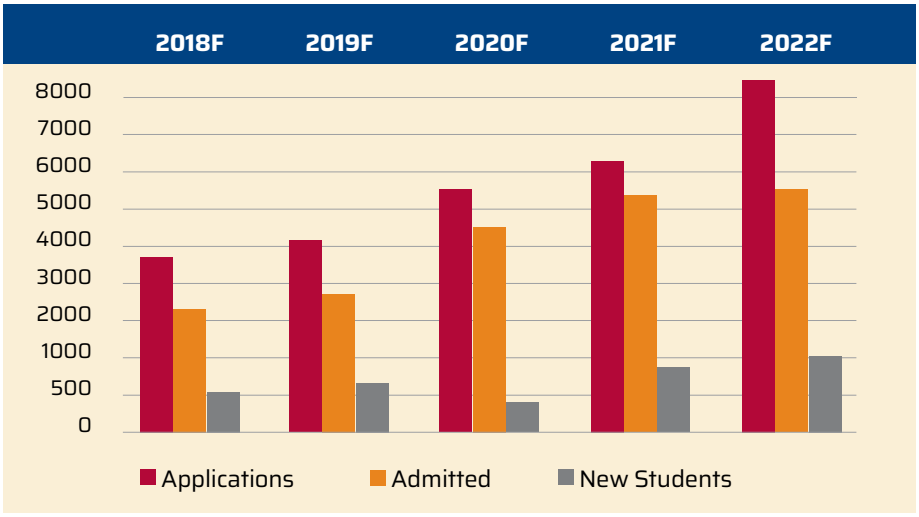
GRADUATE

Applications & Enrollment

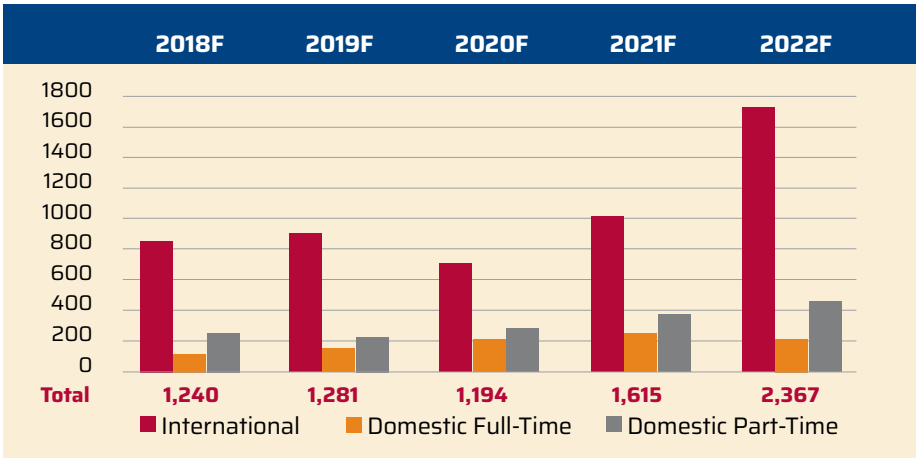
	2018F	2019F	2020F	2021F	2022F
Master's Applications*	3,630	4,234	5,513	6,385	8,577
New Master's Enrolled*	517	587	412	888	1,008
Online Applications	16	38	114	218	228
New Online Enrolled	12	9	59	58	87
Ph.D. Applications	601	1,117	1,401	1,233	1,311
New Ph.D. Enrolled	38	90	57	74	80

*Includes online

Master's Admission



Total Master's Enrollment



Rankings

U.S. News & World Report Best Undergraduate Schools (2023-2024)

#82 in Undergraduate Computer Science Programs

#82 in Undergraduate Engineering Programs

U.S. News & World Report Best Graduate Engineering Schools (2023-2024)

