WELCOME

PRESIDENT HARVEY G. STENGER, THE BINGHAMTON UNIVERSITY COUNCIL, FACULTY, ALUMNI AND STUDENTS OF BINGHAMTON UNIVERSITY, STATE UNIVERSITY OF NEW YORK, ARE HONORED BY YOUR PRESENCE AT THE SPRING 2019 COMMENCEMENT CEREMONY.

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Regalia Hood Colors (inside back cover)
Alma Mater (back cover)
MESSAGE FROM THE UNIVERSITY PRESIDENT

Graduates, parents and special guests: Commencement is always the highlight of the academic year, for the students we are honoring, especially, but also for the faculty and staff who have helped our students achieve so much. Our graduates now look to the next stage in their lives, with new careers and new relationships ahead. All of us at the University are confident that their experiences at Binghamton will allow them to attain their full potential.

Today’s ceremony celebrates their achievements as students, scholars and engaged citizens, and marks the turning point where our graduates begin to apply their talents “in the real world.” Regardless of their future paths, they leave Binghamton with a strong foundation for success.

They will succeed because they already have gained the experiences and knowledge that their careers will demand of them. Ours is a campus where students learn by doing, and these graduates have already proven themselves — winning prestigious fellowships and grants; publishing papers that have gained acclaim from scientists and scholars; and bettering their communities through hands-on internships and practicums.

Outside the classroom, they have embraced their responsibilities as active members of the community. They’ve raised funds to combat deadly disease, provided food for the hungry, taught younger students in local schools, and traveled across the globe to work with and learn from their international peers. At Binghamton they have created a supportive and compassionate community that allows everyone to thrive. Their actions and achievements set a high bar for the classes that will follow, and we are privileged to have had them as members of our University community.

Our graduates have learned the practical, technical and professional skills that will enable success throughout their careers. But most important, Binghamton University has provided the foundation in the liberal arts and participation in a diverse and international student body that gives all of our students the broad understanding and open perspectives they need to address the challenges of the coming decades.

While our focus is on our students, we also understand that Commencement is a shared celebration, bringing together students and their faculty guides and mentors one last time. Also sharing in the excitement and joy of the occasion are the graduates’ many friends and family members. We applaud them for their constant support for our graduates’ hopes and aspirations. I hope that everyone here today will find special meaning in these ceremonies. Thank you for all you have done for our students.

It has been a pleasure to witness the achievements of the Class of 2019. Graduates, thank you for choosing the State University of New York at Binghamton. I am pleased and proud to celebrate with you today, certain that you are well prepared for the future and that your accomplishments will be significant. And as you advance through your careers and your lives, I hope that you will remain connected with Binghamton and share with us your achievements.

Sincerely,

Harvey G. Stenger
President
Can you believe it? Graduation is finally here! It may feel like just yesterday that you attended your first day of classes at Binghamton and got lost trying to learn your way around campus. As you get ready to move on to wherever life takes you, it might seem as if you’re saying “goodbye” to Binghamton for good. Far from it!

When you graduate, you automatically become a member of the Alumni Association. This is a powerful network of more than 137,000 people spread around the world. And it's a resource you can tap into for your entire lifetime. Moving to a new city? Reach out to Binghamton alumni. Looking to change jobs or careers? Reach out to Binghamton alumni. Networking is one of the most important skills you can develop, and it can pay off immensely.

We have many ways you can stay connected to the University and other alumni. Once today’s celebrations are done and you have some down time, check out our pages on Facebook, Twitter and Instagram, and be sure to join the Alumni Association’s LinkedIn group. Keep your personal information up to date in the online alumni directory so you’re always in the loop about alumni events in your area. All of these are available through binghamton.edu/alumni.

This summer, we’ll have special events in Metro New York and other regions to welcome you, the Class of 2019, to the Alumni Association. An email invitation with all the details will come to you soon. Don’t forget to come back Sept. 20–22 for Homecoming. When you’re on campus, make the Alumni Center the first place you visit.

Congratulations on all you’ve accomplished at Binghamton University! I’m excited for you beyond words, and hope you’ll stay connected with us. Wherever you go, Binghamton is always a part of you, and you’re always a part of Binghamton.

Kimberly P. Faber

Executive Director of Alumni Engagement
Svetlana Iyer ’01, MSED ’03

Svetlana Iyer is a Board Certified Behavior Analyst and a certified special education teacher in New York. She earned her bachelor’s degree in psychology and her master’s degree in elementary and special education from Binghamton University in 2001 and 2003, respectively. She has worked in the field of education for 15+ years and believes that every child has potential to move beyond his/her current functioning levels if we use the right instructional methods.

Her experience ranges from inclusive schools as a tenured special education teacher in Greenwich, Conn., to a self-contained day-treatment program for students with severe disabilities in Schenectady, NY. In 2013, she founded and still directs Stepping Stones Center (SSC) in Bangalore, India, which provides assessment and interventions based on principles and procedures of Applied Behavior Analysis (ABA) for children with autism and other developmental disabilities. SSC addresses skill acquisition, reduction of maladaptive behaviors and transition into general education settings. Services at SSC include early intervention, intensive interventions, occupational and speech therapies, and inclusive academic programs.

Currently, Iyer is adjunct faculty at the College of St. Elizabeth in Morristown, N.J., teaching graduate courses in ABA. She travels to India on a quarterly basis to supervise SSC activities, which includes research and program development in India in collaboration with Binghamton University. She is pursuing her doctorate in ABA from Chicago School of Professional Psychology. She lives with her husband and two daughters in New Jersey.
Binghamton University, in addition to awarding baccalaureate, master’s and doctoral degrees for work completed at the University, looks outside itself to identify individuals who, by their accomplishments, represent what the University values and strives to instill in its graduates. It may be scholarly attainment, it may be artistic excellence, it may be a life of outstanding service. These are exceptional individuals in all fields of endeavor who serve as role models and inspirations for students and faculty alike. It is for these reasons that Binghamton University recognizes them with an honorary degree from the State University of New York: Doctor of Fine Arts, Doctor of Humane Letters, Doctor of Laws or Doctor of Science. In doing so, the University not only celebrates their achievements, but also claims them proudly as having a special relationship with Binghamton University.

