COMMENCEMENT CEREMONY

Friday the Fifteenth of December
Two Thousand and Seventeen
William Neal Reynolds Coliseum

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
NORTH CAROLINA STATE UNIVERSITY AT RALEIGH
TODAY, WE HONOR THEIR YEARS OF HARD WORK.
TODAY, WE CELEBRATE THE SWEETNESS OF THEIR SUCCESS.
TODAY, WE COMMEND TO THEM A LIFETIME OF LEARNING.

TODAY, THEY CONTINUE OUR TRADITION OF EXCELLENCE
AS THEY BECOME ALUMNI OF THE DEPARTMENT OF
ELECTRICAL AND COMPUTER ENGINEERING
AT NORTH CAROLINA STATE UNIVERSITY.

Thank you for celebrating with us.
Order of Events

Prelude
Pomp and Circumstance, Op. 39
Sir Edward Elgar

Processional
Faculty, Doctors, Masters, and Bachelors

Welcome
Dr. Daniel D. Stancil
Department Head

Commencement Address
Dr. Robert J. Mattauch
Dean Emeritus, Virginia Commonwealth University

Student Speaker
Mr. Oliver Walsh

Presentation of Doctoral Degrees
Dr. Ginger Yu
Assistant Director of Graduate Programs
Faculty Committee Chairs

Presentation of Master’s Degrees
Dr. Ginger Yu

Presentation of Bachelor’s Degrees
Ms. Cecilia W. Townsend
Coordinator of Undergraduate Advising

Presentation of Undergraduate Awards
Dr. Gregory T. Byrd
Associate Department Head

Closing Remarks
Dr. Daniel D. Stancil

Recessional
Triumphal March from Aida
Giuseppe Verdi
Commencement Address

MR. ROBERT J. MATTAUCH

Dr. Mattauch began electrical education as an engineer at a local radio station at the age of 16 and at the age of 18 as a mill electrician’s helper (grunt) in a Pittsburgh mill. He earned his BS in EE from Carnegie Tech and MEE and PhD degrees from NC State.

He served on the faculty at UVa for 30 years where he taught both undergraduate and graduate courses, initiated semiconductor device research in the Commonwealth of Virginia and served as department Chair. Thereafter he helped found the Virginia Commonwealth University School of Engineering where he served as ECE department founding chair and school Dean.

He is a fellow of the IEEE and received numerous awards for teaching and research. Dr. Mattauch is a member of the NC State School of Engineering Dean’s Circle and a Fellow of the IEEE.

“...In whatever position in which you find yourself, no matter how menial the task, do the very best you can do."

Student Speaker

MR. OLIVER WALSH

Mr. Walsh is a passionate, dedicated, and ambitious individual who graduated from NC State this fall, in Electrical Engineering. He went to Weddington High School, just south of Charlotte NC. In his spare time, he loves to snowboard, surf, and play music with my friends.

Mr. Walsh came to NC State because he knew he loved math, and NC State’s engineering program was renowned. After taking Physics 2, he knew electrical engineering was the major he needed to pursue. Through his internships, and the trips he took with NC State’s Entrepreneurial Initiative, he realized his love of integrating business into engineering. After college, he will be working with Deloitte Consulting in Charlotte NC.
History of the Degree

The doctoral degree is the most advanced academic degree conferred by American institutions of higher education. The title, “doctor,” which is Latin for teacher, was used in the twelfth century to denote those of great learning.

The master’s degree represents successful completion of one or two years of study beyond the bachelor’s degree. This academic honor dates back to the establishment of the oldest universities in Europe.

The bachelor’s degree is the oldest academic degree used by institutions of higher education in America. This degree, which represents completion of a four-year course of study at the college level, was first awarded in America in 1642 to the graduating class of Harvard College.

The Regalia

Academic regalia dates from the European universities of the 12th and 13th centuries. Scholars, whether students or teachers, wore robes as those of a cleric. Cambridge and Oxford first began requiring academic dress and made it a matter of university control even to the smallest detail.

