



### Letter from the Dean

Dear Engineering Graduates,

By nature of you being here today, you are among the best, brightest and hardest working engineers the world has to offer.

You have made it through one of the most rigorous engineering programs in the country. During your time as an engineering student, you have collectively spent thousands of hours researching, volunteering and

interning in the city of Houston, adding to the strength and vibrancy of our community. When you leave our labs and classrooms to embark on your careers, your professional contributions will have a resounding impact here in the city of Houston and around the world.

You are the thinkers, doers and creators of our modern world. You will be the designers, builders, problem-solvers and inventors of our tomorrow. Although you represent a wide variety of backgrounds and disciplines, as you walk across the stage to accept your diploma, you all have one thing in common: you are world-class engineers.

From here, the world is at your fingertips. Work hard, give back, and trust in the knowledge you have acquired during your time as a student at the UH Cullen College of Engineering. Everything else will fall into place.

Congratulations, engineering Cougars! I look forward to seeing the impact your bright careers will have on our future and our world. Please stay in touch and fill me in on all of your successes: dean@egr.uh.edu.

Sincerely,

Joseph W. Tederco

Joseph W. Tedesco Elizabeth D. Rockwell Dean and Professor



### **Convocation Speaker**

### **JESSE GONZALEZ**

Jesse Gonzalez received his Bachelor of Science in Civil Engineering from the University of Houston in 1969. He served as Chairman of the Board for SpawGlass and served as president of the Houston operations for more than fifteen years until his retirement in 2009. Mr. Gonzalez is a registered Professional Engineer in the State of Texas, is past President of the local chapters of Associated Builders and Contractors as well as Associated General Contractors of America and is

Past Chairman of the Greater Heights Chamber of Commerce. He is a Life Member of the Houston Alumni Association and serves on the UH Civil and Environmental Engineering Industrial Advisory Board as well as on the UH Engineering Leadership Board. Mr. Gonzalez is a recipient of the University of Houston Distinguished Engineering Alumni Award, which he received in 2003, and is the recipient of the Lifetime Achievement Award from the UH Alumni Association in 2011.

Mr. Gonzalez, in partnership with nine other employees, purchased the company SpawGlass in 1991. Soon after the purchase, the company was transitioned to 100% employee ownership with more than 300 employee shareholders, ranging from administrative staff and field laborers to executive management. Since the purchase and employee ownership, the company has thrived reaching revenue levels of almost \$500 million. The company has been voted Best Places to Work by the Houston Business Journal and Texas Monthly as well as consistently being ranked as one of Houston's Top 10 General Contractors and one of the Top 400 US General Contractors.

Mr. Gonzalez is married to his high school sweetheart Terry, and they have four children.

### University of Houston

**Cullen College of Engineering** 

### Convocation

Friday, December 16, 2016, 6 p.m. Hofheinz Pavilion

PROCESSIONAL	Grand Marshal Chad Wilson Instructional Assistant Professor	
	Grand Marshal Leonard Trombetta Associate Professor	
	Faculty	
	Banner Bearer	
	Platform Party	
	Dean Joseph Tedesco	
PRESENTATION OF THE COLORS	UH ROTC	
NATIONAL ANTHEM	ManCorps	
WELCOME AND INTRODUCTORY REMARKS	Joseph W. Tedesco Elizabeth D. Rockwell Dean and Professor	
CONVOCATION ADDRESS	Jesse Gonzalez Cullen College of Engineering Alumnus	
PRESENTATION OF BEST DISSERTATION AWARDS	Hanadi Rifai Associate Dean for Research and Facilities	
PRESENTATION AND HOODING OF DOCTORAL CANDIDATES	Jacinta Conrad Associate Professor of Chemical and Biomolecular Engineering	
PRESENTATION OF MASTER'S CANDIDATES	Jagannatha Rao Director of Online Programs and Extension Services	
PRESENTATION OF BACHELOR'S CANDIDATES	Frank Claydon Director of the Division of Undergraduate Programs and Student Success	
CLOSING REMARKS	Dean Tedesco	
ALMA MATER	ManCorps	
RECESSIONAL		

Event music provided by ManCorps, Moores School of Music.



The University of Houston Cullen College of Engineering, established in 1941, is accredited by the Engineering Accreditation Commission of ABET. The Cullen College is ranked among the top 100 engineering schools in the country and is recognized as one of Best Engineering Schools of 2017 by U.S. News & World Report.

Approximately 5,000 students are enrolled in engineering courses—3,722 undergraduates as well as 1,247 master's and doctoral students in biomedical, chemical, civil, computer, electrical, environmental, geosensing systems, industrial, mechanical and petroleum engineering. The college also offers interdisciplinary graduate programs in subsea, aerospace, materials, and computer and systems engineering. Chemical, mechanical, electrical, computer and civil engineering are ranked among the top graduate programs nationally by U.S. News & World Report.

The mission of the Cullen College of Engineering at the University of Houston is to serve the Greater Houston community, Texas and the nation by educating engineers to assume leadership positions in the identification and solution of the complex technical challenges of society, to advance the state of knowledge through pioneering research and scholarly work, to facilitate the transfer of new technology to Texas and U.S. industries, to play a key role in economic development for the Greater Houston region and the State of Texas, and to benefit the public sector through service to the university, community, industry, government and the engineering profession.