Balakrishnan G. Iyer, MS ’00
DOCTOR OF SCIENCE

A clean-energy zealot who has led business development for global conglomerates and successfully steered startups from inception to exit, Balakrishnan “Balki” G. Iyer is currently co-founder and chief growth officer of Utopus Insights, a global energy analytics company.

He holds joint undergraduate and master's degrees in mechanical engineering and science from the Birla Institute of Technology and Science (BITS), India; a master's in industrial and systems engineering from Binghamton University; and an MBA from New York University Stern School of Business.

Iyer began his career at Schlumberger and has held several leadership positions with General Electric and Enel.

A prolific speaker at global conferences, he is passionate about the role of clean energy in changing the world and the role of education in empowering the people who can change the world. His business and entrepreneurial pursuits over the past decade have been guided by this passion. His energy business provided clean solar and wind power to thousands of people in India, replacing fossil fuels and diesel generators. Along with his wife, he co-founded Iyer Educational Institutions, staffed 95 percent by women, to provide inclusive learning opportunities for children with autism.

Iyer strongly believes in the power of mentoring. He is on the advisory group for INK, a platform that promotes inspiring ideas by game-changers. He served on the executive board for GE's Asia Pacific American Forum to coach leaders.

He is a recipient of the prestigious 'Outstanding 50 Asian Americans in Business' award in 2018. He lives in New Jersey with his wife and two daughters.
Patricia A. Saunders ’65
DOCTOR OF HUMANE LETTERS

Dedicated to helping others, Patricia Saunders holds a bachelor’s degree in anthropology from Binghamton University and a master’s degree in social work from Catholic University of America. She is a member of the board of directors and the foundation board of the American Junior Golf Association (AJGA), and since 2000 has been a member of the board of Asphalt Green, currently serving as chair of its Community Programs Committee, providing programs including free swimming lessons to thousands of New York City children. She received the Spirit of Generosity Award from Asphalt Green in fall 2018 for her dedicated service.

Saunders has served as a board member of the Legal Aid Society, and was honored by the Association of Fundraising Professionals for her Legal Aid Society work. In 1999, she established the Francis X. Newman Research Endowment in English in honor of her brother, a longtime Binghamton University faculty member. Gifts from Saunders to Binghamton University total over $450,000 to date, and in 2005, the West Gym pool was renamed the Patricia A. Saunders ’65 Aquatics Center through a gift from her husband and sons.

Saunders was inaugurated into the SUNY 2001 Alumni Honor Roll for her long-standing support and volunteer service, and was honored with the Binghamton University Distinguished Alumni Award in 2010. She was presented with a Medal of Distinguished Service in 2017, in recognition of her volunteer contributions to the campus.

She resides in New York City with her husband, Paul. They have two grown sons: Paul Jr. and Michael.

Howard Unger ’82
DOCTOR OF HUMANE LETTERS

Alumnus and philanthropist Howard Unger is managing partner and founder of Saw Mill Capital, a private equity firm that acquires manufacturing, industrial and commercial service, and specialty distribution businesses.

He earned his bachelor’s degree in accounting from Binghamton University in 1982 and his MBA from the University of Chicago Booth School. After beginning his career at Citicorp, and subsequently founding Chase Capital, a unit of The Chase Manhattan Bank, he formed Saw Mill Capital in 1997.

The son of a Holocaust survivor, Unger was twice appointed to the United States Holocaust Memorial Council by President Barack Obama. He also serves on the Executive Committee, is national co-chair of the Holocaust Memorial Museum’s ‘Never Again: What You Do Matters’ $1 billion capital campaign and is chairman of the Audit Committee.

Unger is a member of the Binghamton University Foundation board, has served on the Binghamton University Foundation Investment Committee, and in 2015 was the University’s School of Management alumnus of the year. He provided the founding gift for the School of Management’s Deans’ Excellence Fund, supported a class in Judaic Studies on the Holocaust enriched by esteemed visiting lecturers, and endowed the Unger Family Scholarship awarded annually to four School of Management students.

Most recently, he made a major gift commitment to support Binghamton University’s new Innovation Lab and the SOM Dean’s Excellence Fund.

Unger has three children: Allison, Jason and Brian. He and his wife, Caryn Stoll Unger, live in Chappaqua, N.Y.
DOCTORAL HOODING COMMENCEMENT CEREMONY

WEDNESDAY, MAY 15, 2019, 3 P.M.

PRELUDE
“The Drunken Sailor,” Traditional, arr. Terry Vosbein
“Minuet in E-Flat,” Michael Haydn, arr. Andy Clark
“Rondeau,” Jean Joseph Mouret, arr. Robert King
University Wind Symphony
Daniel Fabricius, Conductor

PROCESSIONAL
“Pomp and Circumstance,” Theme from “March No. 1,” Edward Elgar, arr. Clare Grundman

GRAND MARSHAL
Jonathan Karp, Associate Professor, Judaic Studies; Chair, Faculty Senate

SCHOOL AND STUDENT MARSHALS
Gretchen Mahler, Associate Professor, Biomedical Engineering; Associate Dean
Haifeng Wang, Systems Science and Industrial Engineering

PIPERS
Broome County Celtic Pipes and Drums

FACULTY MARSHALS WITH UNIVERSITY FACULTY
Roy T. McGrann, Associate Professor, Thomas J. Watson School of Engineering and Applied Science
Judith E. Quaranta, Assistant Professor, Decker School of Nursing