The headgear for all degree candidates has traditionally been the mortarboard, a head covering evolved from the “barret cap” or biretum worn by 13th century judges, doctors and clergy. Faculty may wear a mortarboard or a soft velvet tam called a “daVinci cap,” also a variation on the barret cap.

The black gowns of academic regalia are of a simple design since, until the early 1870’s, they were worn on an everyday basis. In 1894, American universities standardized gown styles for the three different types of degrees based on the shape of the gown’s sleeve. Bachelor’s students wear pointed sleeves, master’s students wear oblong sleeves and doctoral students wear bell-shaped sleeves.

The hood for graduate students, which hangs down the back of the gown, is the regalia piece most unique to an institution. They are typically lined in school colors, NC State’s being red with white chevrons. Depending on the degree being received, they are trimmed with orange (engineering) or blue (philosophy). The hoods of faculty members are lined according to the colors of the institution where they received their doctoral degree.

Some undergraduate degree candidates may also wear an honors sash based on their grade point average. A gold sash worn around the neck indicates the candidate will graduate Summa Cum Laude or “with highest honors.” These graduates have completed their degree(s) with a GPA of 3.75 or higher. The red sash indicates Magna Cum Laude, “with high honors.” The graduates with red sashes have completed their degree(s) with a GPA of 3.5 to 3.74. The white sash is for candidates graduating Cum Laude or “with honors.” The graduates with white sashes have completed their degree(s) with a GPA of 3.25 to 3.49.
ABHINAV RAJIV AGRAWAL
Computer Engineering
James Tuck (Chair)

ALI AZIDEHAK
Electrical Engineering
Subhashish Bhattacharya (Chair)
Design of Fault-tolerant Controller for Modular Multi-level Converters.

GOVIND SAHADEO CHAVAN
Electrical Engineering
Subhashish Bhattacharya (Chair)
Dynamic Control of FACTS devices to enable large scale penetration of Renewable Energy Resources.

MICHAEL CHEN
Electrical Engineering
Michael Steer (Chair)
Microwave Energy Localization in Random Mediums.

YONGHWAN CHO
Electrical Engineering
Subhashish Bhattacharya (Chair)
Islanding and Seamless Reconnection of Multiple Solid-State Transformers Based On Droop Control.

HONGWEN DAI
Computer Engineering
Huiyang Zhou (Chair)
GPU Memory Architecture Optimization.

RUI GAO
Electrical Engineering
Iqbal Husain (Chair)
Control and Design of a PMSG Wind Energy Conversion System and Its Integration with Solid-State Transformer Enabled AC/DC Grid Systems.

MAHSA GHAPANDAR KASHANI
Electrical Engineering
Subhashish Bhattacharya (Chair)
System Study for High PV Penetration in Distribution Systems.

SUXUAN GUO
Electrical Engineering
Alex Huang and Wensong Yu (Co-Chairs)
Megahertz High Voltage Isolated DC/DC Converter Based on SiC MOSFET.

JOONMOO HUH
Computer Engineering
James Tuck (Chair)
Improving the Effectiveness of Searching for Isomorphic Chains in Superword Level Parallelism.

SYED ASIF HUSSAIN
Computer Engineering
David McAllister and Edgar Lobaton (Co-Chairs)
Stereoscopic, Real-time, and Photorealistic Rendering of Natural Phenomena - A GPU based Particle System for Rain and Snow.

ZHENGHE JIN
Electrical Engineering
Ki Wook Kim (Chair)
Electronic Transport Properties of Two-Dimensional Semiconductors and Topological Insulators with Device Applications.

MD ASHFANOOR KABIR
Electrical Engineering
Iqbal Husain (Chair)
High Performance Reluctance Motor Drives with Three-phase Standard Inverter.