#84 in Best Engineering Schools: Graduate

#76 in the nation in Best Graduate Electrical Engineering Programs

#71 in the nation in Best Graduate Computer Engineering Programs

#77 in the nation in Best Graduate Environmental Engineering Programs

#77 in the nation in Best Graduate Materials Science Programs

#80 in the nation in Best Graduate Biomedical Engineering Programs

#80 in the nation in Best Graduate Mechanical Engineering Programs

#82 in the nation in Best Graduate Computer Science Programs

continued

GRADUATE

Rankings

#84 in the nation in Best Graduate Chemical Engineering Programs

#90 in the nation in Best Graduate Civil Engineering Programs

U.S. News & World Report Best Online Programs (2023-2024)

#1 in New Jersey in Best Online Graduate Engineering Programs

#2 in the Northeast in Best Online Graduate Engineering Programs

#8 in the nation in Best Online Graduate Computer Information Technology Programs

#28 in the nation in Best Online Graduate Engineering Programs

GradReports

#1 Best Mathematics Master's Degrees

#1 Best Civil Engineering Bachelor's Degrees

#2 Best Bachelor's Degrees in New Jersey

#12 Best Electrical Engineering Bachelor's Degrees

#15 Best Biomedical Engineering Master's Degrees

#22 Best Biomedical Engineering Bachelor's Degrees

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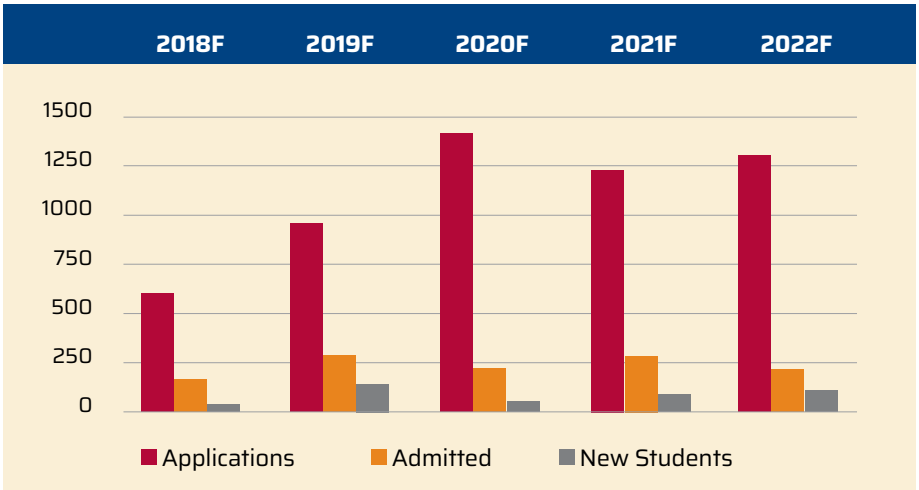
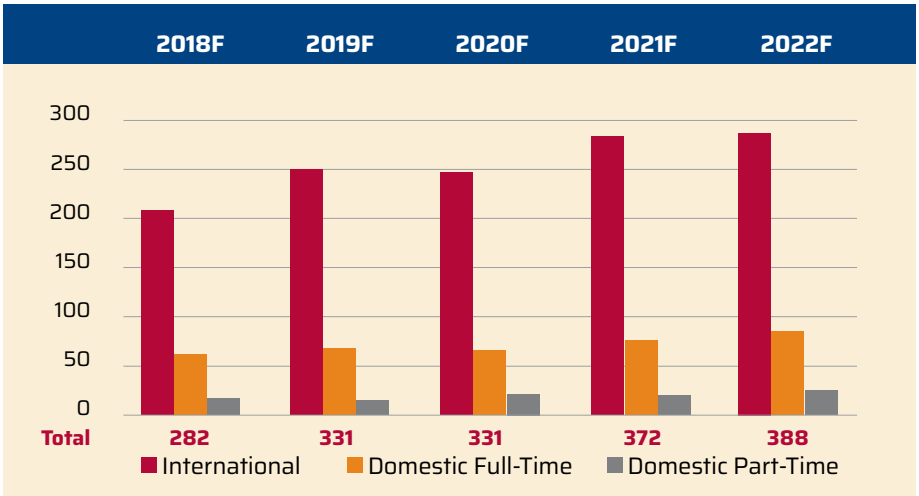
Ph.D. Admission