PLATFORM PARTY
Harvey G. Stenger, President
Linda H. Biemer, Binghamton University Council
Harry P. Bittker, Student Representative, Binghamton University Council
Laura R. Bronstein, Dean, College of Community and Public Affairs
Elizabeth S. Chilton, Dean, Harpur College of Arts and Sciences
Upinder S. Dhillon, Dean, School of Management
Sheila Doyle, Executive Director, Binghamton University Foundation
Kathryn Grant Madigan, Esq., Chair, Binghamton University Council
Jonathan Karp, Grand Marshal; Associate Professor, Judaic Studies; Chair, Faculty Senate
John Koch, Interim Vice President for Advancement
Dennis C. McCabe, Esq., Binghamton University Council
Michael F. McGoff ’70, MA ’75, PhD ’80, Senior Vice Provost and Chief Financial Officer
Gloria E. Meredith, Founding Dean, School of Pharmacy and Pharmaceutical Sciences

Pipers lead in the faculty and platform party in tribute to Robert Harpur, an eminent colonial New Yorker of Scottish heritage, whose name is linked with the historic roots of the University.
Pamela A. Mischen, Platform Party Marshal; Associate Professor, Public Administration; Faculty Advisor to the President
JoAnn J. Navarro ’93, MBA ‘02, Vice President for Operations
Donald G. Nieman, Provost and Executive Vice President for Academic Affairs
Mario R. Ortiz, Dean, Decker School of Nursing
Brian T. Rose, Vice President for Student Affairs
Abigail Ryan, Professional Staff Senate
Bahgat Sammakia, Vice President for Research
Nicole Sirju-Johnson, MPA ’99, PhD ’11, Interim Chief Diversity Officer
Krishnaswami Sripri, Dean, Thomas J. Watson School of Engineering and Applied Science; Executive Vice Provost for International Initiatives and Chief Global Affairs Officer; Distinguished Professor, Systems Science and Industrial Engineering
Aondover A. Tarhule, Vice Provost and Dean, Graduate School
Maureen D. Wilson, Binghamton University Council

ORDER OF EXERCISES

CEREMONY OPENING
Grand Marshal Karp

NATIONAL ANTHEM
“The Star-Spangled Banner,” John Stafford Smith
Vocal performance by Kaleigh Watkins
Accompanied by John Isenberg

PRESIDENT’S WELCOME
Harvey G. Stenger

PROVOST’S WELCOME
Donald G. Nieman

DEAN’S WELCOME
Aondover A. Tarhule

ALUMNI ASSOCIATION WELCOME
Mary Beth Curtin ’82, MAT ’86, MA ’87

PRESENTATION OF CANDIDATES FOR AND CONFERING OF DOCTORAL DEGREES
Dean Tarhule
President Stenger
DISTINGUISHED DISSERTATION AWARDS

ALMA MATER
“In the Rolling Hills of Binghamton,” words by Xin Engel, music by David Engel ’86 *(lyrics on back cover)*
Vocal performance by Kaleigh Watkins
Accompanied by John Isenberg

CEREMONY CLOSING
Grand Marshal Karp

RECESSIONAL
“Emblem of Unity,” J.J. Richards, arr. Andy Clark
“The Liberty Bell,” John Philip Sousa, arr. Don Patterson

Toivo Asheeke
*Sociology: Prof. William Martin*

Tian He
“Optimization Study of Dual-Gantry Collect-and-Place Machines”
*Systems Science: Prof. Sang Won Yoon*

Wei Jiao
“Essays on International Mutual Funds”
*Management: Prof. Murali Jagannathan*

David Morgan Spitzer
“Figures of Motion, Figures of Being: Translation, Diaspora, and the Song of Parmenides”
*Comparative Literature: Prof. Jeffner Allen*

Hwa Yeong Wang
“Confucianism and Rituals for Women in Choson Korea: A Philosophical Interpretation of Confucian Rites”
*Philosophy, Interpretation and Culture (PIC): Prof. Jeffner Allen*

John Wolters
“Mitochondrial Genome Evolution in Yeast”
*Biological Sciences: Prof. Heather Flumera*
CANDIDATES FOR DOCTORAL DEGREES

Mai Mahmoud Ahmed Abdulla
“Feature Selection for Medical Diagnosis: Evaluation of Silent Diseases”
*Industrial and Systems Engineering: Prof. Mohammad Khasawneh*

Mohammed Rabiu Abubakari
“A Mixed Methods Study of Food Accessibility in Broome County New York: Analyses from a Feminist Geography and Social Epidemiology Framework”
*Community and Public Affairs: Prof. Lubna Chaudhry*

Shahrokh Akhlaghi**
“Power System Dynamic State Estimation and Parameter Identification”
*Electrical Engineering: Prof. Ning Zhou*

Amal Alaboud
“Trends and Developments in Volunteer Translation with Special Focus on The Scientific Saudi Institution”
*Translation Studies: Prof. Kevin Lacey*

Tahani Sami Mohammad Alazzam**
“Cities in Translation Amman in the Jordanian Novel: A Case Study of Samiha Khreis’s Dafater Al-Toufan”
*Translation Studies: Prof. Michael Pettid*

Toivo Asheeke*
*Sociology: Prof. William Martin*

Irem Ayan
“The Alienated Tongues: Emotional Labor and Sabotage in Conference Interpreting”
*Translation Studies: Prof. Joshua M. Price*

Muhammad Waqar Azeem
“Empire After 9/11: American Exceptionalism, Trauma and Drone Warfare”
*English: Prof. David Bartine*

Duane L. Bacon**
“An Agile Framework to Develop Safety Critical Software for Aircraft”
*Systems Science: Prof. Daryl Santos*

Maura A. Bainbridge
“Memory or Forgetfulness at Sites of Labor Conflict: A Comparison of the Battle of Homestead, The Pullman Strike and The Ludlow Massacre”
*Anthropology: Prof. Randall McGuire*

