A Message from the Dean

The Fisher College held its 25th Honors Convocation in April, followed by TU’s 150th Commencement in May. We celebrate the accomplishments of all FCSM majors and, indeed, all TU students. With few exceptions, every TU undergraduate student is blessed with one or more courses offered by the Fisher College!

Fisher College representatives attended celebrations this spring with a number of long-time partners, including Building STEPS www.buildingsteps.org, the Middle Grades Partnership www.middlegradespartnership.org, the Ingenuity Project www.ingenuityproject.org, the Northeast Maryland Tech Council www.nmtc.org, and the Maryland Science Center www.mdsci.org. Check these organizations out – our partnership with them provide many valuable opportunities for our faculty and students.

This year’s Dean’s Recognition Award went to Dr. Jeffrey C. Miller, D.D.S. ‘1978. Dr. Miller is a renowned orthodontist who has supported the FCSM and, especially, biology and pre-professional students. I would also like to mention a recent major gift from Dr. Michele Cooper, M.D. ‘1991, in support of her named scholarship. Congratulations and thanks to Drs. Miller and Cooper!

Please have a great summer and we’ll be back in touch this fall.

Sincerely,

David A. Vanko
Dean

Memorial Gifts… from the Development Office - Gifts benefiting The Jess and Mildred Fisher College of Science and Mathematics or any of the departments mentioned in this newsletter, may be made to Towson University Foundation in honor of a birthday, anniversary or other special occasion, or simply as a thank you for a special favor. Gift acknowledgements will be sent to the donor as well as the individual being honored. For more information, contact the Towson University Development Office at 410-704-3375 or 1-866-301-3375 or write to the Towson University Foundation, 8000 York Road, Towson, MD 21252-0001.
Peer-Reviewed Research Publications

Harald Beck and his international graduate student, Cindy Hurtado, published an article entitled: New mammalian records in the Parque Nacional Cerros de Amotape, northwestern Peru."

Jay A. Nelson and former graduate student Genine K. Lipkey had the article; "Hypoxia tolerance variance between swimming and resting striped bass Morone saxatilis" accepted by the Journal of Fish Biology for publication.


Spotlight on Grants and Awards

As the Chair of the IUCN Peccary Specialist Group, Harald Beck et al. received $7000 from the Mohamed bin Zayed Species Conservation Fund.

Professional Outreach

Vonnie Shields conducted an academic Periodic Program Review of the Biology Department of Brockport University, SUNY, April 30, 2015.

Don C. Forester, Professor Emeritus, was elected president of the newly founded Towson University Retired Faculty Association (TURFA).”

Harald Beck was re-elected as the Vice President for the AAUP Towson Chapter.

Manuscripts Reviewed

Harald Beck reviewed a manuscript for Plus One.

Jay A. Nelson served on a grant review panel for the National Oceanographic and Atmospheric Administration Sea Grant program.

Vonnie Shields reviewed a manuscript for Biosystems and Oriental Insects.
Grant Proposals

Kelly Elkins and Subrata Acharya submitted the following proposal to the National Institute of Justice:


Kelly Elkins and Subrata Acharya submitted a project concept to the Laura and John Arnold Foundation.

Research Presentations

Mark Profili presented a talk on Ethics in Forensic Education and participated in a forum on forensic science education at the Mid-Atlantic Meeting of the American Academy of Forensic Science in Cambridge, MD, May 19-22. Masters in Forensic Science student Ashley Dye and her research mentor Ellen Hondrogiannis also attended and Ashley gave a research poster presentation.

Two undergraduate research students in John Sivey’s group successfully defended their Honors Theses in April and May:

Mark Burton, “Transformation of pro-herbicide isoxaflutole: Effects of ‘inert’ agrochemical ingredients.”

Mark Bickley, “Reactivity of aromatic amino acids toward aqueous halogenating agents: Quantifying regiospecific halogenation rates in solutions of free chlorine and free bromine.”

Mark Bickley also is the recipient of a 2015 Undergraduate Environmental Chemistry Award from the American Chemical Society’s Division of Environmental Chemistry.

Meet Our Students: Mark Bickley (pictured on right)

Why did you choose chemistry as your major?
I knew that I was interested in the STEM field. In a core-required class, I realized that I wanted to major in chemistry when my professor was lecturing about titanium, an element, being used in making bridges. I started thinking of all the chemistry related ideas I learned in AP Chemistry back in high school, and declared my major later that week.

