Bahram Roughani
Associate Dean for the
Natural and Applied Sciences
Annual Report 2017-2018
This past year was another year of growth and success for Natural and Applied Sciences (NAS). We welcomed talented new students to campus, completed the first year of a new graduate degree program in Data Science, and received approval to start new undergraduate degree programs including Data Science (B.S.), Forensic Studies (B.A.), Physics (B.A.), and a minor in Data Science. NAS played a crucial role in design and establishment of the university-wide minor in Innovation and Entrepreneurship, including courses from Physics, Mathematics and Statistics, Computer Science, and Engineering. Moreover, NAS has had measurable impact on the growth of the Innovation and Entrepreneurship (I&E) ecosystem at Loyola by offering co-curricular programs such as popup classes, supporting makers’ efforts, and guiding the University Innovation Fellows (UIF) program to complement curricular aspects of I&E at Loyola. This year we welcomed Pre-Health programs to NAS, a successful program that has shown significant growth in recent years in addition to expanding pre-health-related scholarly work involving students.

NAS events and programs including Hauber Summer Research, Grand Seminar, Celebration of Science, Cosmos and Creation, CPaMS, Pathways to Innovation, Health Outreach Baltimore, and Baltimore Health Immersion had another successful year. Also, department and faculty initiatives such as Mid-Atlantic Biology Research and Career (MABRC) Network efforts including the MABRC conference hosted at Loyola’s Greenspring campus enjoyed great success.

Students’ achievements including admissions to top post graduate and professional programs, obtaining competitive fellowships, research work and conference presentations reflects the impact of liberal arts education and the “care for the whole person” on Loyola’s science, math, and engineering majors. Our faculty, as the intellectual leaders of our campus, have shown remarkable professional success based on recognition by peers, record of achievements, and successful tenure and promotion.

This document represents an overview of the progress by members of NAS on important fronts during the past year, while we recognize it is not the most comprehensive report about NAS progress. In the coming year, I look forward to supporting our students and faculty and assisting in delivering an intentional liberal arts education that ensures our students are equipped to succeed. Also, I look forward to ideas for expansion of collaboration across NAS disciplines and across campus and nurturing a closer relationship with alumni that can help us solve both big and small challenges. Our work has been positively impacted by the support we have received from the Natural and Applied Sciences Steering Board (NASSB) and advisory boards associated with Engineering, Computer Science, and Data Science programs. The success of our intellectual community depends upon the critical but collegial collaboration of diverse individuals. I look forward to the challenges and opportunities ahead and welcome suggestions and ideas from students, faculty, staff, alumni, and advisory boards on how to enhance the success of the NAS division in the future. The success of the NAS program would have not been achieved without the strong support of Dean Fowl, Dr. Amanda Thomas, VPAA, and university administration.

Associate Dean for the Natural and Applied Sciences
NAS FACT SHEET

Departments:
• Biology
• Chemistry
• Computer Science
• Engineering
• Mathematics & Statistics
• Physics

Programs:
• Pre-Health Programs

Degree Programs:
• Biology (BS)
• Biochemistry (BS)
• Chemistry (BS)
• Computer Science (BS)
• Computer Science (BA)
• Data Science (MS)
• Engineering (BSE)
• Mathematics (BS)
• Physics (BS)
• Statistics (BS)

New Degree Programs:
• Data Science (BS)
• Forensic Studies (BA)
• Physics (BA)

Largest Interdisciplinary Majors:
• Biochemistry (BS)
• Biology – Psychology

Interdisciplinary Minors:
• Forensic Studies
• Natural Science
• Biomedical Physics
• Environmental & Sustainability Studies
• Data Science
• Innovation & Entrepreneurship (*University-wide)
This NSF supported S-STEM grant ($565,000) is being implemented by a team of NAS faculty from three academic departments; Computer Science, Physics, Mathematics, and Statistics, listed below:

Original team of CPaMS faculty on the NSF grant:

- Mili Shah, Professor of Mathematics (PI)
- Dawn Lawrie, Professor of Computer Science (Co-PI)
- Mary Lowe, Professor of Physics (Co-PI)
- Lisa Oberbroeckling, Professor of Mathematics (Co-PI)