Clara M. Barnhart
“Hell of a Nose, and Other Portraits”
*English: Prof. Maria Mazziotti Gillan*

Steven John Bates**
“World-Systems Analysis as Response to Limitations of the Sociology of Knowledge”
*Sociology: Prof. Richard Lee*

Saqer Abdulla Saqer Almarri
“The Khuntha and the Community: A Study in the Medieval Islamic Understanding of the Body and a Critical Edition of Abd Al-Rahim Al-Isnawi’s Idah Al-Mushkil Fi Ahkam Al-Khuntha Al-Mushkil”
*Translation Studies: Prof. Maria Luyones*

Bassam Mahmud Ahmad Al Saideen*
“Translating Intertextuality as Intercultural Communication: A Case Study”
*Translation Studies: Prof. Jeannette Patterson*

Saba Abdel Mouty Fayad Al-Sayouri
“Learning Large-Scale Network Representations”
*Industrial and Systems Engineering: Prof. Sarah S. Lam*

Sulaiman Mohammad S. Alsowaina
“Translations and Post-Translation Adaptations of Self-Help into Arabic”
*Translation Studies: Prof. Mary Youssef*

Sulaiman Mohammad S. Alsowaina
“Translating Intertextuality as Intercultural Communication: A Case Study”
*Translation Studies: Prof. Jeannette Patterson*
Kenneth William Baumann  
“Impact of Thermal Ablation Modalities and Investigation into Molecular Stress Pathways for the Treatment of Pancreatic Cancer”  
Biological Sciences: Prof. Robert Van Buskirk

Amanda Beardsley  
“Celestial Mechanics: Technologies of Salvation in the Church of Jesus Christ of Latter-Day Saints and American Culture”  
Art History: Prof. Pamela G. Smart and Prof. Thomas McDonough

Gamze N. Bedirhanoglu Balaban**  
Sociology: Prof. Caglar Keyder

Melody R. Best  
“The Effect of Training Method on Bedside Nurses’ Documentation Proficiency in Electronic Medical Records”  
Nursing: Prof. Mary Ann Swain

Huanjing Bi  
“Tissue Specific Matrix Recapitulates Pancreatic Islet Organoids from Pluripotent Stem Cells”  
Biomedical Engineering: Prof. Sha Jin

Olga Blomgren  
“Reading Dangerously: Cannibalizing Languages, Creolizing Texts and Archipelagic Thinking in Writings by Rosario Ferré and Edwidge Danticat”  
Comparative Literature: Prof. Luiza Moreira and Prof. Jeffrey Allen

Jonathan A. Bramsen  
“Development of a 3D In-Vitro Model of Calcific Aortic Valve Disease”  
Biomedical Engineering: Prof. Gretchen Mahler

Davis Knox Brigman**  
“Accounting for Health Differences Between Couples on the Basis of Marital Status: The Role of Income”  
Clinical Psychology: Prof. Matthew Johnson

Elise Jessica Cain  
“Perceptions of College Students from Rural Areas: Exploring Identities and Their Influences on the College Experience”  
Community and Public Affairs: Prof. Deborah Taub

Anthony Carmine Canino  
“Language Support for Adaptive Energy-Aware Applications”  
Computer Science: Prof. Yu David Liu

Charmaine Luzano Carreon  
“Where Tenderness Lies”  
English: Prof. Maria Mazzotti Gillan

Jenna Matilda Carter  
“The Molecular Mechanisms that Modulate Age-Sensitive Responses to the Aversive Properties of Ethanol”  
Behavioral Neuroscience: Prof. David Werner

Xijinyan Chen**  
“When Translation Meets Psychoanalysis: A Study in Contemporary Chinese Literary Translation”  
Translation Studies: Prof. Nicholas Kaldis

Ximeng Chen  
“Understanding Emerged Self-Help Groups of Parents Who Have Lost Their Only Child in China”  
Community and Public Affairs: Prof. Kristina Lambright

Nanfei Cheng**  
“Experimental Investigation of Reactions Relevant to the Blueschist-Eclogite Transition”  
Geological Sciences: Prof. David Jenkins

Olga Blomgren  
“Language Support for Adaptive Energy-Aware Applications”  
Computer Science: Prof. Yu David Liu

Nannette S. Cowen*  
“The Effect of Physical Activity Recommendations in Achieving a Therapeutic Level of Activity in Adults Who are at Risk for Type 2 Diabetes”  
Nursing: Prof. Pamela Stewart-Fahs

Heather Alita Crapo*  
“Electrochemical Analysis of Microbial Pathogens in Response to Physico-Chemical Stressors”  
Chemistry: Prof. Omowunmi Sadik

Eran Crockett*  
“On a Class of Nilpotent Algebras”  
Mathematics: Prof. Fernando Gazman

Alyson Dearie**  
“Athletic Training Faculty: Education, Preparedness, Perceptions, and Changing Roles”  
Educational Theory, Research and Practice: Prof. Marla Mallette

Alexander James Denman-Brice**  
“Theta Oscillations and Neural Coding of Taste in the Rat Solitary Nucleus”  
Behavioral Neuroscience: Prof. Patricia di Lorenzo

Philip Edward Dexter  
“Lazy High-Performance Big Data Processing”  
Computer Science: Prof. Yu David Liu

Fei Dong*  
“Polyurethane-Based Conformal Coatings for Tin Whisker Mitigation”  
Materials Science and Engineering: Prof. Junghyun Cho