### ADMINISTRATION

## Administration

Contraction of the second

Joseph Tedesco Elizabeth D. Rockwell Dean and Professor

Hanadi Rifai Associate Dean for Research and Facilities

Suresh Khator Associate Dean for Graduate Programs and Computing Facilities

Frank Claydon Director of the Division of Undergraduate Programs and Student Success

Metin Akay Chair, Department of Biomedical Engineering

Michael Harold Chair, Department of Chemical and Biomolecular Engineering

Roberto Ballarini Chair, Department of Civil and Environmental Engineering

Badrinath Roysam Chair, Department of Electrical and Computer Engineering Gino Lim Chair, Department of Industrial Engineering

Pradeep Sharma Chair, Department of Mechanical Engineering

Mohamed Soliman Chair, Department of Petroleum Engineering

Russell Dunlavy Chief Development Officer - UH STEM

Stephen Bangerter Executive Director of Business Operations

Audrey Grayson Executive Director of Communications

Jagannatha Rao Director of Online Programs and Extension Services

Janice Quiroz-Perez Director of the Engineering Career Service Center

Roshawnda Anderson Assistant Dean of Administration

## National Academy of Engineering Members

J.J. Azar Petroleum Engineering

Benton Baugh Subsea Engineering

Charles Cutler Chemical and Biomolecular Engineering

Christine Ehlig-Economides Petroleum Engineering

John Lienhard Mechanical Engineering

Dan Luss Chemical and Biomolecular Engineering Andrea Prosperetti Mechanical Engineering

Kaushik Rajashekara Electrical and Computer Engineering

James Symons Civil and Environmental Engineering

Ganesh Thakur Petroleum Engineering

Anestis Velestos Civil and Environmental Engineering

Kaspar Willam Civil and Environmental Engineering

## Department of Biomedical Engineering

Mohammad Abidian Associate Professor

Metin Akay Professor and Chair

Muayyad Al-Ubaidi Professor

Ravi Birla Associate Professor

Joseph Francis Associate Professor

Howard Gifford Associate Professor

Nuri Ince Assistant Professor Kirill Larin Professor

Sheereen Majd Assistant Professor

Elebeoba May Associate Professor

Chandra Mohan Professor and Associate Chair

Muna Naash Professor

Ahmet Omurtag Associate Professor

Sergey Shevkoplyas Associate Professor

FACULTY

Tianfu Wu	
Assistant Professor	

Yingchuan Zhang Assistant Professor

## Department of Chemical and Biomolecular Engineering

Vemuri Balakotaiah Professor

Patrick Cirino Associate Professor

Jacinta Conrad Associate Professor

Vincent Donnelly Professor

Demetre Economou Professor

Lars Grabow Assistant Professor

Michael Harold Professor and Chair

Ramanan Krishnamoorti Professor Dan Luss Professor

Michael Nikolaou Professor

Jeremy Palmer Assistant Professor

Jeffrey Rimer Associate Professor

Megan Robertson Assistant Professor

Navin Varadarajan Associate Professor

Peter Vekilov Professor

Richard Willson Professor

## Department of Civil and Environmental Engineering

Roberto Ballarini Professor and Chair Abdeldjelil Belarbi Professor Mina Dawood Associate Professor

Egor Dontsov Assistant Professor Craig Glennie Associate Professor

Thomas Hsu Professor

Yandi Hu *Assistant Professor* Konrad Krakowiak

Assistant Professor

Hyongki Lee Assistant Professor

Arturo Leon Associate Professor

Stacey Louie Assistant Professor

Yi-Lung Mo Professor

Kalyana Nakshatrala Assistant Professor

Hanadi Rifai Professor and Associate Dean

William Rixey Associate Professor and Associate Chair Debora Rodrigues Associate Professor Ramesh Shrestha Professor Joseph Tedesco Professor and Dean Cumaraswamy Vipulanandan Professor Keh-Han Wang Professor Kaspar Willam Professor

## Department of Electrical and Computer Engineering

Jiming Bao Associate Professor Aaron Becker Assistant Professor Stanko Brankovic Associate Professor Jiefu Chen Assistant Professor Jinghong Chen Associate Professor Yuhua Chen Associate Professor Ji Chen

Professor

Frank Claydon Professor and Director Jose Contreras-Vidal Professor Xin Fu Assistant Professor Zhu Han Professor Thomas Hebert Associate Professor David Jackson Professor Han Le Professor

FACULTY

Dmitri Litvinov Professor Stuart Long Professor David Mayerich Assistant Professor Hien Nguyen Assistant Professor Miao Pan Assistant Professor Shin-Shem Pei Professor Saurabh Prasad Assistant Professor Kaushik Rajashekara Professor **Badrinath** Roysam Professor and Chair

Paul Ruchhoeft Associate Professor Xiaonan Shan Assistant Professor David Shattuck Associate Professor Bhavin Sheth Associate Professor Wei-Chuan Shih Associate Professor Leonard Trombetta Associate Professor and Associate Chair John Wolfe Professor Yan Yao Assistant Professor Wanda Zagozdzon-Wosik Associate Professor