HAOTAO KE
Electrical Engineering
Douglas Hopkins (Chair)
3-D Prismatic Packaging Methodologies for Wide Band Gap Power Electronics Modules.

SUNGKWAN KU
Computer Engineering
Eric Rotenberg (Chair)
Design for Competitive Automated Layout (DCAL) of Superscalar Processors.
NAMITA LOKARE
Electrical Engineering
Edgar Lobaton (Chair)

DAVID ALAN LUO
Electrical Engineering
Michael Kudenov (Chair)
Spectroscopy and Optical Metrology by Using Polarized Light.

YANTING MA
Electrical Engineering
Dror Baron (Chair)
Solving Large-Scale Inverse Problems via Approximate Message Passing and Optimization.

STEVEN MILLS
Electrical Engineering
Veena Misra (Chair)

NAMITA NARENDRRA
Electrical Engineering
Ki Wook Kim (Chair)
Multiscale Modelling of Electronic and Thermal Transport: Thermoelectrics, Turbostratic 2D Materials and Diamond/c-BN HEMT.

SIGIT ARYO PAMBUDI
Computer Engineering
Wenye Wang and Xiaogang Wang (Co-Chairs)
Modeling and Evaluation of Cyber-Physical Threats in Emerging Interdependent Networks.

WEIYI QI
Electrical Engineering
Paul Franzon (Chair)
IC Design Analysis, Optimization and Reuse via Machine Learning.

ANAND SINGH
Computer Engineering
Ioannis Viniotis (Chair)
SLA based Service differentiation in Cloud Data Centers.

KAI TAN
Electrical Engineering
Alex Huang and Iqbal Husain (Co-Chairs)

JOSE MANUEL VALERO SARMIENTO
Electrical Engineering
Alper Bozkurt (Chair)
Injectable Capsules for Physiological Monitoring on Animals.

MAZIAR VANOUNI
Electrical Engineering
Ning Lu (Chair)
Operation and Management of Thermostatically Controlled Loads for Providing Regulation Services to Power Grids.

KASUNAIDU VECHALAPU
Electrical Engineering
Subhashish Bhattacharya (Chair)
Enabling High Efficiency Medium Voltage Converter for High Speed Drives and Other Grid applications using Low Voltage (LV) and High Voltage (HV) Silicon Carbide (SiC) Devices.

MENG WANG
Electrical Engineering
Jacob Adams (Chair)
Electrically Controlled Liquid Metal Antennas and Periodic Structures.

BAGUS PRASETYO WIBOWO
Computer Engineering
James Tuck (Chair)
Cross-Layer Approaches for Architectural Vulnerability Estimation to Improve the Reliability of Superscalar Microprocessors.

ETHAN ROBERT WOODARD
Electrical Engineering
Michael Kudenov (Chair)
Spectrally Resolved Longitudinal Spatial Coherence Interferometry.

YANG XU
Electrical Engineering
Douglas Hopkins (Chair)
Development of Advanced SiC Power Modules.
YIZHE XU  
Electrical Engineering  
Alex Huang (Chair)  
*Modeling and Control of Grid-Connected Microgrid as Solid State Synchronous Machine (SSSM).*

FEI XUE  
Electrical Engineering  
Alex Huang (Chair)  
*Research on Bidirectional DC-DC Converters for Distributed Energy Storage Device.*

BINBIN YANG  
Electrical Engineering  
Jacob Adams (Chair)  
*A Modal Approach to Compact MIMO Antenna Design.*

XIAO ZHANG  
Electrical Engineering  
Omer Oralkan (Chair)  
*Capacitive Micromachined Ultrasonic Transducers (CMUTs) on Glass Substrate for Next Generation Medical Imaging and Beyond.*