Starting in 2018, CPaMS is transitioning from an NSF supported to Loyola supported program, with a new CPaMS leadership team:

- Megan Olsen, Professor of Computer Science (faculty lead)
- Mary Lowe, Professor of Physics
- Prince Chidyagwai, Assistant Professor of Mathematics
- Sibren Isaacman, Professor of Computer Science
- Lisa Oberbroeckling, Professor of Mathematics (Co-PI)

Other faculty involved in CPaMS are:

- Timothy Clark, Professor of Mathematics & Statistics
- Roberta Sabin, Professor Emeritus of Computer Science
- Dawn Lawrie, Professor of Computer Science (Co-PI)
PATHWAYS TO INNOVATION

This collaborative initiative involving a core team from Physics, Engineering, and Computer Science started in January 2015. Faculty involved in this initiative are:

- **Engineering Department**: Suzanne Keilson and Robert Pond
- **Computer Science Department**: Dawn Lawrie and M.S. Raunak
- **Physics Department**: Randall Jones, Mary Lowe, and Bahram Roughani

Pathways to Innovation Highlights:

- **New course on “Technical Innovation and Entrepreneurship”** (cross-listed as CS491 / EG491 / PH491): This course was developed and taught by Bahram Roughani during spring semester 2016, 2017, and 2018. 38 students have participated in this course so far.

- **Interdisciplinary Capstone Design Project Courses**: A new approach to capstone design courses was developed and implemented since 2015-16. This interdisciplinary approach enables CS and engineering students to work in joint senior design capstone projects, while allowing students to utilize their skills in completely new environments built by multidisciplinary teams.

- **I&E Minor**: The new university-wide minor for innovation and entrepreneurship is comprised of four tracks designed to serve students from Business, Sciences, Engineering, Humanities, and Social Sciences. Through this 18-credit program, students develop the capacity to identify commercially or socially viable products or services and learn how to bring them to market through a new venture or within an existing organization. Catalogue description and requirements may be found [here](VentureWell.org).

- **University Innovation Fellows (UIFs)**: A structured program out of Stanford’s design school, goals of the UIF program include fostering innovation and entrepreneurship through cross disciplinary collaboration. UIFs are trained by Stanford’s faculty utilizing an online platform, video conferencing with other fellows across the country (approaching 2000 worldwide fellows and 164 global institutions) and completing assignments on campus under the supervision of faculty mentors Dr. Suzanne Keilson and Dr. Bahram Roughani. Loyola has sent a UIF cohort to the national meetup in 2017 and 2018. Loyola’s third cohort to attend the national meetup has been selected while plans include continuation of this program in the coming years.
Pathways to Innovation program is designed so participating schools assemble a team of faculty and academic leaders to assess their institution’s current offerings, design a unique strategy for change, and lead their peers in a two-year transformation process. This phase of the Pathways to Innovation at Loyola University was spring 2015-Spring 2017.

Popup Classes: We have initiated popup classes in support of innovative and informal learning opportunities based on extra-curricular activities. Many of our popup classes have been held in the library as a neutral space to welcome everyone from NAS and outside of NAS programs to work together.

Popup Classes Pedagogy:
- Prepare for wide range of experiences
- Tap into students’ desire to learn new skills
- Use quick and concise instructions
- Facilitate communal dialogue so students learn from each other
- Point to resources for future learning

### FALL 2017 vs SPRING 2018

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<th>FALL 2017</th>
<th>SPRING 2018</th>
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<td>ADOBE LIGHTROOM</td>
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<td>PRACTICAL PHOTOSHOP</td>
<td>USING MICROSOFT APPS TO INCREASE PRODUCTIVITY &amp; COLLABORATION</td>
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<td>BASICS OF TINKERCAD</td>
<td>UNDERSTANDING ENVIRONMENTAL INJUSTICE IN BALTIMORE THROUGH GIS</td>
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<td>3D SCANNING</td>
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ABOUT HAUBER RESEARCH PROGRAM:

Each summer, a select group of highly motivated, talented undergraduates work side-by-side with faculty mentors from the six natural and applied science departments at Loyola to conduct research in the students' area of interest. Hauber Fellows are selected by a committee, and each student receives $5,000 for 10 weeks of summer research.