Total Ph.D. Enrollment

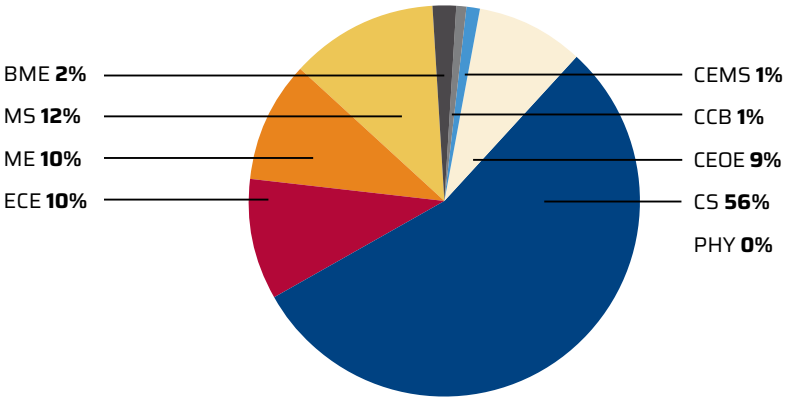


New Programs

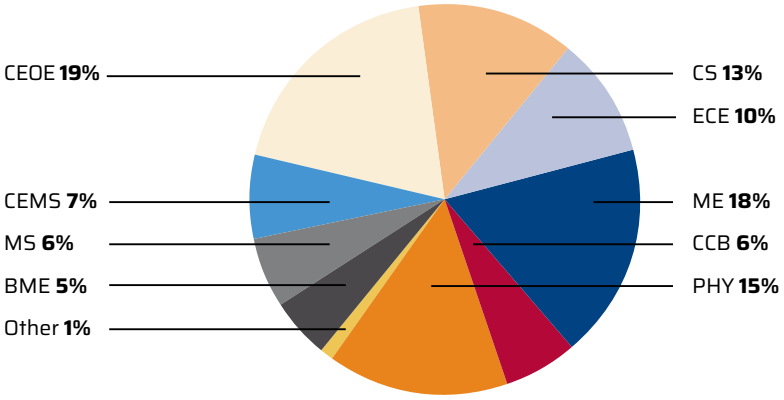
- Ecole Centrale de Nantes, France - Dual-Degree Ph.D.
- Hackensack Meridian School of Medicine, New Jersey, USA - M.S.
- Inter-University Engineering Doctoral Consortium, New York/New Jersey, USA - Stevens, NYU, NYUIT, Rutgers, CCNY, Columbia, Cornell, Princeton

Graduate Student Distribution Across Departments Spring 2022

Master's Enrollment



Ph.D. Enrollment



GRADUATE

Best Computer Science Schools

#7 among the 30
Best Online Master's Degrees
in Computer Science

College Factual

#1 out of 17
in Best Mathematics
Bachelor's Degree

#1 out of 17
in Best General Mathematics
Bachelor's Degree

#1 out of 7
in Best Mathematics &
Statistics Master's Degree

#15 out of 152
in Best Mathematics &
Statistics Doctor's Degree

#17 out of 130
in Best General Mathematics
Doctor's Degree

#17 out of 131
in Best Mathematics
Doctor's Degree

University HQ

#10 Best Online Master's
Degree in Data Science

New Intra-University Joint Programs

Inter-University Engineering
Doctoral Consortium,
New York/New Jersey

- Stevens, NYU, NYUIT,
  Rutgers, CCNY, Columbia,
  Cornell, Princeton

École Centrale de Nantes,
France — Dual-Degree Ph.D.