## Department of Industrial Engineering

Christopher Chung Associate Professor Qianmei Feng Associate Professor Ali Kamrani Associate Professor Suresh Khator Professor and Associate Dean Gino Lim Professor and Chair Jiming Peng Associate Professor Lawrence Schulze Associate Professor

### FACULTY

## Department of Mechanical Engineering

Ashutosh Agrawal Assistant Professor

Daniel Araya Assistant Professor

Haleh Ardebili Associate Professor

Richard Bannerot Professor

Theocharis Baxevanis Assistant Professor

Yi-Chao Chen Professor

Matthew Franchek *Professor* 

Hadi Ghasemi Assistant Professor

Karolos Grigoriadis Professor

Yashashree Kulkarni Associate Professor

Dong Liu Associate Professor

Philippe Masson Assistant Professor

Anastassios Mavrokefalos Assistant Professor Ralph Metcalfe Professor

Andrea Prosperetti Professor

Jagannatha Rao Associate Professor, Associate Chair and Director

Jae-Hyun Ryou Assistant Professor

Venkat Selvamanickam Professor

Pradeep Sharma Professor and Chair

Gangbing Song Professor

Li Sun Professor

Su Su Wang Professor

Kenneth White *Professor* 

Di Yang Assistant Professor

Cunjiang Yu Assistant Professor

## Department of Petroleum Engineering

Christine Ehlig-Economides *Professor* 

Lori Hathon Assistant Professor

Dimitrios Hatzignatiou Professor

Konstantinos Kostarelos Associate Professor

Michael Myers Associate Professor Guan Qin Associate Professor

Mohamed Soliman Professor and Chair

Ganesh Thakur Professor

George Wong Associate Professor

### **DISSERTATION AWARDS**

## Best Ph.D. Dissertation Awards

### Summer 2016 and Fall 2016 Graduates

This semester, we have awarded the following individual a plaque and a check for \$1,000 for being the outstanding dissertation award winner:

Fatemeh Ahmadpoor PhD in Mechanical Engineering

DISSERTATION TITLE: Statistical Mechanics of 2D Materials: From Biological Membranes to Graphene

DISSERTATION ADVISOR: Dr. Pradeep Sharma

### THE HONORS COLLEGE

## The Honors College Honors

The Honors College at the University of Houston offers students special opportunities to develop their academic abilities. Below are the Honors College honors designations.

### University Honors with Honors in Major

Students who complete the Honors College curriculum (36 hours) and complete a senior honors thesis.

### **University Honors**

Students who complete the Honors College curriculum and elect not to complete a senior honors thesis.

### Collegiate Honors and Collegiate Honors with Honors in Major

Students who fulfill the requirements for the honors program in the college of their major, including 21 hours of honors courses; who complete an Honors College minor, or who complete 21 hours of approved honors courses. If students also complete a senior honors thesis, they graduate with Collegiate Honors with Honors in Major.

# Membership in The Honors College and Membership in The Honors College with Honors in Major

Students who affiliate with the Honors College during their undergraduate years and complete fewer than 21 hours of honors courses. If students also complete a senior honors thesis and fulfill the requirements of their major with distinction, they graduate with Membership in The Honors College with Honors in Major.

### Honors in Major

Students who complete a senior honors thesis but are not members of the Honors College.

### THE HONORS COLLEGE

## Honors Recipients

### **University Honors**

Leo Bartos Jingfan Hu Elsa M. Johnson Andrew James Maicke Fernando Medrano Henry Hung Nguyen Aubrey Claire Swilling

### **Collegiate Honors**

Krystal D. Gengler Humas S. Khan Enjelia Veony

### Membership in The Honors College

Kameron Billingsley

Mauricio Gonzalez

### **CANDIDATES FOR GRADUATION**

## Fall 2016

#### DOCTOR OF PHILOSOPHY IN BIOMEDICAL ENGINEERING

#### Yun Peng

Biomechanics and Electromyography in Assessing Female Stress Urinary Incontinence ADVISOR: Dr. Yingchun Zhang

### DOCTOR OF PHILOSOPHY IN CHEMICAL ENGINEERING

Melanie Jane Hazlett Kinetic and Mechanistic Study of CO and Hydrocarbon Oxidation, and NOX Oxidation and Reduction over Pt-Pd Catalysts ADVISORS: Dr. William S. Epling and Dr. Lars C. Grabow

#### Megan Ann Ketchum Pathological Crystallization from Mixed Aqueous-Organic Solvents ADVISORS: Dr. Jeffrey Rimer and Dr. Peter Vekilov

Ibukun Gbadebo Makinde Production Forecasting, Performance Analyses and Behavior of Shale Volatile Oil Reservoirs ADVISORS: Dr. W. John Lee and Dr. Guan Qin

Shyam Panjwani Data Driven Approaches to Model Building: Applications to Energy Industries ADVISOR: Dr. Michael Nikolaou

#### Brian J Rohde Thermoset Blends of an Epoxy Resin and Polydicyclopentadiene ADVISORS: Dr. Megan Robertson and Dr. Ramanan Krishnamoorti