How has being a chemistry major benefited you?
I’ve been able to build a very solid foundation in many areas of chemistry. This strong foundation has helped me achieve post-graduation goals, such as my acceptance into the University of Maryland School of Pharmacy. Towson’s chemistry major program, in addition to its extremely helpful faculty, not only prepared me but also gave me the confidence needed to pursue this new exciting phase of my education.
Faculty Professional Development/Disciplinary Service

Ryan Casey reviewed a book proposal for Wiley and a grant proposal for the Kentucky Science & Engineering Foundation.

Kelly Elkins reviewed a manuscript for the Journal of Chemical Education.

Outreach Activities

Kelly Elkins served as the faculty advisor for an 11th grade student for his G/T Research class 2014-2015 project, "Forensics: A Cold Case," for which he researched and interviewed her about error in forensic science.

Department Seminar

Dr. Jana Shen, Department of Pharmaceutical Sciences, University of Maryland, Baltimore, “Unraveling pH-dependent mechanisms in biology and chemistry,” April 23.

The Towson Research and Performance Expo—April 23, 2015

*undergraduate **graduate

Ryan Adams-Brown** (faculty sponsor: Kelly Elkins) “Assessment of non-fluorescent dyes ability to visualize nuclei for quantitation purposes in telogen hair roots leading to DNA analysis.”

Astrid Aniwa** (faculty sponsor: Ellen Hondrogiannis) “Determining if LATOF can be used to detect metal and silicate particles in the fibers of electronic cigarettes.”

Jessa Avancenna*, Simi Akanbi* and Shannon McVeigh* (faculty sponsor: Boon Loo) “Surface-enhanced Raman spectroscopic studies of the interactions of azide ions on gold, silver and copper nanoparticles.”

Aasim Azad** (faculty sponsor: Ellen Hondrogiannis) “Measure the effect of glutaraldehyde and nitrite on the ability to quantify phencyclidine in urine samples using disposable pipette extraction and GC-MS.”

Daniel Baumann* (faculty sponsor: Shannon Stitzel) “Cross-linker effect on metal ion selectivity in molecularly imprinted polymers.”

Courtney Blue** (faculty sponsor: Ellen Hondrogiannis) “The analysis of synthetic cathinones: ethylone and alpha-PVP using GC-MS.”

Rondessa Collins** (faculty sponsor: Cynthia Zeller) “Study of free formaldehyde release from imidazolidinyl and diazolidinyl urea in concealers dated from September 2013 to January 2015.”

Isabel Decolin** (faculty sponsor: Richard Preisler) “Post-amplification techniques on low-level DNA.”

Aloise Diedrich* and Kelsey Polak* (faculty sponsor: Richard Preisler) “Comparing the effects of neutral osmolytes with tris(ethylenediamine)cobalt(III) transition metal complex on the B-to-Z transition.”
The Towson Research and Performance Expo—April 23, 2015

Chemistry undergraduate and Forensic Science Masters students presented the following posters:

Ashley Dye** (faculty sponsor: Ellen Hondrogiannis) “The analysis of gunshot residue through LA-ICP-TOF-MS.”

Jonathan Jopse* (faculty sponsor: Ellen Hondrogiannis) “Electronic cigarette analysis and testing: instrumentation and method development.”

Sarah Lamberson** (faculty sponsor: Cynthia Zeller) “Evaluation of DNA extraction and recovery after inhibitory factors are presented.”

Sara Maloney* (faculty sponsor: Shannon Stitzel and Ryan Sours) “Determination of cocoa liquor provenance using fatty acid signatures.”

Michele Markwardt** (faculty sponsor: Kelly Elkins) “Investigator® Lyse&Spin Basket Kit by QIAGEN® as an effective replacement for DNA IQ™ spin baskets during the extraction of DNA from forensic samples, while reducing the risk of contamination.”

Anjelica Perez** (faculty sponsor: Kelly Elkins) “Detection of herbal highs: A multiplex PCR assay for species differentiation through melt-curve analysis.”

Pierce Publico* (faculty sponsor: Cynthia Zeller) “The significance of DNA methylation techniques in body fluid detection.”