Hackensack Meridian School
of Medicine, New Jersey —
Master of Science

RESEARCH

Top Ten PIs by Research Dollars Awarded FY 22-23

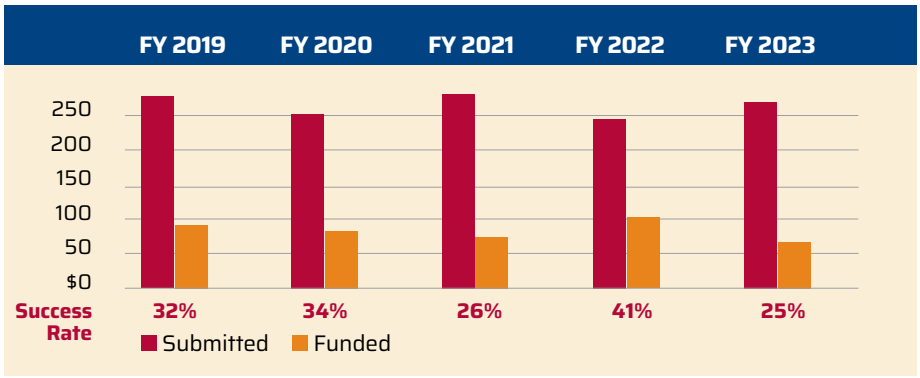
PI Name	DEPARTMENT	AWARD TOTAL
John Dzielski	CEOE & DL	$4,705,804
Christos Chrisodoulatos	CEOE & CES	$3,349,284
Dilhan Kalyon	CEMS	$2,877,032
Jennifer Kang-Mieler	BME	$2,663,245
Matthew Libera	CEMS	$1,808,624
Dibyendu (Dibs) Sarkar	CEOE	$1,617,192
Cheng Chen	CEOE	$1,511,804
Damiano Zanotto	ME	$1,441,094
Yanghyo (Rod) Kim	ECE	$1,379,700
Susanne Wetzel	CS	$1,373,943
Grand Total		**$22,727,722**

Top Ten PIs by Research Expenditures FY 22-23

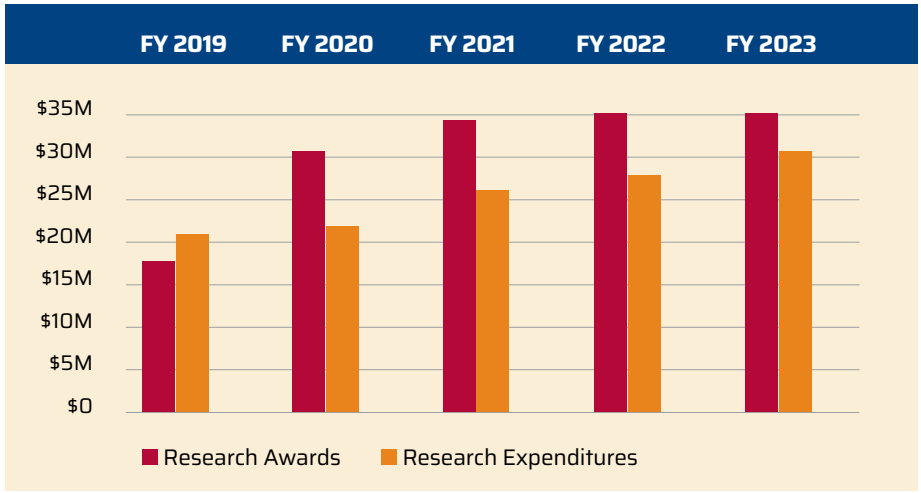
PI Name	DEPARTMENT	AWARD TOTAL
Christos Christodoulatos	CEOE & CES	$3,836,787
Yuping Huang	PHY	$2,393,724
Muhammad Hajj	CEOE & DL	$1,269,688
Samantha Kleinberg	CS	$1,248,767
Jason Corso	CS	$1,012,641
Susanne Wetzel	CS	$816,568
Jon Miller	CEOE & DL	$741,741
Jennifer Kang-Mieler	BME	$702,353
Nicholaus Parziale	ME	$678,391
Raju Datla	CEOE & DL	$654,851
Total		**$13,355,511**