Fourteen Hauber fellows conducted research during summer 2018, thanks to the generous support of individual donors and organizations.

Hauber Summer Program Format and Deliverables:

The Hauber Fellows program runs for 10 weeks in the summer. Students gain valuable experience while engaged in research in their discipline whereas faculty obtain assistance with their work while mentoring students in scientific research methods and projects. Hauber Research Fellows gather weekly for informative seminars regarding using library resources, research opportunities, regulations related to responsible conduct of research, graduate school planning, writing CV and statement of purpose, writing successful presentations, and presentation skills. Students then offer an overview of their research in a formal presentation which is open to students, faculty, staff and the greater Loyola community. At the end of the program, each Hauber Research Fellow is required to submit a written report and present their research posters on multiple occasions including during Grand Seminar, which provides the Loyola community with an opportunity to learn about the results of the on-campus research work completed during the summer.
<table>
<thead>
<tr>
<th>Project</th>
<th>Student Fellow</th>
<th>Faculty Mentor</th>
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<tbody>
<tr>
<td>The Effects of Short Chain Fatty Acid Mixtures on Colonic Motility</td>
<td>Natalie Morris</td>
<td>Derek Kendig</td>
<td>Biology</td>
<td>Edward Hauber SJ Endowment</td>
</tr>
<tr>
<td>Fluctuations in expression of Lsh (HELLS) and the characterization of stem cell qualities in human melanoma (A375)</td>
<td>Natasha Valas</td>
<td>Theresa Geiman</td>
<td>Biology</td>
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<td>Effects of Matcha and Green Tea on Cytoskeleton Structure, Phagocytosis and Killing</td>
<td>Hannah Lamond</td>
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<td>Haig Endowment</td>
</tr>
<tr>
<td>The influence of black tea (Camellia sinesis) on cytokine production in macrophages</td>
<td>Christina Kingsley</td>
<td>Chris Thompson</td>
<td>Biology</td>
<td>Haig Endowment</td>
</tr>
<tr>
<td>Assessing Air Quality in Urban and Greenspaces in Baltimore City</td>
<td>Thomas Howard</td>
<td>Elizabeth Dahl</td>
<td>Chemistry</td>
<td>Grace</td>
</tr>
<tr>
<td>Segmentation and Analysis of Handwritten Medieval Text for Automatic Indexing</td>
<td>Nicole Schneider</td>
<td>Roger Eastman</td>
<td>Computer Science/Philosophy</td>
<td>Gino Gemignani</td>
</tr>
<tr>
<td>Improving Calibration of Agent-based Models</td>
<td>Chiara Maalouf</td>
<td>Megan Olsen M Raunak</td>
<td>Computer Science</td>
<td>Booz Allen Hamilton</td>
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<tr>
<td>Analysis of Vulnerability Trends</td>
<td>Richard Kogut</td>
<td>M Raunak</td>
<td>Computer Science</td>
<td>Booz Allen Hamilton</td>
</tr>
<tr>
<td>Circuit Design for Probabilistic Computation</td>
<td>Chet Pajardo II</td>
<td>David Hoe</td>
<td>Engineering</td>
<td>Whiting Turner</td>
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<tr>
<td>Enhancing Simulated Environments for Nursing Education and Practice</td>
<td>Margaret Herbster</td>
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<tr>
<td>Alternative Dice Labels</td>
<td>James White</td>
<td>Timothy Clark</td>
<td>Math/Stats</td>
<td>Haig Endowment</td>
</tr>
<tr>
<td>Chaos and nonlinear Dynamics in Chua’s Circuit as a Result of the Event Interval Hypothesis</td>
<td>Kenneth Marcelino</td>
<td>Gregory Derry</td>
<td>Physics</td>
<td>Lowe Family</td>
</tr>
<tr>
<td>Using Modeling to Explore Time Series Methodology Issues</td>
<td>Ethan Mullen</td>
<td>Gregory Derry</td>
<td>Physics</td>
<td>Dr. John Kane</td>
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<tr>
<td>Atomic Force Microscopy of Carbon Nanotubes and DNA</td>
<td>Kylee Sullivan</td>
<td>Mary Lowe</td>
<td>Physics</td>
<td>Dr. John Kane</td>
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ANNUAL NAS EVENTS:

Grand Seminar
The fall 2017 Grand Seminar took place on Tuesday, November 7, 2017 and featured Dr. John Warner, one of the founders of Green Chemistry and recipient of the 2014 Perkin Medal. Dr. Warner presented “Green Chemistry: The Missing Elements.” His inspiring talk described the history and background of green chemistry and the opportunities for the next generation of materials designers to create a safer, more sustainable future. Over 230 guests from Loyola and the local community were in attendance. Dr. Warner is also one of the founders of Beyond Benign, an organization for green chemistry education. As a result of his talk, Loyola’s chemistry department signed the organization’s Green Chemistry Commitment, becoming one of a growing group of universities and colleges preparing a new generation of chemists.

Celebration of Science Week
Natural and Applied Sciences hosted a week of science-related events during spring 2018 including: a speed mentoring night; Celebration of Science event featuring Hauber poster presentations, virtual reality demos, and a pinning ceremony for the University Innovation Fellows; robotics demos in Boulder atrium; and an IoT workshop where students built their own weather stations. Student clubs and organizations also hosted tables with demos and giveaways in the Boulder atrium throughout the week. We anticipate making this an annual week of events. For details visit, www.loyola.edu/celebratescience.

Cosmos and Creation
The 36th Annual Cosmos and Creation Conference, organized by co-chairs Dr. Rob Pond (Engineering) and Dr. Paul Richard Blum (Philosophy) took place June 8 – June 10, 1018. This annual conference began in 1982 with the vision of bringing scientists together to share their experiences working in God’s world. The 2018 keynote speaker was Michelle Francl, PhD, Professor of Chemistry at Bryn Mawr College and Adjunct Scholar at the Vatican Observatory. The topic of her presentations were: Are scientists mystics? For more information, visit www.loyola.edu/join-us/cosmos-creation.
PROGRAM DEVELOPMENT:

Data Science (MS):
The new Data Science graduate program officially started in spring 2017 with seven graduate students taking one or two courses. Data Science is a collaborative degree program involving Computer Science, Mathematics and Statistics, and required courses from the Information Systems department in the School of Business. The lead faculty in developing this new graduate degree program are Dawn Lawrie, professor and chair of the Computer Science Department, and Christopher Morrell, professor of Mathematics and Statistics. Currently Christopher Morrell is serving as the first Data Science program director. An Industrial Advisory Board has been formed for this program and is meeting at least twice each year. The goal of the board is to build connections with regional organizations. A half-time program operator joined the program to coordinate logistical and operational aspects of this graduate degree program.

The first Data Science Industrial Advisory Board Meeting was held on November 28, 2016 and prior to offering the very first course towards the new Data Science graduate program. The website for this degree program is: http://www.loyola.edu/academics/data-science

New Undergraduate Degree Programs:
Three new programs have been approved:
- Forensic Studies (BA)
- Physics (BA)
- Data Science (BA)

Additionally, two new minors have been approved:
- Data Science
- Innovation & Entrepreneurship (university-wide)

FORENSIC STUDIES PROGRAMS
A Forensic Studies major (BA) was approved in spring 2018 and begins this academic year (2018-2019).
- 6 FS majors will be beginning as freshmen in the fall with 4-6 current students expected to declare as majors.

The Forensic Studies minor program continues to grow and is currently the largest university minor with 55 students, including sophomores, juniors and seniors.
- 19 students graduated with an FS minor in the class of 2018.

Learn more at https://www.loyola.edu/academics/forensic-studies.
ENVIRONMENTAL & SUSTAINABILITY INITIATIVES

Examples of recent initiatives by NAS faculty related to environmental and sustainability issues:

**Evergreen Fest – Science & Climate Change** was held on April 19, 2018 in the Quad. The fest was organized by student groups led by the Environmental Action Club under the guidance of Elizabeth Dahl and Taylor Casalena and featured talks, demonstrations, advocacy and activities around the themes of science and climate change.

**Environmental Justice in South Baltimore – A Toxic Tour & Discussion** was coordinated by Elizabeth Dahl through Messina and run by the Energy Justice Network on November 11, 2017.