LaShay Robbins** (faculty sponsor: Kelly Elkins) “Development of latent fingerprints on cartridge casings submerged underwater using various methods.”

Jenna Roussillon** (faculty sponsor: Kelly Elkins) “Multiplex real-time PCR detection and differentiation of food-borne pathogen Bacillus cereus and related Bacillus species.”

Katherine Sweetin** (faculty sponsor: Kelly Elkins) “Multiplex real-time PCR detection and identification of food-borne pathogens Salmonella enterica, Escherichia coli and Shigella flexneri.”

Katie Vautier** (faculty sponsor: Ellen Hondrogiannis) “Liquid-liquid extraction of PCP from urine.”

Alexandra Vlk* (faculty sponsors: Sarah Stokes and Kit Bowen) “Anion photoelectron spectroscopy of the 2-hydroxypyrimidine dimer and trimer systems.”

Taylor Watts* (faculty sponsor: Ryan Sours) “Chromatographic investigation of the interaction between a polymorphic compound and tailored surfaces.”

Alex Weghorst** (faculty sponsor: Kelly Elkins) “The design and development of a drug testing application to aid in crime scene investigation.”
Publications and Presentations

Subrata Acharya and her undergraduate student Saurabh Khatiwada presented their research on “Re-Designing Presumptive Drug Test through Modern Technology” at the 13th Annual Colonial Academic Alliance Undergraduate Research Conference, Drexel University, Philadelphia, PA, March, 27-29, 2015.

Subrata Acharya and her graduate student William Forrester had a paper titled “Towards the Design and Implementation of a BYOD Security Platform for the K-12 School Environment” accepted for presentation at the Colloquium for Information Systems Security Education (GISSE), Las Vegas, NV, June 15-17, 2015.

Subrata Acharya was an invited guest speaker on Computer Security Education, at the Spark The Future Event at Park Elementary School, Baltimore, MD, April 24, 2015.

Heidi Feng, Subrata Acharya and Ziying Tang along with graduate students Jin Guo, Sheng Miao and Ting Tang demonstrated their projects on Accessible Technology-driven Health Solutions at the Towson University Showcase, April 28, 2015.


Jie Lin, Wei Yu, Xinyu Yang, Qingyu Yang, Xinwen Fu, and Wei Zhao, “A Novel Dynamic En-route Decision Real-Time Route Guidance Scheme in Intelligent Transportation Systems,” accepted to appear in Proc. of IEEE International Conference on Distributed Computing Systems (ICDCS), June/July, 2015, Columbus, USA (accept ratio: 13%)


Robert Hammell and doctoral student Charlie Fowler had their paper entitled "Mining Information Assurance Data with a Hybrid Intelligence/Multi-agent System" accepted for publication and presentation as part of the 14th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2015) to be held 28 June – 1 July, 2015 in Las Vegas, NV.

Robert Hammell and doctoral student Donghwoon Kwon had their paper entitled "Objective Framework for Early-Stage Comparison of Software Development Project Types" accepted for publication and presentation as part of the 14th IEEE/ACIS International Conference on Computer and Information Science (ICIS 2015) to be held 28 June – 1 July, 2015 in Las Vegas, NV.

Jonathan Lazar presented the “Introduction to Human-Computer Interaction” tutorial with Simone Barbosa (professor from PUC-Rio, Brazil), on April 20th, at the ACM Conference on Human Factors in Computing Systems (CHI) in Seoul, South Korea.


The Computer and Information Sciences Department co-hosted co-sponsored the Global Accessibility Awareness Day event in Baltimore:

https://www.eventbrite.com/e/global-accessibility-awareness-day-baltimore-tickets-16835284790
Publications and Presentations

Marius Zimand gave a presentation on "Kolmogorov complexity versions of the Slepian-Wolf Theorem", on April 10, in a joint session of the Logic Seminar and Probability Seminar in the Mathematical Department at Penn State University.

The paper "On Optimal Language Compression for sets in PSPACE/poly", by N.V. Vinodchandran (Univ. of Nebraska) and Marius Zimand has been published in the journal Theory Comput. Syst. 56(3): 581-590 (2015).