RESEARCH

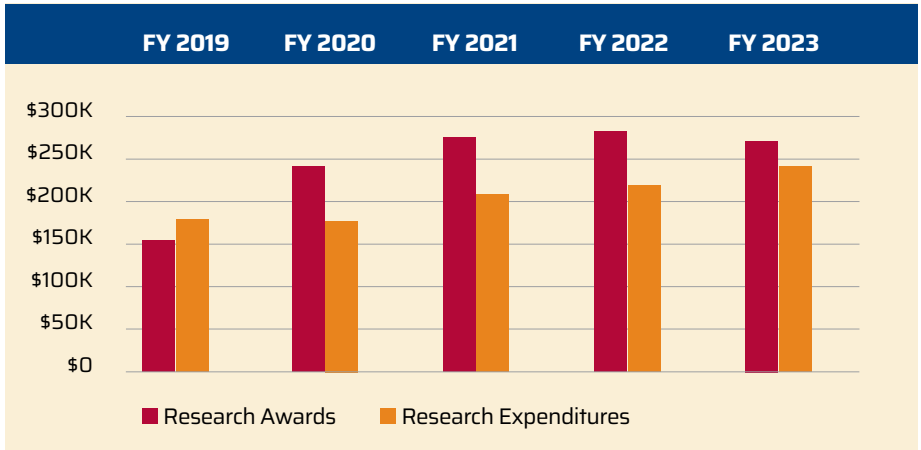
Research Proposal Activities



Total Research Funding & Expenditures



Total Research Funding & Expenditures Per Faculty



Total Patents Granted by Department AY 21-22

Data for AY 22-23 not yet available

DEPARTMENT	PATENTS
Biomedical Engineering	2
Chemical Engineering & Materials Science	2
Chemistry & Chemical Biology	1
Civil, Environmental & Ocean Engineering	-
Computer Science	1
Electrical & Computer Engineering	-
Engineering & Science	-
Mathematical Sciences	-
Mechanical Engineering	2
Physics	2
Total	**10**

Number of Refereed Journal Articles and Conference Papers Published AY 21-22

Data for AY 22-23 not yet available

DEPARTMENT	ARTICLES	PAPERS
Biomedical Engineering	34	24
Chemical Engineering & Materials Science	23	4
Chemistry & Chemical Biology	14	2
Civil, Environmental & Ocean Engineering	139	20
Computer Science	9	59
Electrical & Computer Engineering	77	48
Engineering & Science	-	-
Mathematical Sciences	27	-
Mechanical Engineering	65	33
Physics	24	7
Total	**412**	**197**

RESEARCH

FACILITIES

Recently Renovated Spaces

The Schaefer School has invested in upgrading departmental office and lab spaces to better meet the needs of our faculty, staff and students. The following locations were renovated during the 2022-23 academic year:

- **Carnegie Laboratory 200** — ME research lab
- **Carnegie Laboratory 213** — ME research lab
- **Davidson Laboratory 244** — CEOE department office and Center for Student Success
- **Davidson Laboratory Shop** — security wall
- **Edwin A. Stevens Hall 317-325** — ME Center for Student Success and faculty offices
- **Edwin A. Stevens Hall Annex** — ME research lab and faculty offices
- **Gateway North 410-425** — Stevens Institute for Artificial Intelligence office suite and CS faculty offices
- **McLean Hall 108** — BME department office and Center for Student Success
- **McLean Hall 504** — BME research lab
- **Williams Library Basement** — ECE teaching lab

FACILITIES

MEDIA

Highlights

Donald Carlucci

Donald Carlucci appeared in *The Philadelphia Inquirer's* story titled "What Happens When Someone Fires Bullets Skyward."