*Degrees awarded summer 2018  |  **Degrees awarded fall 2018
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<td>Kuwanna M. Dyer-Pietras</td>
<td>“Sedimentology and Stratigraphy, Strontium Isotope Geochemistry, and Spectral Analysis of the Eocene Lacustrine Green River Formation, Piceance Creek Basin, Colorado”</td>
<td>Geological Sciences: Prof. Robert Demicco</td>
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<td>Katharine Ellenberger*</td>
<td>“Perception and Practice: Doing Public Archaeology”</td>
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<td>“Multi-Objective Design Optimization of Reverse Total Shoulder Arthroplasty to Maximize Range of Motion and Joint Stability”</td>
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<td>“Politics of Middle Class Professionals and Recent Protest Wave in Global South: Political Agency of Professionals in Gezi Protests and Beyond”</td>
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<td>“Little Palace”</td>
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<td>Alena Alessandra Gericke**</td>
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<td>Chelsea Caroline Gibson</td>
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<td>Ahmed Hadi Hakami</td>
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<td>Daniel W. Hampton**</td>
<td>“Determinants of Profit and Charity Care Provision: A National Study of Nonprofit Hospitals”</td>
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<td>Chendong Han**</td>
<td>“Enzyme-Encapsulating Polymeric Nanoparticles as a Novel Approach in Biofilm Treatments”</td>
<td>Biomedical Engineering: Prof. Amber Doiron</td>
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<td>Karen M. Heffernan</td>
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<td>Alexander Matthew Horspool</td>
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<td>Minjie Huang*</td>
<td>“Agent-Based Models of Consumer and Firm Behavior”</td>
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<td>Carmita Eliza De Jesus Icasiano</td>
<td>“Pastforward: Tracing the Life of Philippine Likhang-Bayan”</td>
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<td>Shaojie Jiang**</td>
<td>“High-Pressure Studies on Hybrid Perovskites and the Superlattice Self-Assembled by In203 Nanocrystals”</td>
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<td>Ki Eun Kang</td>
<td>“Developer Threats and Regional Competition for Economic Development”</td>
<td>Community and Public Affairs: Prof. George Homsy</td>
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Brian Kelly**
“Moving Pictures”
*English: Prof. Leslie Heywood

John J. Kelly
“Compressive Sensing Matrix Design and Evaluation with Cognitive Radio Applications”
*Electrical Engineering: Prof. Mark L. Fowler

Alireza Fazli Khalaf
“Economic and Environmental Evaluations of Dedicated and Residential Electric Tariffs for Plug-In Electric Vehicles”
*Industrial and Systems Engineering: Prof. Yong Wang

Ozgur O. Kilic
“Scaling Virtual Processors for Parallel Applications in Virtual Machines”
*Computer Science: Prof. Kartik Gopal

Sarah Catherine King
“Celebrity Activism in the Vietnam Era: How Popular Culture Icons Shaped Debate Over the War and Transformed US Political Culture”
*History: Prof. Leigh Ann Wheeler

Maan Zaid Kokash
“Assessing the Reliability of Fused/Sintered Nanoparticles”
*Industrial and Systems Engineering: Prof. Peter Borgesen

Kelly Marie Kraus
“Implementing an Educational Program to Decrease Binge Drinking on a Northeastern University Campus”
*Family Nurse Practitioner: Prof. Geraldine Britton

Patricia Krizan**
“K-2 Social Studies: Vygotsky, Inquiry, and Argumentation”
*Educational Theory, Research and Practice: Prof. S. G. Grant

Anastasia Y. Kudinova*
“Association Between the Magnitude of the Immune Response and Recurrent Major Depression Disorder in Humans and Depression-Like Behavior in Animals”
*Psychology: Prof. Brandon Gibb

Zhandarka Kurti**
“The Making of ‘Disconnected Youth’: The Role of Criminal Courts, Probation, and Non-Profit Organizations in the Criminalization and Management of Youth of Color in NYC”
*Sociology: Prof. Kelvin Santiago-Valles

Alexandra Laletina
“Exploring student identity in a language-based co-curricular program”
*Educational Theory, Research and Practice: Prof. Marla Mallette

Megan A. Larson*
“Characterization of Urban Wetland Vegetation and Management Practices”
*Biological Sciences Program in Ecology, Evolution and Behavior (EEB): Prof. John Titus

Justin D. Leshen**
“Investigating the Electronic Structure of Sr3Ru2O7 Through Spectroscopic Imaging — Scanning Tunneling Microscopy”
*Physics: Prof. Pegor Aynajian

Tianlin Li**
“Limiting the Lifetime of Confidential Data in Virtualized Platforms”
*Computer Science: Prof. Ping Yang

Nathan Charles Lipps
“A Dead Man Built Slowly”
*English: Prof. Leslie Heywood

Ross David Lipton**
“Harmony and Totality: Harmony as a Metaphor for Social/Political Cohesion and Its Various Articulations Within Music and Architecture Throughout Modernity”
*Comparative Literature: Prof. Gisela Brinkler-Gabler

Lalaine B. Little
“Retablo: Configuring Relationships, Spaces, and Activities in the Eighteenth-Century Spanish Philippines”
*Art History: Prof. Nancy Um

Liang Liu
“The Transport Phenomena in Inkjet Printed Microfluidic Systems”
*Mechanical Engineering: Prof. Timothy J. Singer

Jack P. Lombardi*
“Fabrication of Flexible and Additive Electronic Devices Using Roll to Roll Compatible Lithographic Processes and Aerosol Jet Printing”
*Industrial and Systems Engineering: Prof. Mark Poliks

Pamela C. Lovejoy*
“Sex-Specific Paraquat Susceptibility in Drosophila Melanogaster”
*Biological Sciences Program in Ecology, Evolution and Behavior (EEB): Prof. Anthony Fiumera

Anastasiya Lyubas**
“Plasticity of Language in Debora Vogel’s Modernist Poetics”
*Comparative Literature: Prof. Brett Levinson

Caroline Maxine Mauduy
“The Translator’s Visibility, Agency and Implication in Translating a Metalinguistic Text”
*Translation Studies: Prof. Michael Pettit

Laura E. McArdell*
“Examining Efficacious Components of Tele-Psychoeducation”
*Clinical Psychology: Prof. Jennifer Gillis Mattson