**Baltimore Environmental Exchange (BEE):** Loyola University, in coordination with joint-recipients MADE CLEAR grant from Goucher College and Stevenson University, created the newly formed Baltimore Environmental Exchange (BEE). Activities of BEE include best practices for climate education across the curriculum and integration with co-curricular initiatives, with special emphasis on integration of science and societal approaches to understanding climate change. Professors Bernadette Roche (Biology) and Elizabeth Dahl (Chemistry) led this project.

**About MADE CLEAR:** The Maryland and Delaware Climate Change Education, Assessment and Research (MADE CLEAR) program is supported by a Phase II Climate Change Education Partnership (CCEP) grant awarded to the University System of Maryland (USM) by the National Science Foundation. MADE CLEAR supports the Baltimore Environmental Exchange (BEE) program, mentioned above.

Loyola received a BGE Green Grant of $4000, initiated through the Sustainability Office, for a pollinator garden.

**Avila Gardens,** a community garden available throughout the growing season for all members of the Loyola community, remains utilized with two perennial herb gardens in good standing and four garden plots.

Environmental Studies minor currently has 29 students enrolled with anticipation of a surge of rising sophomores in Fall 2018.

The second class of minors graduated with 9 students (1 student in the first graduating class). Loyola University Maryland recognizes that sustainability is a multi-faceted commitment. Within a university this may involve energy conservation, green building, academics, food service, grounds maintenance, and other areas. However, to ensure our students are well informed about environmental and sustainability issues, we need faculty who are knowledgeable and passionate about this issue to be engaged and lead efforts as shown by the example of their recent initiatives.
Loyola’s pre-health programs have been part of the Natural and Applied Sciences division since summer of 2017. Under the leadership of program director Dr. Maiju Lehmijoki-Gardner, students interested in medicine, dentistry, nursing, and other health professions are supported in curricular planning, graduate school preparation, and career awareness. Advising and other services are available to Loyola’s over 550 pre-health students across all class years and all health professions.

Students gain valuable service experience in the field through programs like Health Outreach Baltimore in partnership with Mercy Medical Center and Baltimore Health Immersion, an intensive 5-week summer program. Since its inception in 2014, Health Outreach Baltimore and its total of over seventy student advocates have served over 1070 clients and responded to their over 2900 resource requests at Mercy’s Center for Advanced Fetal Care, Mother Baby, and Emergency Departments. In summer 2018, two students received research funding to study the programs outcomes. Baltimore Health Immersion has educated over sixty students in psychological and social determinants of health through two courses and internships at over ten healthcare sites since its inaugural year in 2015. The pre-health programs also serve students through seven student clubs and annual on-campus events, such as CRP/BLS training and Red Cross Blood Drive.

In 2018, Dr. Lehmijoki-Gardner and Ms. Sarah Lewis, assistant to pre-health programs and to the dean of undergraduate studies, presented on pre-health data collection practices at the national conference for health professions advisors (NAAHP). The pre-health programs’ website, available at https://www.loyola.edu/academics/pre-health, attracts 4,500–6,500 monthly page views during the spring and over 2,500 monthly page views during other times of the year (Google Analytics).
Loyola University has reinstated a program review for all academic programs based on a rotation that includes a few programs reviewed each year. This program review is conducted by a team typically consisting of two external reviewers from other universities and at least one internal reviewer. Usually the external reviewers have the same background as the program being reviewed and the internal reviewer is selected from a program that has some level of overlap with the program under review. Internal program reviews for four departments have been completed so far:

- Mathematics and Statistics (spring 2015)
- Engineering (Fall 2017)
- Computer Science (Fall 2017)
- Physics (Spring 2017)

Internal reviews for Biology, Chemistry, and pre-health programs will be completed by 2019.

### Program Certification

The chemistry program is certified by the American Chemical Society every six years. Our Chemistry program was recertified in 2014, thus, the next recertification is set for 2020.

### Program Accreditation

In addition to the internal program reviews, there are two ABET accredited programs, Computer Science & Engineering.