Robert Chang

Robert Chang appeared in *ASME American Society of Mechanical Engineers'* video titled "Bridging Biology and Mechanical Engineering in Biomanufacturing and Bioprinting."

Megan Dion

Megan Dion, undergraduate, appeared in *IEEE Spectrum*'s story titled "This Stevens Institute of Technology Student Got a Head Start in Engineering."

Dominic Duggan appeared in *TechTarget*'s story titled "Construct an Event-Driven Architecture for Real-Time Operations."

Dominic Duggan

John Dzielski appeared in *Science News*' story titled "Spiraling Footballs Wobble at One of Two Specific Frequencies."

John Dzielski

Brendan Englot appeared in *IEEE Spectrum*'s story titled "Underwater Robots Get a Boost in Mapping the Ocean," *ASME American Society of Mechanical Engineers*' video titled "Is This ROV the Future of Underwater Mapping?," *Lifewire*'s story titled "How This Agile, Soccer-Playing Dog Robot Could Lead to Better Future Robotics," *Robotics 24/7*'s story titled "A Conversation with Brendan Englot, Stevens Institute's New Director for Artificial Intelligence," *News 12 New Jersey*'s story titled "Brendan Englot Speaks About Opportunities and Challenges of AI," *CBS Radio*'s story titled "Brendan Englot Discusses Challenges to Search and Rescue Mission for Titan," *Fox News*' story titled "New Assets 'On-Scene' in Missing Titanic Submarine Search After Canadians Pick Up 'Underwater Noises,'" *Fox 29 News Philadelphia*'s segment titled "Time Running Out for Passengers on Missing Sub Heading to Titanic Wreckage," *Fox News*' story titled "What Is an ROV? Deep-Sea Tech Used in Titanic Submarine Search," *Fox 29 News Philadephia*'s segment titled "5 on Titan Submersible Presumed Dead," and *Business Insider*'s story titled "It Would Be Too Risky to Try to Recover the Remains of Those Lost in the Titan Sub Implosion, Underwater ROV Expert Says."

Brendan Englot

Frank Fisher

Frank Fisher appeared in *NJBIZ*'s story titled "Engineering a Solution to a Shortage."

Muhammad Hajj

Muhammad Hajj appeared in *Protocol*'s story titled "Catch a Wave" and *New Jersey Monitor*'s story titled "Lawmakers Advance Bill to Study Energy from Waves and Tides."

continued

MEDIA

Samantha Kleinberg appeared in *City Health*'s story titled "The Next Generation of Precision Nutrition Science" and *Physicians Practice*'s story titled "AI's Impact on the Common Health Conditions Affecting Seniors."

George Korfiatis appeared in *Fox Weather*'s segment titled "Why Sinkholes Tend to Appear After Extreme Rain."

Daniel Lentini, undergraduate, appeared in *PIX11*'s segment titled "Mental Health and Sleep."

Reza Marsooli appeared in *The City*'s story titled "Low-Lying East Harlem Dodged Sandy's Worst but Neighborhood's Still Not Ready for Next Storm" and *CBS News*' story titled "Discolored Water in Norwalk Harbor Caused by Brown Tide, Expert Says."

George McConnell appeared in *Lifewire*'s story titled "Don't Worry! AI Won't Be Reading Your Mind Anytime Soon, Experts Say."

Jon Miller appeared in *New Jersey 101.5*'s story titled "Can New Jersey Handle Another Sandy?," *The Washington Post*'s story titled "In Place of Sandy-Ravaged Homes, a 'Living' Beach Helps N.J. Prepare for Next Storm," and *Asbury Park Press*' story titled "Are NJ Beaches Prepared for Hurricane Season? Officials Say Yes, but Vulnerabilities Remain."