Suranj Chakraborty's paper titled "Investigating System Development Processes in Healthcare Organizations" with doctoral student Deema al Sekait and Sutirtha Chatterjee, University of Nevada at Las Vegas was accepted at the 21st Americas Conference on Information Systems (AMCIS), Puerto Rico.

Suranj Chakraborty's paper titled "Preparing Industry-ready Analysts In the Classroom: A Module Injection Approach" with doctoral student Atiya Afsana and Siddharth Kaza, Towson University and Sutirtha Chatterjee, University of Nevada at Las Vegas was accepted at the 21st Americas Conference on Information Systems (AMCIS), Puerto Rico.

Yeong-Tae Song presented a paper titled "Ontological Personal Healthcare using Medical Standards" at IWBBIO15, Granada, Spain April 15 -17, 2015.

Yeong-Tae Song was invited to deliver a keynote speech for the IEEE SNPD2015 entitled: "Empowering patient through personal healthcare system using interoperable electronic health record" at SNPD2015, Takamatsu, Japan June 1-3, 2015.

Jonathan Lazar was quoted in an article titled “Should Netflix be Accessible to the Deaf?” published in the Atlantic, on April 16, 2015.

Services to the Discipline

Subrata Acharya participated in the Executive Retreat for the Women in Maryland Higher Education (WIMHE) Board, Morgan State University, Baltimore, MD, May 11, 2015.

Subrata Acharya served as a moderator for oral presentations that were presented at the 13th Annual Colonial Academic Alliance Undergraduate Research Conference, Drexel University, Philadelphia, PA, March, 27-29, 2015.

Yanggon Kim is a Conference Chair of the ICIS 2015 in Las Vegas, NV.

Suranj Chakraborty's Track proposal titled “Information Systems and Positive Organizational Scholarship” with Kevin Fulk, Tarleton University and Sutirtha Chatterjee, UNLV was accepted for the 24th European Conference on Information Systems (2016), Istanbul, and he will serve as a Track Chair for the conference.

Suranj Chakraborty was invited and completed reviews for Decision Sciences Journal, Journal of the AIS and European Journal for Information Systems.

Undergrad Student Scholarships

Congratulations to
Rachel Dabay
Andrew Kemper
William Moffitt

For being selected as recipients of $1000 scholarships awarded by the Association of Electronic Warfare and Information Operations (informally known as AOC – Association of the Old Crows).

The Susquehanna Chapter of the AOC is based at Aberdeen Proving Ground and for the past several years has solicited scholarship applications from Towson University and other local universities (primarily UMBC and the University of Delaware) to encourage the study of science, engineering, and technology at local colleges.
Papers Published or Accepted for Publication

Diana Cheng and graduate student David Thompson co-authored a paper entitled “Rebounding from the axis: An experiment modeling endangered species.” This article was accepted for publication in the Fall 2015 issue of the New Jersey Mathematics Teacher, the journal published by the New Jersey Council of Teachers of Mathematics.

Russell Hendel's "Solution to Problem B-1137, By the Binomial Theorem", (with co-author, Jaroslav Seibert), was published in the Fibonacci Quarterly, Volume 52(4), p. 370, November 2014.


Lawrence Shirley's paper, "Mathematics of students' culture: A goal of localized ethnomathematics," was accepted for publication in the journal Revista Latinoamericana de Etnomatemática

Conference and Seminar Presentations

On Thursday, April 23, 2015, Mircea Voisei gave his sabbatical talk "Lecture Videos for Calculus Classes and Recent Progress on the Rockafellar Conjecture."

Refereeing, Reviewing, and Panel Service


Russell Hendel reviewed several papers for the 19th World Multi-Conference on Systemics, Cybernetics And Informatics, WMSCI 2015.

Russell Hendel reviewed a paper for the Fibonacci Quarterly.

Undergraduate Research

Honi Bamberger supervised the undergraduate research project of Ms. Britaney Cosner, who accompanied her to Middletown, New York on April 22nd. While there Ms. Cosner observed 22 kindergarten through second grade teachers while they conducted mathematics lessons. Then Dr. Bamberger worked with the children while Ms. Cosner interviewed their teacher in an effort to determine what professional development has helped them implement new teaching strategies. Ms. Cosner's notes will be written up and the data collected from her survey will be analyzed. A collaborative article is expected from this work.
Workshops

On April 1, 2015, Honi Bamberger conducted a “Number Talk” workshop for the fourth thru sixth grade teachers at the National Presbyterian School, in Washington, D.C. as part of the work that she does each month with students and teachers at this school.