ABET accreditation visits for both Engineering and Computer Science were completed during Fall 2017 based on a 6-year re-accreditation schedule. The final report of the ABET accreditation visit will be announced by September 2018, while the unofficial initial report shows positive feedback by ABET regarding both programs.
GRANTS & GRANT APPLICATIONS

AWARDED AND ACTIVE:

- Megan Olsen (PI/CS), Birgit Albrecht (Co-PI/Chemistry), David Binkley (Co-PI/CS), and Jeremy Schwartz (co-PI/SSBM), “MRI: Acquisition of a Computing Cluster to Enable Transformative Research across Disciplines” – July 2016 – present, supported by Major Research Instrument (MRI), NSF ($280,120).
- David Rivers (PI – Biology) and Andrew Schoeffield (Co-PI – Biology), “Development of a Quantifiable Confirmatory Test to Detect Fly Artifacts Contaminating Bloodstain Evidence” – September 2016 – present, supported by the Department of Justice, National Institute of Justice ($154,521)
- Theresa Geiman (PI – Biology), “Nathan Schnaper Summer Intern Program in Cancer Research – Yr 3” – November 2017 – present, supported by NIH ($29,170)
- Bernadette Roche (PI – Biology) and Elizabeth Dahl (Co-PI – Chemistry), “Increasing Capacity for Climate Change Across the Curriculum at Loyola University Maryland” – September 2016 – present, supported by MADE CLEAR Climate Change Education Summit ($5,000)
- Raenita Fenner (PI – Engineering) and Peggy O’Niell (Co-PI – Writing), “Integrating Writing into Engineering Labs: Developing Curriculum, Supporting Faculty, and Creating a Writing Fellows Program” – November 2016 – present, supported by Engineering Information Foundation ($22,687)
- Lisa Scheifele (PI – Biology), “The Build-a-Genome Network for Synthetic Genomics” – NSF ($500,000)

SUBMITTED:

- Dave Rivers – NIH-R25 SEPA UMB Scholars Program, collaborative partnership with Greenbaum Cancer Center to develop Loyola Forensic Academy ($43,214)
- Lisa Scheifele – NSF – Improving Undergraduate STEM Education – cooperation with Morgan State University ($1,988,372; Loyola’s part ($170,614)
- Theresa Nguyen – National Lipids Association Junior Faculty Basic Science award – “Harnessing yeast coenzyme Q biosynthesis and probiotic assimilation of cholesterol to address hypercholesterolemia”
NOTABLE ACHIEVEMENTS & AWARDS

**Computer Science Student Project Presented at Research Competition**
CS major and 2017 Hauber Fellow Sydney Pugh, ’19, presented her project “Change Impact Using Dynamic History Analysis” at the SIGCSE Technical Symposium, the largest computing education conference worldwide organized by ACE SIGCSE, in Baltimore in February 2018.

**Two NAS Students Receive Goldwater Honorable Mentions**
Math and CS major Nicole Schneider, ’19, and Math and Physics major Zachary Metzler, ’20, both received honorable mentions in 2018 for the Barry Goldwater Scholarship. This prestigious national program recognizes students with outstanding potential and intention to pursue careers in mathematics, the natural sciences, or engineering.

**Computer Science Students Place at Local Hackathons**
During spring 2018, Loyola’s team earned a top place at Georgetown’s HoyaHacks in the Google cloud track and placed in the top 10 at the Johns Hopkins HopHacks.

**VEX U Robotics Team Made the Playoffs**
In February 2018, Loyola’s VEX U team competed in the northeast tournament at the College of Southern Maryland, finishing in 8th place, landing a spot in the playoff round.

**“NIST Surf 2018 Sydney Pugh and Christopher Carangelo” – NIST**

**Computer Science Professor wins Best Poster Award**
Professor Mohammad Raunak and his NIST colleagues received the best poster award at the 2018 Hot Topics on Science of Security Conference (HoTSoS) for their research “What Proportion of Vulnerabilities can be Attributed to Ordinary Coding Errors?”