Monique Shaunta Wilburn Methane Oxidation over, and Sulfur Interactions with, Pd/Pt Bimetallic Catalysts ADVISOR: Dr. Bill Epling

### DOCTOR OF PHILOSOPHY IN CIVIL ENGINEERING

#### Bahareh Basirat

Testing and Modeling of Drilling, Cementing and Long Term Performance of Smart Cemented Oil Well ADVISOR: Dr. Cumaraswamy Vipulanandan

#### Zibraeb Alem Gebreselassie

Detection and Quantification of Steel and Composite Corrosion with Smart Cement and Polymer Coating Materials ADVISOR: Dr. Cumaraswamy Vipulanandan

#### Saeid Karimi

Computational Methods for Multi-Scale Temporal Problems: Algorithms, Analysis and Numerical Experiments ADVISOR: Dr. Kalyana Babu Nakshatrala

#### Meng Liu

Bond Behavior and Reliability Analysis of Carbon Fiber Reinforced Polymer (CFRP) Strengthened Steel Beams ADVISOR: Dr. Mina Dawood

#### Can Xu

Material Degradation due to Moisture and Temperature **ADVISOR:** Dr. Kalyana Babu Nakshatrala

#### Botong Zheng

Rehabilitation of Fatigue Sensitive Steel Elements Using Shape Memory Alloy/Fiber Reinforced Polymer (SMA/FRP) Composite Patches ADVISOR: Dr. Mina Dawood

### DOCTOR OF PHILOSOPHY IN ELECTRICAL ENGINEERING

#### Yunan Gu

Matching Theory Framework for 5G Wireless Communications **ADVISOR:** Dr. Zhu Han

#### Sirui Xing

Kinetic Study of Graphene Synthesis by Chemical Vapor Deposition **ADVISOR:** Dr. Shin-Shim Pei

#### Mengna Yang

Investigation of TDOA Localization Method for Non-Line-of-Sight Scenarios ADVISORS: Dr. David R. Jackson and Dr. Ji Chen

### DOCTOR OF PHILOSOPHY IN INDUSTRIAL ENGINEERING

Li Liao

Intensity Modulated Proton Therapy Optimization Under Uncertainty: Field Mis-alignment and Internal Organ Motion ADVISOR: Dr. Gino Lim

### DOCTOR OF PHILOSOPHY IN MATERIALS ENGINEERING

Sean Michael Berg

Development of Analytical Models for Evaluating the Mechanical and Electrochemical Response of Flexible and Stretchable Lithium Ion Battery Materials **ADVISOR:** Dr. Haleh Ardebili

Taylor Hidemi Kelly

Investigation of the Mechano-Electrochemical Coupling of Solid Polyethylene Oxide and Stretchable Lithium Ion Batteries ADVISOR: Dr. Haleh Ardebili Ivan Nekrashevich Ferromagnetic Resonance Spectroscopy of Arrays of Coupled Nanomagnets ADVISORS: Dr. Dmitri Litvinov and Dr. Paul Ruchhoeft

William Quinn Walker Thermo-Electrochemical Mechanisms of Lithium Ion Batteries for Human Space Flight Applications ADVISOR: Dr. Haleh Ardebili

### DOCTOR OF PHILOSOPHY IN MECHANICAL ENGINEERING

Fatemeh Ahmadpoor Statistical Mechanics of twodimensional Materials: From Biological Membranes to Graphene ADVISOR: Dr. Pradeep Sharma

Song Chen Novel Fabrication of Flexible Electronics by Transfer Printing Process ADVISOR: Dr. Cunjiang Yu

Mejdi Kammoun Flexible and Stretchable Lithium Ion Batteries Based on Solid Polymer Nanocomposite Electrolyte ADVISOR: Dr. Haleh Ardebili

Seyed Mohammad Parvasi Advances in Piezoelectric Modeling for Health Monitoring of Structures with Interface Elements ADVISOR: Dr. Gangbing Song

#### Xin Yan

Time-Scaling in Atomistics and the Mechanical Behavior of Materials **ADVISOR:** Dr. Pradeep Sharma

### **CANDIDATES FOR GRADUATION**

Junxiao Zhu Innovative Applications of Piezoelectric Ceramic for Structural Impulse Events Monitoring ADVISOR: Dr. Gangbing Song

#### MASTER OF SCIENCE IN AEROSPACE ENGINEERING

Saravanakumaar Ramia Alec J Stephenson

### MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING

Kelsey Smegner

#### MASTER OF SCIENCE IN CIVIL ENGINEERING

Sravya Bikki Venkatesh Burri Saicharan Patel Byrishetty Ranadeer Gadeela Harish Hegde Halil Ibrahim Kula Jinge Li Wanzhi Liu Yunhao Lu Raj Gopal Nannapaneni Dhrudat Mahendrakumar Patel Salouna Pati Rabin Poudel Harischandra Bhanu Tadikonda Xiaovin Tan Huy Quang Tran Saurav Regmi

### Master of Chemical Engineering

Qiang Gao

Sha Huang Jennifer Johnson Rodney L. Leger Aymara Carolina Pacheco Jonathan Jay Chaim Talor