On April 25, Ming Tomayko gave an invited presentation titled “Making Sense of Fraction Concepts” at the Maryland Council of Teachers of Mathematics (MCTM) Regional Mini-Conference at Wilde Lake High School, Howard County.

On April 29, Ming Tomayko led a professional development session on high yield math routines for lower school teachers at St. John’s Parish Day School in Ellicott City.

Other Professional Activities

Spotlight on Service in the Community

Baltimore City Public Schools had a teacher in-service day on Friday, April 17th. Honi Bamberger worked, during the morning, with all of the mathematics teachers at Liberty Elementary School to help teachers better understand how to create problem-based lessons across the grades.

Russell Hendel is Coordinator of Judges for the Greater New York Math Fair, held on Mar 29, 2015 at the Brooklyn Technical High School in Brooklyn. The Greater New York Math Fair was created to encourage high school students in public, private and parochial schools in the New York Metropolitan Area to pursue the phase of mathematics in which they are interested. Several hundred students from the New York area participated by writing and presenting original research papers. The papers were judged by over five dozen judges from the New York area. The day culminated with an award ceremony which awarded bronze, silver and gold medals to the presenters.


Russell Hendel attended the Spring 2015 meeting of the Mid-Atlantic Actuarial Club, held on May 20, 2015, at the Turf Country Club in Baltimore Maryland.

Russell Hendel will attend the first Society of Actuaries Education seminar, to be held in Chicago Illinois on June 23 and 24 2015.

Russell Hendel will attend the preliminary education and curriculum committee (PECC) meeting of curriculum chairs for the Society of Actuaries to be held on July 24, 2015, in Victoria Canada.

Lawrence Shirley spoke about career opportunities for graduates, especially in the Peace Corps, as a part of the Foreign Language Day in the College of Liberal Arts on April 24.

On April 21, eleven students from Ming Tomayko's Math 324 class served as STEM fair judges at Stoneleigh Elementary School, Baltimore County. Over 100 projects by 4th and 5th grade students were judged.
Student Clubs

The Mathematics Education Club (MEC) had a record attendance of 40+ members at its April 16th meeting. Ms. Marty Sweeney, Director of The Odyssey School, Ms. Maureen Partilla, Principal at Pleasant Plains Elementary School, and Mr. Joseph Manko, Principal at Liberty Elementary School talked with members about what they look and listen for when they interview for a new teacher. On May 7th a Make-and-Take was held as the last meeting of the academic year. Members left with mathematics games that they'll be able to use in their next placement.

Mathematics Awards at the 25th Annual Fisher College Convocation Ceremony

(L to R) Dean David Vanko, Matthew Rhoades, Recipient of the Mildred T. Becker Scholarship for 2014-2015, Dr. Raouf Boules

Megan Deckert, Recipient of the Mildred T. Becker Scholarship for 2014-2015

Jennifer Roberts, Recipient of the Mary Hudson Scarborough Award for Excellence in Middle School Mathematics Education

Adja Thiam, Recipient of the Eunice Bowers Schmied and Otto Karl Schmied Memorial Scholarship in Mathematics
Integrated STEM (iSTEM) Instructional Leadership Program

On May 12, 2015, TU received formal approval for the new 6-course Post-Baccalaureate Program for practicing elementary teachers: Integrated STEM (iSTEM) Instructional Leadership (PreK-6). The program will be housed in the Physics, Astronomy & Geosciences Department, and also involves coursework with the Departments of Biological Sciences, Mathematics, and Instructional Leadership and Professional Development. It is led by Program Director, Dr. Pamela Lottero-Perdue. Graduates of the program will receive the new Maryland State Department of Education (MSDE) endorsement, COMAR 13A.12.02.29 Instructional Leader – STEM (PreK-6).