XIANGQI ZHU  
Electrical Engineering  
Ning Lu (Chair)  
*DSM-Based Methodology Development for Addressing Problems of High PV Penetrated Distribution System.*
Master of Science
ELECTRIC POWER SYSTEMS ENGINEERING
Shantam Shrikant Chavan
Moath Ali Dardas
Tyler Draper
Lindsey A Erps
Rishabh Gupta
Fadi Kasem
Sean Ketting
Harshit Nath
Pratyush Pasbola
Nimisha Prashant
Priya Raghuraman
Gautam Umapathy Sivam

Master of Science
COMPUTER ENGINEERING
Rajat Agarwal
Advait Apte
Sarthak Bhuva
Pankaj Bongale
Kunal Bipin Buch
Manila Chaudhary
Ming Dai
Raunak Dharani
Adam Dorenfeld
Jiajun Fan
Jessica Leigh Gonowon
Barkha Gupta
Mohit Gupta
Pratyush Gupta
Karan Gurnasinghani
Shikha Hallan
Arpit Jain
Saurav Jhalani
Venkatesh Kadimi
Praneeta Kalsait
Aditya Khandelwal
Rajat Khandelwal
Sai Jagadish Kota
Vivek Kumar
Anisha Ladsaria
Yixuan Li
Sudeepo Majumdar
Preetam Shivaram Mandya
Arvind Meti
Randal Myers
Ruchira Shrikant Naphade
Surya Penumatcha
Swaminathan Ramachandran
Murali Ravuru
Anush Mohan Shet
Prathamesh Shinde
Sameer Saurabh Singh
Laxman Sole
Karthick Narayanan Srinivasa
Raghavan
Rohan Srivastava
Puneet Talwar
Shardul Pramod Telharkar
Vijay Thiagarajan
Tarun Thokala
Supriya Umashankar
Aishwarya Vaidlamudi
Abhinav Vangala
Dhruva Venkatachallam
Sahitya Yoganand Kore

Master of Science
COMPUTER NETWORKING
Balakundi Achar
Chincholkar Aniketh
Srivastav Atla
Bharath Banglaore Veeranna
Ashish Bhat
Surabhi Boob
Tsung-Ying Chuang
Meghav Desai
Nirav Dsouza
Suhas Krishna Gopalkrishna
Rakshit Holkal Ravishankar
Lahari Kommi
Eric Logeson
Yaswanth Kumar Muppala
Neetish Pathak
Revanth Pathuri
Guru Darshan Pollepalli Manohara
Davis Pynadath
Nitish Raghunathan
Vishal Kumar Seshagirirao Anil
Manan Shah
Karan Sagar Vishwanath
Bachelor of Science
ELECTRICAL ENGINEERING

Catherine J Ambrose
Yassine Boutkardin
Matthew Douglas Boyce *
Alexandria Bruns
Laura Marie Campbell
Alexander Chase Carter
Diyang Chen
Ryan Oakes Cooper
Brandon Douglas
Andrew Scott Duncanson
Samuel Grayson Eddy II *
Erin Nicole Fenton
Sri Ram Suhas Ganni
Michael David Gibson
Alexander R Hertzing
Isaac F Kaplan
Shayaan Javed Khokhar
Randy Mack Miller
Alexander Grzegorz Nowinski
Henil Apurva Patel *
Prince Binalbhai Patel
Christen Michelle Pischke
Robert Jordan Powell
Mujtaba Syed Quadri
William Alexander Reames *
Cameron Rouse
Shelby Walker Sessions
Daniel Bryan Sharpe
Michael Daniel Spears
Aaron Clinton Stinson
David Storelli
Austin Taylor Tucker
Lilly Vang
Oliver Brian Walsh
Kaitlyn Marie Yingling

*Indicates graduate is receiving two degrees
** Indicates graduate is receiving three degrees