Sarah T. Olsen**
“An Examination of the Bidirectional Transfer Deficit in Adults: Using a Tangrams-Style Puzzle to Explore Adults’ Ability to Transfer Learning to and from Touchscreens”
*Cognitive Psychology: Prof. Peter Gerhardtstein

Young-Sin Park
“The Choson Industrial Exposition of 1915”
*Art History: Prof. John Tagg

*Candiates for Doctoral Degrees

*Degrees awarded summer 2018 | **Degrees awarded fall 2018
Kandarp Patel
“Spatial Sparsity Based Direction of Arrival (DOA) Estimation of Acoustic Source in the Presence of Model Errors”
Electrical Engineering: Prof. Mark L. Fowler

Lisa Sundahl Platt
“Using Dynamic Modeling as a Decision Support Tool in Resilient Healthcare Systems Design”
Systems Science: Prof. Mohammad Khasawneh

Omaimah Qadhi**
“Understanding Families’/Surrogate Decision Makers’ Experience of Decision Making for Critically Ill Patients in Saudi Arabia”
Nursing: Prof. Carolyn Pierce

Sudhinda Balakrishna Rao
“Evolutionary Perspectives on Obesity and Associated Metabolic Conditions, and a Test of the Ancestral Diet Hypothesis”
Biological Sciences Program in Ecology, Evolution, and Behavior (EEB): Prof. David S. Wilson

Ruba Rashed
“Understanding Arab Feminism Through Feminist Translation and Critique of the Modern Arabic Novel”
Translation Studies: Prof. Mary Youssef

Binish Rijal**
“Unexpected Outcomes: Intra-Firm Pollution Leakage in the United States and Interest Rate Formation in Nepal’s Informal Credit Sector”
Economics: Prof. Neha Khanna

Bernadette A. Roe
“Shadow Work”
English: Prof. Leslie Heywood

Amanda Beth Roome
“Lyme Disease and Human Health in the Northeastern United States”
Anthropology: Prof. Ralph M. Garruto

Subhadra Rukmini
“The Development of Whole-Cell Vaccines for Cancer Immunotherapy”
Biomedical Engineering: Prof. Kaming Ye

Hamza Ramadan Omar Saad**
“An Integrated Framework of Data Mining and Process Mining to Characterize Quality and Production Processes”
Industrial and Systems Engineering: Prof. Nagendra Nagarur

Shabnam Seyedzadeh Sabouchni
“Opioid Prescription for Dental Visits in Emergency Departments: Patient Profiles and Predictive Models”
Community and Public Affairs: Prof. A. Serdar Atav

Bhawesh Sah
“Last Mile Delivery Using Drones and Trucks”
Industrial and Systems Engineering: Prof. Sung Hoon Chung

Pankaj Saha**
Computer Science: Prof. Madhusudhan Govindaraju

Roozbeh Salary*
“Computational Fluid Dynamics Modeling and In Situ Physics-Based Monitoring of Aerosol Jet Printing Toward Functional Assurance of Additively-Manufactured, Flexible and Hybrid Electronics”
Industrial and Systems Engineering: Prof. Mark Polikhs

Morteza Sarailoo
Electrical Engineering: Prof. N. Eva Wu

Megan Elizabeth Savage*
“Personality and Social Perception: The Impact of Social on ‘Reading The Mind In The Eyes’ Performance in Relation to Borderline Personality Disorder”
Clinical Psychology: Prof. Mark Lenzenweger

Leyla Savsar**
“Outside the Nation, Inside the Melancholic State(s) of Mind: Re-Thinking the Rhetoric of Displacement and Re-Membering the Affective Immigrant Experience in Transnational Literature”
English: Prof. Susan Strehle

Giovanni Scaringi
“The Fiscal Federalism Takeover and the Determinants of Executive Power”
Political Science: Prof. Jonathan Krasno

Edward L. Scott
“Personal Investments in Human and Social Capital: The Perceived Barriers to Career Goal Attainment of NCAA Division I Minority Athletic Administrators”
Community and Public Affairs: Prof. Mary Ann Swain

Evgeny Alexandrovich Sedashov
“Essays in Political Economy of Corruption: Micro-Level Determinants and Macro-Level Consequences”
Political Science: Prof. Mikhail Filippov

Bedri Sendir*
“Optimizing NoSQL Databases Through Coherently Attached Flash”
Computer Science: Prof. Madhusudhan Govindaraju

Zachary Seymour
“Leveraging Weakly-Aligned User-Generated Data for Deep Learning Features”
Computer Science: Prof. Zhongfei Zhang

Neda Shamshizadeh
“Grounded Theory on Women’s Menopause and Sexuality”
Nursing: Prof. Mary Ann Swain

Yong Shi*
“Synthesis, Characterization, and Optimization of Multi-Electron Cathode Materials for Lithium-Ion Batteries”
Chemistry: Prof. M. Stanley Whittingham

Sirajul Arefin Shibly
“Performance Implications of Supplier Signals in Asymmetric Buyer-Seller Relationships: The Buyer’s Perspective”
Management: Prof. Debi P. Mishra

Carrie Siu
“Synthesis, Characterization, and Electrochemistry of Multivalent Cathode Materials for Lithium-Ion Batteries”
Materials Science and Engineering: Prof. M. Stanley Whittingham

Graciela Maria Solano*
“The Influence of Participation in the Healthy Choices Program for Community Dwelling Individuals with Serious Mental Illness”
Nursing: Prof. Carolyn Pierce

Erica Michelle Stephens
“The Influence of Metamorphosis on the Timing of Heteromorphic Spermatogenesis in Manduca sexta (Lepidoptera)”
Biological Sciences Program in Ecology, Evolution, and Behavior (EEB): Prof. Julian Shepherd

Ting Su**
“Extensions of Matroids Over Tracts and Doubly Distributive Partial Hyperfields”
Mathematics: Prof. Laura Anderson