### MASTER OF SCIENCE IN CHEMICAL ENGINEERING

Nicholas Jason Collett Rajat Subhra Ghosh Joshua Daniel Herr

### MASTER OF SCIENCE IN COMPUTER AND SYSTEMS ENGINEERING

Mohammad Mobashshir Alam Adeel Bhumika Jaysukhbhai Dhami Mohammed Mukarram Gulam Tejeswini Jayaramareddy Vinay Kumar Reddy Kaitha Vamshidhar Reddy Keesara Vinay Babu Kosaraju Sindhu Maturi Sreya Saswati Mohanty Ahmed O. Ogunfayo Saketh Reddy Palakollu Sujita Rani Pathipaka Harshavardhan Sriperumbooduru Alma Rebeca Tijiboy Mendoza Varshitha Reddy Yendapally

### MASTER OF ELECTRICAL ENGINEERING

Bindu Varshini Kosanam Niteshkumar Mishra Simrat Bir Singh Pannu Adwita Chintamani Parkar Asher Rahman

### MASTER OF SCIENCE IN ELECTRICAL ENGINEERING

Alekhya Bhavani Adusumilli Anusha Aedavalli Rajeev Reddy Bathula Pouya Beigi Naveen Reddy Chilumula Zhengwu Fang Prateek Prakash Gaure Pavithra Gopinath Bala Naga Vamsidhar Grandhi Sahithi Krishnaveni Grandhi Ahmed Mughees Hassan Eric Scott Ingram Srikanth Kandanuru Venkata Sudarshan Gauri Vijav Kelkar Matthew Lewis Habib Falih Maher Syed Waris Mahmood Srijani Mukherjee Raidan R Nasreddine Chioma Shirley Ndobu Shrivatsa Neerkaje Khuzema Sunel Lifeng Yan

### MASTER OF SCIENCE IN ENVIRONMENTAL ENGINEERING

Saurabh Nomula Pujith Pamulapati Rakiba Rouf Susana Vallejo

### MASTER OF SCIENCE IN GEOSENSING SYSTEMS ENGINEERING AND SCIENCES

Peter J. Gadomski

### MASTER OF INDUSTRIAL ENGINEERING

Sameer Reddy Alapati Krishnasai Reddy Ambati Abhishek Cheboli Dhiraj Panditrao Chougale Michael Graham Conlin Sri Harsha Reddy Daggula Naga Santoshi Haasika Dasika Dinesh Devarajan Sriram Dintakurti Veera Venkata Srujan Kumar Dronamraju Dharanidhar Reddy Edala Stewart Austin Estopinal Chaitanya Gangineni Sai Jayanth Reddy Gillella Sicong Guo Reza Jarvand Naveenraj Kalyanasundaram Karthick Srinivasan Kandasamy Sahit Katta Sai Vivek Kethavarapu Gaurav Khandelwal Chia Yuan Ko Huseyin Kose Tarun Kunchakuri Vishwanath Lingam Akhila Sree Maddukuri Dipam Sudhirbhai Makani Sreshta Mandadi Rube Victor Mariduena Piedra Evan James Morris Aditya Subramani Murugan Sravan Krishna Narra Nishant Kamleshkumar Patel Harsh Mukeshbhai Patel Vivek Anand Reddy Pidaparthi Sri Pranay Potluri

### **CANDIDATES FOR GRADUATION**

Pranay Chandrashekhar Purohit Praveen Ramesh Aashika Sathya Moorthy Naga Lakshmi Poojitha Satyavarapu Harihara Sekar Parth Rakeshkumar Shah Rushi Gaurangbhai Shah Deepak Shankar Raj Kumar Shanmugha Sundaram Saketh Kapardi Singaraju Harmandeep Singh Duarakesh Sridhar Vamsi Kaushik Sridharan Manoj Surapaneni Rahul Teja Thottempudi An T. Trinh Vaibhav Tyagi Abhishek Vaid Prem Vanajothi Esabelle Verdeja

### MASTER OF SCIENCE IN INDUSTRIAL ENGINEERING

Saurav Sharma Varun Vedantham

### MASTER OF SCIENCE IN MATERIALS SCIENCE AND ENGINEERING

Chella Ganapathy Chockalingam Bharath Dixit Kuan Yi Lee

### MASTER OF MECHANICAL ENGINEERING

Diego Alejandro Rojas

### MASTER OF SCIENCE IN MECHANICAL ENGINEERING

Kurre Abhishek Anurag Bagmar Carlos S. Cano Naveen Chanda Kiran Kumar Reddy Chalamala Rosline Hasmukh Aka Harrison Christian Efoise Vincent Eigbobo Bahareh Eslami Farzad Faisal Ronald Obokhuai Irerua Mukundkumar Manishbhai Kacha Saketh Reddy Karra Navya Kolli Sai Krishna Pranav Kompalli Rahul Korpu Alexander S. Kortum Vinay Kumar Reddy Mandadi James Patrick McGlynn Kashish Mittal Jyothirmayee Musamalla Kamala Kannan Nattamai Rajan Ronit Rajeshkumar Patel Antonis Vasilios Tatsis Seyed Mohammad Sajadi Jithin Sai Sandra Smith Sarkar Shadi Shariatnia Xiaoyang Shen Rithvik Vankayala Vamsi Mohan Vedhuruwada Lakshmi Sarma Krishna Teja Vedula Vamsi Yerraguravagari Yuan Zhang