Philip Orton appeared in *Bloomberg News*, *The Washington Post*, *The Economic Times*, *The Business Standard*, and *The New Nation*'s story titled "Rising Seas Are the Next Crisis for the World's Ports," *The Independent*'s story titled "Hurricane Sandy 10 Years Later: Is New York Ready for the Next Big One?," *CBS News New York*'s documentary titled "Sandy 10 Years Later," *Asbury Park Press*' story titled "When Could a Storm Like Sandy Strike New Jersey Again? We'll Be Ready," *News & Record*'s story titled "Will Post-Sandy Repairs Be Enough for the Next Big Storm?," *WFMZ-TV 69 News*' story titled "It's Been 10 Years Since Superstorm Sandy," *Lee News Central*'s video titled "Hurricane Sandy 10 Years Later: Lessons Learned," *The Daily Freeman*'s story titled "Rain Later in Week Could Cause Flooding in Mid-Hudson Valley," and *American Geophysical Union*'s story titled "Historical Dredging and Wetland Loss in New York City's Jamaica Bay Increase Flooding."

continued


Samantha Kleinberg


George Korfiatis

Daniel Lentini


Reza Marsooli


George McConnell


Jon Miller


Philip Orton

MEDIA

Nicholaus Parziale

Nicholaus Parziale appeared in *ASME American Society of Mechanical Engineers*' video titled "How to Study Hypersonic Flight Without Leaving the Ground? This Shock Tunnel Goes to Mach 6."

Igor Pikovski

Igor Pikovski appeared in *WFLA News Channel 8*'s video titled "'Most Sensitive' Dark Matter Detector Finally Started Up."

Jason Rabinovitch

Jason Rabinovitch appeared in *CNET*'s story titled "No, NASA's Revolutionary Hubble Space Telescope Is Not Dead Yet," *Europa Press*' story titled "Ingenuity Levanta Mucho Más Polvo en Marte Que Si Volase en la Tierra," *Digital Trends*' story titled "Ingenuity Helicopter Helps Researchers Learn About Dust on Mars," and *Space.com*'s story titled "Mars Helicopter Ingenuity's Historic 1st Flights Shed Light on Martian Dust Dynamics."

Dibyendu (Dibs) Sarkar

Dibyendu (Dibs) Sarkar appeared in *NBC LX News*'s story titled "TikTok Wants You to Make 'Ecobricks' From Plastic Trash. Should You?"

K.P. (Suba) Subbalakshmi

K.P. (Suba) Subbalakshmi appeared in *AiThority*'s story titled "AI Researchers Use Social Media Monitoring Tactics to Identify Behavior Toward Vaccination."

Marouane Temimi

Marouane Temimi appeared in *Los Angeles Times*' story titled "L.A. Lets Rain Flow Into the Pacific Ocean, Wasting a Vital Resource. Can We Do Better?," *Fox Weather*'s segment titled "How Ground Saturation, Flooding Is Impacting California's Infrastructure," *Los Angeles Times*' story titled "Will This Rain Ever Stop? New Storms Make Their Way Across California," *New Jersey Monitor*'s story titled "Ten Years After Sandy, Hoboken Offers Lessons in Storm Resilience," *NJ.com*'s story titled "10 Years Later, Hudson County Is Better Prepared to Handle a Superstorm Sandy," *The Economic Times*' story titled "California Storms: The Science Behind the Floods," and *Smart Water Magazine*'s story titled "California's Extreme Weather Calls for Investments That Help Capture Water from Storms."

David Vaccari

David Vaccari appeared in *Pledge Times*' story titled "Food Threatens to Decrease Because the Important Basic Ingredient of Fertilizers Is Becoming Scarce."