Tao Tao*
“Solution Processing of Ceramic Nanocomposite Coatings for Improved Functional Properties”
Materials Science and Engineering: Prof. Junghyun Cho
Yu Yin To**
“Not Even a God Can Save Us Now: ‘American’ Literature in the Aporias of Secularism and Post-Secularism”
Comparative Literature: Prof. Brett Levinson

Russell Howard Tobias
“First-Level Interconnects in Electronics Packaging: Alloyed Silver Intermetallic Growth Kinetics and their Mechanical Reliability Effects on Wire Bonding”
Mechanical Engineering: Prof. Junghyun Cho

Mohammad Ibrahim Hamad Tradat
“Transient and Steady Experimental and Numerical Thermal Studies Towards Energy Efficiency Improvements in Data Centers”
Mechanical Engineering: Prof. Bahgat Sammakia

Atanas G. Tzenev
“Attraction of Foreign Direct Investment in Central and Eastern Europe: The Dynamics of Policy and Politics”
Political Science: Prof. Mikhail Filippov

Sri Siddhi Navniet Upadhyay*
“Bringing Characters to Life: What Do Readers ‘Hear’ When Reading Stories?”
Cognitive Psychology: Prof. Celia Klin

Andrew L. Verdon*
“Essays in Human Capital Theory”
Economics: Prof. Solomon Polachek

Haifeng Wang
“Adaptive Neural Architecture Optimization for Medical Image Analysis”
Industrial and Systems Engineering: Prof. Sang Won Yoon

Heather Wastler
“Self-Referential Hypermentalization in Schizotypy”
Psychology: Mark Lenzenweger

Xin Wen
Novel Methods for Optimization of Optical Thin Film Filters with Applications”
Electrical and Computer Engineering: Prof. David Klotzkin

Kaylie Wiseman
“Cognitive Flexibility in Autism Spectrum Disorder, Obsessive Compulsive Disorder, and Eating Disorders: An Investigation of Shared Traits and Mechanisms”
Psychology: Prof. Raymond Romanczyk

Tong Yang
“Towards Flexible Electronics — How Processing Influences Materials Performance”
Materials Science and Engineering: Prof. Jeffrey Mativetsky

Wei Yang**
“Nonlinear Coupled Oscillators for Energy Harvesting”
Mechanical Engineering: Prof. Shahrzad Towfighian

Lin Yao
“James-Stein-Type Optimal Weight Choice for Frequentist Model Average Estimator”
Mathematics: Prof. Ganggang Xu

Farnaz Zamani Esfahani*
“Schizophrenia as a Complex System: Insights from Network Science”
Systems Science: Prof. Hiroki Sayama

Edward Patrick Zegarra**
“Partnerships for Patrimony: Developing a Sustainable Archaeological Site Stewardship Program in the Central Andes, A Case Study from Huari, Ayacucho, Peru”
Anthropology: Prof. William Isbell

Hanlei Zhang
“Structural Degradation in Cathode Materials for Li-Ion Batteries”
Materials Science and Engineering: Prof. Guangwen Zhou

Yicheng Zhang
“Studies on TiH2 Anode Material and Mo and V Based Cathode Materials for Alkali Metal Ion Batteries”
Materials Science and Engineering: Prof. M. Stanley Whittingham

Mingfei Zhao
“Numerical Modeling of Particle Assembly in Evaporating Colloidal Droplets”
Mechanical Engineering: Prof. Xin Yong

Bichen Zheng*
“Analytical Decision Support Systems for Contact Center Simulation and Optimization”
Industrial and Systems Engineering: Prof. Sang Won Yoon

Andrei Zhirnov
“Campaigns, Information and Duveger’s Psychological Effect”
Political Science: Prof. Olga Shvetsova

Changwei Zhou
“On Cohomology Theory of Arithmetic Surfaces”
Mathematics: Prof. Alexander Borisov

Chaochao Zhou**
“Multiobjective Design Optimization of a Mobile-Bearing Total Disc Arthroplasty Considering Spinal Kinematics, Facet Joint Loads, and Metal-On-Polyethylene Contact Mechanics”
Mechanical Engineering: Prof. Ryan Willing

Jian Zhou**
“Acoustic Flow Sensing”
Mechanical Engineering: Prof. Ronald Miles

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*Degrees awarded summer 2018 | **Degrees awarded fall 2018
Binghamton University opened its doors as Triple Cities College in 1946 to serve the needs of local veterans returning from service in World War II. Originally located in Endicott, five miles west of the present campus, the fledgling school was a branch of Syracuse University. Four years later, when the college was incorporated into the State University of New York, it was renamed Harpur College in honor of Robert Harpur, a Colonial teacher, patriot and pioneer, who devoted his later years to settling the area around Binghamton.

Until 1953, Harpur College was one of only two public liberal arts colleges in the state. In 1961, the campus was moved across the Susquehanna River to Vestal. Growing enrollment and a reputation for excellence soon led to the selection of Harpur College as one of four doctorate-granting university centers in the state system. In 1965, the campus was formally designated the State of New York at Binghamton. Binghamton University was adopted as its informal name in 1992.

Today, Binghamton University is known for the excellence of its students, faculty, staff and programs, and enrolls nearly 17,800 students in programs leading to bachelor’s, master’s and doctoral degrees. More than 14,000 students are undergraduates and more than 3,700 are graduate students. Its curriculum, founded on the liberal arts, has expanded to include selected professional and graduate programs, including the new Doctor of Pharmacy (PharmD) program launched in fall 2017.

The University offers more than 100 major degree programs across its six academic divisions and is recognized as the most selective and prestigious university in the SUNY system. College guides such as the Fiske Guide to Colleges have dubbed Binghamton a “premier public university in the Northeast.” Students actively take part in internships, education-abroad programs, honors programs, Division I athletics and many of the 450+ student organizations on campus. They enjoy attractive, comfortable living-and-learning residences, and they give faculty high marks for being approachable and inspirational.