### MASTER OF PETROLEUM ENGINEERING

Akhila Bachapalli Kumara Mouktik Chittipeddi Seif Elfeky Jingya Guan Kaijie Guo Yi Jiang Haixia Liu Palak Puri Kyuchul Shin Vignesh Swaminathan Xuanda Wu Jielin Xu

### MASTER OF SCIENCE IN PETROLEUM ENGINEERING

FNU Gaurav Himanshu Shekhar Jha Deep Rajendrakumar Joshi Dileep Kumar Ujjineni

### MASTER OF SCIENCE IN SUBSEA ENGINEERING

Abayomi Adesina Adediran Olaoluwa Ayotunde Alalade Adewole Ayodeji Badmus Preston Abbott Broom Ovidio Cesar Gonzalez Javan Ogorchukwu Igboh Ahmad Oluwadamilola Isiaka Oluwabusayo Modupe Olorunnipa Oluwarotimi Okikiola Shoge Kartik Subramanian

### BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING

Nada Y. Enan Eric Carl Machmer Ruth E. Segovia Julianne Deborah Stutz Aubrey Claire Swilling

### BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

Juan E. Arciniega Yasser F. Aziz Jimmy Dang Johnny Dang Matthew Gage Murray Manuel Enrique Rojas O'Callaghan Chad Allen Sims Khai The Truong

### BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Hala Barrag Abdo William G. Arsola<sup>2</sup> Tanzeem Ahmad Chowdhury Jorge N. Cuevas-Quintanilla<sup>2</sup> Alexander Paul Deeb Farhan Zuher Dossaji Christopher Leonard Frost Doroteo Garcia Iose Garza Matthew Shane Gill<sup>2</sup> Cesar Ariel Gonzalez Daniel Fernando Gracia Rick J. Harenberg<sup>1</sup> Jacob A. Logan Walter Mata 3 Henry Hung Nguyen

### CANDIDATES FOR GRADUATION

Shanna Elizabeth O'Hara Shaun L. Smith Evelyn Stewart Tu Gia Truong Ayman Sami Zamzam Basil M. Zibdawi <sup>24</sup>

### BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

Cori Nicole Bradshaw Chaofan Chen James Everett Cockrell III Albien Fezga Dhruvmin Dipakkumar Gandhi Jitin George Larry W. Gerhardt Christian S. Krause Carlos Alejandro Quiroga

### BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Ihangir Khalid Awan Kameron Billingsley 3 Luis Joel Camacho Diaz Christian P. Carlin Michelle Dang Hamid Faizi Zachary Tyler Freeman Tiffany R. Garcia Alfredo A. Garza Krystal D. Gengler Patrick G. Gros<sup>3</sup> Larry Hernandez 1 Elsa M. Johnson Quyen Ngoc Le<sup>2</sup> Leonardo Han Lee Andrew James Maicke<sup>2</sup> John Charles Nemec<sup>2</sup>

Adam John Nuss Emmanuel Oseghale Olear 3 **Bernabe** Palacios Seungwoo Park 3 Parth Kamlesh Patel Alvssa Danielle Peloso Nhan Trung Phung Joseph Robert Pompa Leslie Frank Rodriguez<sup>3</sup> Charles Gerson Rollo Adilene Rucoba Albert Q. Truong Vinh Vu Quang Truong Erik Randall Van Aller Eli Stephen Walker Kyle D. Walker<sup>2</sup> Derian Widiaia<sup>2</sup> Michael Leonard Wilkerson Joshua Alexander Zavala

### BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Bradley Kyle Armstrong Leo Bartos Homero Benavides Adriano Antonio Cabrita Lavino Ezinne V. Chima Christina Dillon Dzevad Dzanic<sup>2</sup> Colleen L. Evans<sup>3</sup> Jorge Luis Gonzalez Juan Gonzalez Mauricio Gonzalez Jeffrey Richard Steven Hay<sup>3</sup> Jonathan Do Le Pitaksa Sherry Limsirivallop Enrique Virgilio Lopez 3 Fernando Medrano

Victor Jose Montano Chance Moser Hieu M. Nguyen Huy P. Nguyen Willians Jarrihson Padilla <sup>2</sup> Carlos M. Regueiro Barbara Victoria Salas Isauro Sanchez Maher Waleed K. Shaikh Usman Furukh Shiekh Saeed Shojaee Heleno A. Silva Tyler R. Thorp Daisy Trevino Jacob D. Walker

#### BACHELOR OF SCIENCE IN PETROLEUM ENGINEERING

Mehwish Ahmad <sup>3</sup> Muhammad Omar Ahmed Syed Shazaib Ahmed Sved Raheel Aijaz Hector Luis Alarcon Peinado Rehab Taha H. Alkhalifah Gregory David App Daniela Arciniegas Murillo 3 Heather Arevalo Stratton Allan Arnold Chrvs Enock Bimokono Destin Mervely Bimokono Imane Chraibi Erik Alfonso Cordero Michelle Louise Delaney Juan Teodoro Delmas-Rodriguez Nicolas Diaz Misse Dina Ntone David Dorado Melvin T. Egbe