Bachelor of Science
COMPUTER ENGINEERING

Jackson Joel Auman *
Raghav Balu
Tyler Ryan Bennett *
William Edward Burdick-Crow *
Ian A Campbell *
Austin Cody Childers *
Thomas J Eagle *
Fatoumatta Saidy Fatajo *
William Duke Finley *
Mark Kenneth Foley *
Alexandar Gavric *
Ryan Michael Geary *
Colin W Hines *
Zhiqiang Huang *
John Anthony Jefferson *
Christopher Stephen Johnson *
Joshua A Kauffman *
Sungwoong Lee *
Runxue Liao *
Chandler Stuart McCowan *
Giang Hoang Nguyen
Hoang Minh Nguyen *
Donovan Cesar Ortiz *
Benjamin Overby *
Michael R Patel *
Adrian J Perkins
Anthony C Ray *
Bryan Patrick Rishe
Daniel Luis Rodriguez *
Robert Clayton Rowe *
Mehrnaz Sadeghian *
Peter Michael Sadej *
Calvin N Schmidt *
Shreeam Lokesh Shorey **
Nicholas Alexander Henry
Snouwaert *
Kevin Sorn *
Jeremy Swafford *
Daniel Robert Thoresen Thompson
Eddie Carlton Tuck III *
Robert Taylor Walker
Matthew Ryan Wiggins
Tsu-Hsin Yeh *
Shawn Demond Young *
Connor Lake Youngquist *

*Indicates graduate is receiving two degrees
** Indicates graduate is receiving three degrees
Outstanding Senior
AWARDS

Catherine J Ambrose
Ryan Michael Geary

Alexander Grzegorz Nowinski
Michael R Patel

Tsu-Hsin Yeh

Bachelor of Science
HONORS

SUMMA CUM LAUDE
Catherine J Ambrose
Raghav Balu
Alexander Chase Carter
Ryan Michael Geary
Giang Hoang Nguyen
Hoang Minh Nguyen
Alexander Grzegorz Nowinski
Michael R Patel
Mehrnaz Sadeghian
Daniel Robert Thoresen Thompson
Lilly Vang
Tsu-Hsin Yeh
Kaitlyn Marie Yingling

MAGNA CUM LAUDE
Samuel Grayson Eddy II
Fatoumatta Saidy Fatajo
William Duke Finley
Sri Ram Suhas Ganni
Colin W Hines
John Anthony Jefferson III
Sungwoong Lee
Runxue Liao
Christen Michelle Pischke
Mujtaba Michelle Quadri
Shreeram Lokesh Shorey

CUM LAUDE
Tyler Ryan Bennett
Yassine Boutkardin
William Edward Burdick-Crow
Laura Marie Campbell
Austin Cody Childers
Ryan Oakes Cooper
Alexander Gavric
Michael David Gibson
Alexander R Hertzing
Zhiqiang Huang
Christopher Stephen Johnson
Shayaan Javed Khokhar
Donovan Cesar Ortiz
Henil Apurva Patel
William Alexander Reames
Kevin Sorn
Eddie Carlton Tuck III
Austin Taylor Tucker
Olivar Walsh
Guest Information

@NCSTATEECE
Be sure to follow the Department of Electrical and Computer Engineering on Twitter, Facebook, or Instagram to stay up to date and see some of the work the Department and these graduates have been doing.

#ECEGRADPACK
We invite you to use this hashtag today to be part of our celebration across social media of these outstanding students.

PHOTOGRAPHY
The Department of Electrical and Computer Engineering has retained a professional photographer to capture the moment each student receives his or her diploma. A photo proof will be sent by the photographer to the student’s permanent address with information on how to purchase prints.

While we encourage our guests to take as many photos as they like during the ceremony, guests will not have access to the floor of the arena during the ceremony. We however have staff taking photos throughout the ceremony and procession, and those photos will be made freely available via the ECE website.

VIDEO
The ceremony is live-streamed on the ECE website and YouTube to all those unable to join us this morning. A full video of the ceremony will be made available for free on the ECE website in the next few days – follow us on social media to be notified as soon as it is available.

DISABILITY SERVICES
Student marshals and departmental staff are available to assist our guests with disabilities. If you need assistance, please notify the nearest marshal or member of our staff.