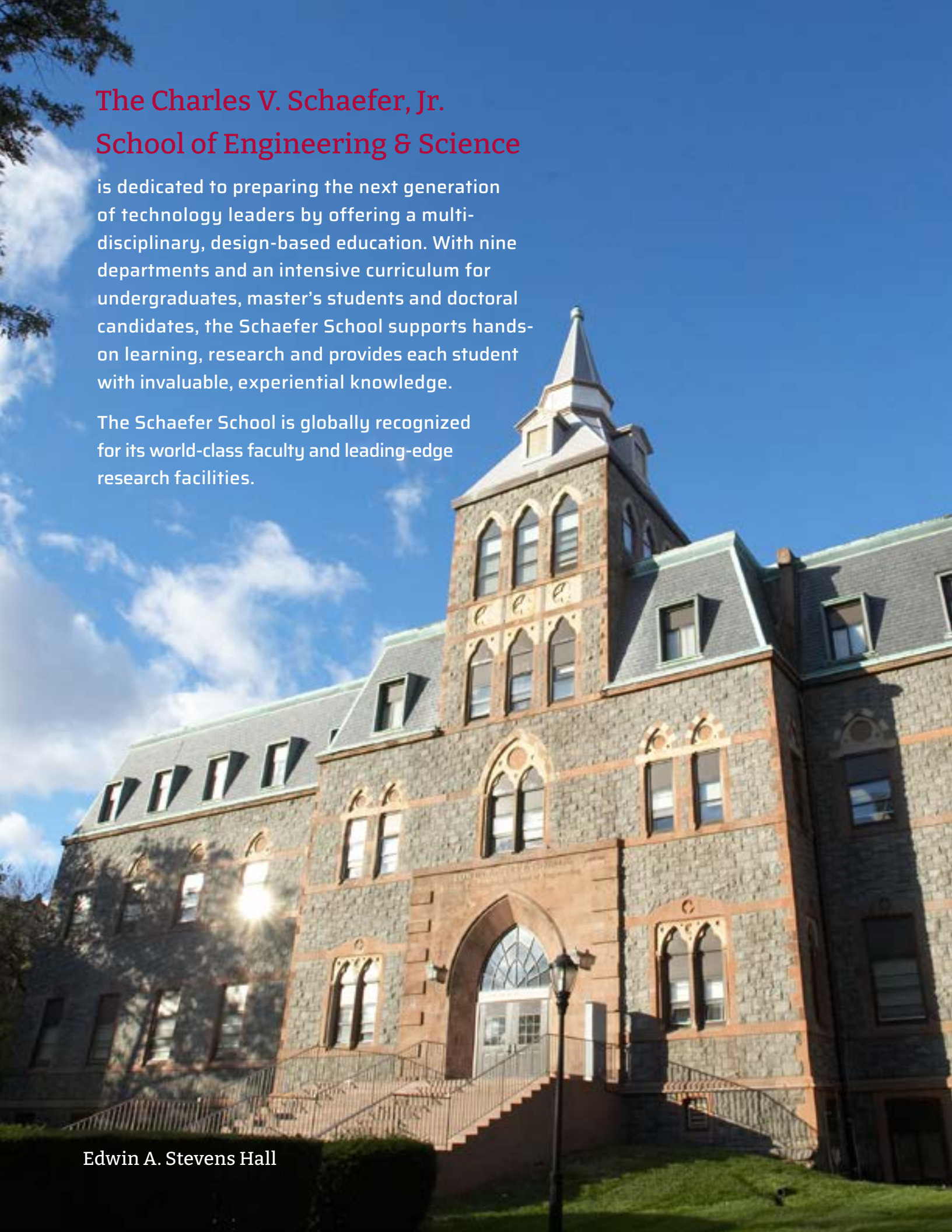
Lei Wu

Lei Wu appeared in *Utility Dive*'s story titled "US Energy Storage Needs National Standards and Regulations to Thrive Amid Clean Energy Transition: GAO."

The Charles V. Schaefer, Jr. School of Engineering & Science

is dedicated to preparing the next generation of technology leaders by offering a multi-disciplinary, design-based education. With nine departments and an intensive curriculum for undergraduates, master's students and doctoral candidates, the Schaefer School supports hands-on learning, research and provides each student with invaluable, experiential knowledge.

The Schaefer School is globally recognized for its world-class faculty and leading-edge research facilities.



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