Mohammed Ahmad Elsaleh<sup>3</sup> Sigfrido Juan Manuel Esperanza Justin Colbert Everett 3 Michael Douglas Gaither Sean Michael Galate Ruben Dario Giraldo Padilla Jose Abraham Gonzales Monica R. Hayes Jingfan Hu Jesus Jimenez Jaime John Michael Karras Mohamad Ahmad Khalil Humas S. Khan Hussein Amr Khorshed Michail Kotsifis Samuel Thomas Kyte Jessie Thao Lai Eric Minh Le<sup>3</sup> Ierrv Lee Mabel Charlene Lee Youvi Li Clinton McKay Martin Matt Edward McGlothlin<sup>2</sup> Casey Lynn McKinley Rami A. Mohsen Morgan Mosahab Annie Tien Nguyen 3 Benson Lee Nguyen 3 Sagar Mukesh Panchal William Louis Parsons **Rebeca** Perales Kevin Nguyen Pham Patrick Sebastien Piller Aziz Rajan Cristian David Ramirez Kristen E. Reeves Firoozeh Roointan Olujimi Daniel Rufai

### **CANDIDATES FOR GRADUATION**

Steve Saffar Mina Nassef Shenouda William Russell Smolik <sup>3</sup> Mark Terry Sokolow Rudolph S. Szymczak Katherine T. Tran <sup>3</sup> Brandon Joseph Trower David Addison Tyroch

### Summer 2016

### DOCTOR OF PHILOSOPHY IN BIOMEDICAL ENGINEERING

Duong Thanh Nguyen Investigating Glioblastoma Multiforme Angiogenesis in in vitro threedimensional Microwell Platform ADVISOR: Dr. Metin Akay

### DOCTOR OF PHILOSOPHY IN CHEMICAL AND BIOMOLECULAR ENGINEERING

#### Imran Alam Bifurcation Analysis of Homogeneous-Heterogeneous ADVISOR: Dr. Vemuri Balakotaiah

#### Tian Gu

Spatio-temporal Dynamics of Reaction Zones in Catalytic Monolith Reactors ADVISOR: Dr. Vemuri Balakotaiah

#### Mohammad Khoshghadam

Numerical Study of Production Mechanism of Unconventional Liquid-Rich Shale Reservoirs with Multi-Fractured Horizontal Wells ADVISOR: Dr. John Lee Anna Vasileva Enjelia Veony <sup>2</sup> Robert Henry Wallace Roy Stefan Weckiewicz Yuqian Wu Zhonghao Xiang <sup>2</sup> Leila Zeinali Yichi Zhang

#### Jinsu Kim

Bacteriophage Imaging Immunoassay for Point of Care Diagnostics ADVISORS: Dr. Jacinta Conrad and Dr. Richard Willson

Manjesh Kumar Rational Design of Nanoporous Materials through Molecular Design and Mechanistic Study of Nucleation and Growth ADVISOR: Dr. Jeffrey D. Rimer

#### Lei Liu

Control of the Electron Energy Distribution and Plasma Ignition Delay in a Novel Dual Tandem Inductively Coupled Plasma Source ADVISORS: Dr. Vincent M. Donnelly and Dr. Demetre J. Economou

#### Matthew Oleksiak

Controlling Structure and Properties of Zeolites Prepared in Organic-free Media ADVISOR: Dr. Jeffrey D. Rimer

#### Shuai Qian

Design and Application of Regulatory Protein-Based Biosensors for Biocatalyst Screening in Recombinant Escherichia Coli ADVISOR: Dr. Patrick C. Cirino

#### Sumedha Sharma

Bacterial Adhesion and Motility on Silanized Glass Surfaces **ADVISOR:** Dr. Jacinta Conrad Shyam Sridhar Photo Assisted Etching in Halogen Containing Plasmas ADVISORS: Dr. Vincent Donnelly and Dr. Demetre Economou

Guozhen Yang Development of Sustainable and Degradable Thermosets and Elastomers ADVISOR: Dr. Megan Robertson

### DOCTOR OF PHILOSOPHY IN CIVIL ENGINEERING

Arezou Attar Accelerated Alkali-Silica Reaction and Corrosion of Reinforcing Steel in Concrete: Application on Dry Casks ADVISOR: Dr. Bora Gencturk

Florentia Kavoura Moment-Rotation Behavior of "Pinned" Column Base-Plate Connections in Low-Rise Metal Buildings ADVISOR: Dr. Bora Gencturk

Mohammad Shabouei Theoretical and Numerical Study in Porous Media: Solution Verification and Viscous Fingering Instability ADVISOR: Dr. Kalyana Babu Nakshatrala

Chengzhao Zhang Oil Spill Cleanup by Hydrophobic Silica Aerogels and Spilled Oil Interaction with Suspended Sediments ADVISORS: Dr. Keh-Han Wang and Dr. Yandi Hu