Binghamton’s faculty and students come from more than 100 countries, bringing with them many different cultures and backgrounds and representing a wealth of ideas. It has an excellent research library, outstanding computer facilities, a superb performing arts center, a teaching greenhouse, a 190-acre Nature Preserve, an Events Center and more.

Binghamton is a highly regarded research university, yet, at the same time, is as accessible as a smaller school. Retention is well above national averages, and more undergraduates are admitted into nationally ranked, rigorous graduate programs than is the norm nationally for public research universities.
ACADEMIC REGALIA

The shapes, colors and trim of gowns, hoods and caps indicate the academic degree, the school granting the degree and the subject of study. The higher the degree, the more elaborate the costume. Gowns are distinguished by the shape of the sleeves. Bachelors’ gowns have pointed sleeves, masters’ have sleeves cut square at the back and doctors’ gowns also have velvet facing and three velvet bars on the sleeves that are either black or a color indicating the degree: dark blue for philosophy; light blue for education; golden yellow for science; pink for music; orange for engineering; brown for fine arts; white for arts, letters and humanities; and copper for economics.

Hoods are distinguished by length, lined with the official color(s) of the conferring institution and trimmed with a color indicating the subject in which the degree is granted. Blue and gold, the color of the State University of New York, are in the hoods of all those who will receive a doctorate today, including honorary degree recipients.

The cap or mortarboard is black, with a long tassel that may be black or the color appropriate to the subject. Only doctors’ caps may have a tassel of gold thread. It is customary for graduates to move tassels from right to left after degrees are conferred.
ABOUT BINGHAMTON UNIVERSITY

Binghamton University attracts students and scholars from across New York state, the country and the world. The international flags that hang in the Events Center during Commencement ceremonies and at other venues on campus during the academic year represent the more than 100 nations our students hail from. Flown since Commencement 1997, these flags are an important visual reminder that Binghamton University’s strength lies in its people who represent a great variety of cultures, backgrounds and ideas.

INTERNATIONAL FLAGS

THE UNIVERSITY MACE

A gift of the Class of 1993, the University mace represents the magisterial authority of the University as an institution of higher learning. Such symbols go far back into antiquity, their use proclaiming the power of the holder. Today, the mace stands for the pre-eminence of the world of knowledge.

Professor John Thomson of the Department of Art and Design undertook the commission by the Class of 1993 for the University mace. Nearly three feet long, it is made of hand-turned, polished walnut. The spherical head has two inset cast-bronze facets in the shape of medallions. One bears the seal of Binghamton University. The other carries a high-relief rendering of Pegasus, the flying horse of Greek mythology, which as a part of the seal symbolizes the University’s aspirations for its future.
TRUSTEES, COUNCIL AND ADMINISTRATION

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Mario R. Ortiz, Dean, Decker School of Nursing
Krishnaswami Srihari, Dean, Thomas J. Watson School of Engineering and Applied Science
Aondover A. Tarhule, Dean, Graduate School
GUEST INFORMATION

ACCESSIBILITY SERVICES
If you or someone in your party is in need of accessibility services, ask any volunteer in a Red Coat for assistance.

CEREMONY LENGTH
This ceremony should last approximately 60–90 minutes, depending on the number of graduates in the ceremony.

EMERGENCIES
Police and emergency medical staff are on site. If you need assistance, contact the closest usher. (Ushers can be identified by their Red Coat or volunteer name badges.)

In the event of a fire alarm, the building’s emergency horns will be activated. Guests should carefully exit the building through the nearest exit. Be aware that the closest exit may not be through the same doors through which you entered the building. Ushers will assist in the orderly evacuation of the building.

LISTING OF GRADUATES
Inclusion in the program does not constitute evidence of completion of degree. Candidates who filed a spring 2019 Graduate Application for Degree with the University’s Student Records Office by March 27 are guaranteed to be in the program. Those filed after the deadline may or may not appear, depending on the date of submission.

PHONES
Guests are asked to silence cell phones for the duration of the ceremony. Your cooperation is appreciated.

PHOTOGRAPHY
So that all may enjoy the majesty and joy of the occasion, we ask guests to refrain from approaching the stage to take pictures during the ceremony. Photographers from Commencement Photos, Inc. will be photographing our graduates as they cross the stage. For information on how to order prints, visit www.commencementphotos.com.

RESTROOMS
Restrooms are located on the north side and the lower level west side of the Osterhout Concert Theater.

SEATING
Guests may remain seated during the processional. Stand to sing the national anthem. For purposes of decorum and the safety of all guests, we ask that the aisles remain clear during the ceremony. Guests are asked to remain seated until the platform party, faculty and graduates have recessed. Your cooperation is appreciated.

There is handicap-accessible seating reserved throughout the theater and at the top of the theater. The stage is reserved for the platform party, senior administrators and faculty.

SIGN LANGUAGE INTERPRETERS
Sign language interpreters will be visible on stage right. For best viewing of the interpreters, sit in the north side of the theater.

SOCIAL MEDIA
For pictures and ceremony information, follow Binghamton University on Facebook, Instagram, Twitter and Snapchat.
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<th>REGALIA HOOD COLORS</th>
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<td><strong>Doctoral Degrees</strong></td>
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<td><strong>LIGHT BLUE</strong> (EDD)</td>
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<td><strong>Master’s Degrees</strong></td>
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<td><strong>CCPA CEREMONY</strong></td>
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<td><strong>LIGHT BLUE</strong> (EDUCATION)</td>
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<td><strong>APRICOT</strong> (NURSING)</td>
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In the rolling hills of Binghamton
’Neath everchanging skies
Where two gently flowing rivers meet,
We form our cherished ties.

Together we spend these years,
United in our aim.
Through our bold pursuit of excellence,
We proudly bear your name.

Chorus:
O Binghamton, we carry thee
With us for all our time
And through us individually
Forever may you shine.