**Physics Professor wins Third Prize in Essay Contest**
Professor Greg Derry received third prize in the FQXi essay contest for his entry, *Fundamentality, Explanation, and the Unity of Science*. There were over 200 entries answering the question “What is ‘Fundamental’?” The Foundational Questions Institute (FQXi) supports and shares research on questions at the foundations of physics and cosmology, particularly new frontiers and innovative ideas.
FACULTY PROMOTIONS

Promotions to Tenured Associate Professor

Dr. Raenita Fenner, Department of Engineering (2017)
Dr. Megan Olsen, Department of Computer Science (2017)
Dr. David Hoe, Department of Engineering (2018)
Dr. Sibren Isaacman, Department of Computer Science (2018)
Dr. Armina Kazi, Department of Biology (2018)

Promotion to Full Professor

Dr. Andrea Erdas, Department of Physics (2018)

FACULTY AWARDS

David Binkley, Professor of Computer Science

Best Paper Award for work presented at the 17th IEEE International Working Conference on Source Code Analysis and Manipulation in Shanghai, China

2017 Distinguished Scholar of the Year

Christopher Thompson, Professor of Biology

2017 Faculty Award for Excellence in Mentoring

Jiyuan Tao, Professor of Math and Statistics

2018 Distinguished Scholar of the Year
Mid-Atlantic Biology Research and Career Conference (MABRC)

NAS hosted the Mid-Atlantic Biology Research and Career Conference (MABRC) on the Timonium campus on November 17, 2017, “Building Tomorrow’s BioHealth Workforce – A Career Counselor Symposium.” The keynote speaker was Maryland Labor Secretary Kelly M. Schulz. This event brought together industry, government and university representatives to discuss how best to attract and prepare students to be job-ready by graduation. Loyola Biology professor Dr. David Rivers and Dr. Michael Tangrea, ’96, Director of Clinical Research at Sinai Hospital and NASSB member, were integral in bringing this event to Loyola.

NOTEABLE ACHIEVEMENTS & AWARDS

NEWS ABOUT OUR ALUM AND STEERING BOARD MEMBERS:

NASSB Member Receives Runner-up for Prestigious National Award

Lisa Mazzuca, ’91 (Mathematics), NASA Search and Rescue Mission Manager, Loyola math alum and NAS steering board member, received runner-up for the 2017 Service to America Medal in the Promising Innovations category.

Former NASSB Chair Leader in Additive Manufacturing at Johns Hopkins University Applied Physics Lab

John Slotwinski, ’91 (Physics), former chair of the Natural and Applied Sciences Steering Board, joined the Johns Hopkins University Applied Physics Lab in 2014 where he helped start the metal additive manufacturing efforts and is now the Section Supervisor and Technical Lead for the Additive Manufacturing Center. He is also developing and teaching Additive Manufacturing in the JHU Engineering for Professionals Program in both the Materials Science and Mechanical Engineering departments and was recently elected Chair of the ASTIM F42 Committee on Additive Manufacturing.

Kelly Schulz, Michael Tangrea, ’96, and David Rivers
NATURAL AND APPLIED SCIENCES
STEERING BOARD MEMBERS

Tim Durkin
NBCT Physics, Liberty High School

Gino J. Gemignani, Jr.
Former Senior VP, Whiting-Turner

Michael E. Hinkey
Former Vice President & General Manager
Airborne C4ISR Systems, Northrup Grumman

Dr. Jacqueline Le Moigne
Goddard Senior Fellow, Assistant Chief for Technology,
Software Engineering Division, NASA Goddard Space Flight Center

Dr. Timothy E. Mueller
VP of Science and Technology, Delaware Innovation Space

William Olsen
Director of Launchpad Operations, MasterPeace Solutions

Dr. Karen Snetselaar
Chair & Professor, Biology Dept., St. Joseph’s University

Dr. Michael A. Tangrea
Director, Translational Research,
Alvin & Lois Lapidus Cancer Institute, Sinai Hospital

Dr. Lisa Mazzuca
Mission Manager, NASA Search and Rescue

Thomas Clark
Supervisor of the Electro-Optical and Infrared Systems & Technology Group
The Johns Hopkins University Applied Physics Laboratory

Brennen Baylor
Associate Patent Attorney, McBee Moore Woodward & Vanik IP, LLC

Jennifer Tancreto
Assistant Division Chief, Survey Methodology, Demographic Statistical Methods Division, U.S. Census Bureau