### DOCTOR OF PHILOSOPHY IN ELECTRICAL ENGINEERING

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Efficient Computation of Layered Medium Green's Function and its Application in Geophysics ADVISOR: Dr. Ji Chen

Murad Megjhani

Data-Driven, Label Consistent, Dictionary Learning Methods for analysis of Biological Datasets ADVISORS: Dr. Badrinath Roysam and Dr. Jose-Luis Contreras Vidal

Sohini Sengupta Properties of 2D Periodic Leaky-Wave Antennas at Microwave

and Optical Frequencies ADVISORS: Dr. David R. Jackson and Dr. Stuart A. Long

Kaige Yan Efficient Computer System Designs to Improve the Mobile User Experiences ADVISOR: Dr. Xin Fu

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Taofeek Olumuyiwa Biobaku Risk-based Optimization Models for Maritime Safety and Security ADVISOR: Dr. Gino J. Lim

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Maritime Vehicle Routing under Uncertainty: Liquefied Natural Gas Shipping and Offshore Pipeline Damage Assessment Problems ADVISOR: Dr. Gino Lim

#### Yin Shu

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High-Performance Flexible Thin-Film Electronics Based on Single-Crystal-Like Inorganic Semiconductor Materials ADVISOR: Dr. Jae-Hyun Ryou

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#### Yifei Li

Developing Beyond Lithium Ion Batteries for Electrical Energy Storage ADVISOR: Dr. Yan Yao

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### MASTER OF ELECTRICAL ENGINEERING

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Tanmay Gandhi <sup>3</sup>

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Chase D. Fick <sup>2</sup>

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Alexander N. Govea

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Jorge D. Jimenez Justin Noel Loveless <sup>3</sup> Dominic James Mak Tiffany Y. Yao <sup>3</sup>

### BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING

Jessica Olvera <sup>3</sup>

### BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Brittany Bleau Caughron Jonathan Travis Graham Brian Khanh Le Tasneem Mohamed Alexander James Pearsall

THE UH ALMA MATER

## The Alma Mater

All hail to thee, Our Houston University. Our hearts fill with gladness When we think of thee. We'll always adore thee Dear old varsity. And to thy memory cherished, True we'll ever be.

Words and music by Harmony Class of 1942

ACADEMIC REGALIA

## Academic Regalia

THE ATTIRE of the participants dates back to the 12th and 13th centuries, when universities began to be established in Europe. In 1321, at the University of Coimbra in Portugal, gowns were required attire not just for faculty members, but also for students of all classifications. Other European universities started requiring gowns, but there was not a standard design. In 1887, Gardner Leonard volunteered to design the graduation gowns for his class at Williams College. His design, as well as the standardization of colors to denote areas of study, were later adopted by an intercollegiate commission, and are the ones used today by most United States colleges and universities.

GOWNS. The bachelor's gown has long pointed sleeves; the master's gown has an oblong sleeve open at the wrists (some older gowns may be open near the upper part of the arm); the doctoral gown is fuller than the others with full-length velvet panels on the front and three velvet crossbars on each sleeve in black or in the color distinctive to the academic discipline of the wearer's degree.

HOODS. The hood, worn by master's and doctoral degree recipients, drapes over the shoulders and down the back and indicates the academic discipline to which the degree pertains; the field of the hood denotes the university that conferred the degree. The size of the hood indicates the level of the degree.

**CAPS.** The black mortarboard is the most common cap used. The tassel fastened to the center of the cap is black, although it may be the color appropriate to the subject of the degree. The tassel for the doctoral cap may be of gold thread. Candidates for bachelor's degrees wear the tassels on the right side, shifting it to the left side after being awarded their degrees. Candidates for master's and doctoral degrees wear their tassels on the left side and do not shift them after receiving their degrees.

BACHELOR'S DEGREES	<i>Gown:</i> Black <i>Tassel:</i> Orange
MASTER'S DEGREES	<i>Gown:</i> Black <i>Hood:</i> Orange <i>Tassel:</i> Black
DOCTORAL DEGREES	<i>Gown:</i> Black <i>Hood:</i> Dark Blue <i>Tassel:</i> Old Gold

**SPECIAL THANKS** 

A special thanks to the Convocation Committee and volunteers who assisted in making this memorable event possible.

## Convocation Committee

Sandra Sierra Convocation Co-Coordinator and Administrative Assistant

Brandon Green Convocation Co-Coordinator and Academic Records Coordinator

> Shirley Mate Academic Advisor III

Miranda Vernon-Harrison Director of Graduate Student Affairs

Roshawnda Anderson Assistant Dean of Administration

### Volunteers

Kenneth Garcia Jennifer Dunn Monica Sanchez Evette Adams Patricia Castella Sarah Williamson Lesley Sisk Rachell Underwood Deborah Hernandez Kaitlin Mallory Jose Rodriguez Lupe Alicea Yvette Farnum Yolanda Thomas Veronica Ellison Nicolette Solano Jaime Broussard Amanda Zabaneh Sharon Hall Andreeka Lewis Yebine Yabi Cecily Smith Jenna Donnelly Brittany White Trina Johnson

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**AUTOGRAPHS** 