Six teachers, who took part in a grant-funded, pilot version of the program, will be May 2015 graduates of the program. These teachers are:

- Ms. Leigh Catterton, Edgewood High School, Harford County Public Schools
- Ms. Pat Kenny, George D. Lisby Elementary at Hillsdale, Harford County Public Schools
- Ms. Kelly Mangum, Hickory Elementary, Harford County Public Schools
- Mr. Dan McGonigal, The New Century School, Baltimore City
- Ms. Lori Pitcock, Leeds Elementary School, Cecil County Public Schools
- Ms. Jan Stewart, Hickory Elementary, Harford County Public Schools

Congratulations, graduates of the PBC in iSTEM Instructional Leadership (PreK-6)

Proposals

TU Faculty Development and Research Council grant, working with undergraduate research student Dan Zile on "A Gravitational Analog for Faraday's Law of Induction" (2015 calendar year)

Publications


Lottero-Perdue, P.S. & Parry, E. (in press for June 2015), "Elementary teachers’ reported responses to student design failures.." Proceedings (peer reviewed) of the 2015 American Society for Engineering Education (ASEE) Annual Conference.* Note: This paper was awarded the Best Paper honor for the ASEE K12 & PreCollege Division
Publications


Jia-An Yan, Shang-Peng Gao, Ryan Stein (graduate student) and Gregory Coard (undergraduate student), “Tuning the electronic structures of silicene and germanene by biaxial strain and electric field,” accepted by Phys. Rev. B.


Presentations and abstracts

Kathryn Zander* presented a poster entitled “Nanoparticle Size Dependence of Transition Temperature of Metamaterial Superconductor” by Kathryn Zander,* Bradley Yost,** Thomas Gresock,** M.S. Osofsky, H. Kim, R. L. Greene, S. Saha, Igor I. Smolyaninov, and Vera Smolyaninova at the National Conference NCUR15, Eastern Washington University, WA. Faculty mentor Vera Smolyaninova.

Thomas Gresock,** presented a poster entitled “Light Propagation in Luneburg Lens Waveguides” by Thomas Gresock,** Kathryn Zander,* David Lahneman,* Todd Adams,* Christopher Jensen,** I. I. Smolyaninov, and Vera Smolyaninova at the TU Undergraduate and Graduate Student Research and Performance Expo, faculty mentor – Vera Smolyaninova.


Presentations and abstracts

Grace Yong presented a poster entitled a Possible Mechanisms in Atomic Force Microscope-Induced Nano-Oxidation Lithography (negative AFM tip case) in La$_{0.67}$Ba$_{0.33}$MnO$_3$-$\delta$ Thin Films on SrTiO$_3$(001) at the 2015 March Meeting of the American Physical Society held at San Antonio, Texas (Session H1: Poster Session). Co-authors: William Vanderlinde (Laboratory for Physical Sciences, University of Maryland), E. Kevin Tanyi (Norfolk University), David Schaefer, Christopher Stumpf and Rajeswari M. Kolagani.


Kyle Sherbert, “Information Entropy of 1D Quantum Systems,” poster presentation, April 23, 2015 TU Undergraduate/Graduate Research Expo. [Faculty Mentor: Jia-An Yan]

Nathan Prins, “Electron transmission through different potential barriers based on numerical study,” poster presentation, April 23, 2015 TU Undergraduate/Graduate Research Expo. [Faculty Mentor: Jia-An Yan]

Mack A. Dela Cruz, “Electronic and vibrational properties of monolayer and bilayer TaSe$_2$,” poster presentation, April 23, 2015 TU Undergraduate/Graduate Research Expo. [Faculty Mentor: Jia-An Yan]


K. Wilcomb and J.M. Overduin, “When you dance, you dance with the universe” (poster), American Physical Society Conference for Undergraduate Women in Physics, Rutgers University (January 16-18)


Community Engagement and Professional Service

Jim Selway and Vera Smolyaninova conducted a full-day workshop “Light and lenses” (in five 2nd grade classes) at the Pointers Run Elementary School STEM Day, April 9, 2014 to celebrate the International Year of Light.

Vera Smolyaninova served the CLEO2015 Technical Program Committee, Metamaterials and Complex Media Subcommittee, where she reviewed and rated 5 post deadline conference papers.

Rajeswari Kolagani served as a panelist for an NSF (Division of Materials Research) proposal review panel (April 2015)

Jia-An Yan reviewed 3 manuscripts for Physical Chemistry and Chemical Physics, 1 manuscript for Journal of Physical Chemistry, 1 manuscript for Journal of Physics: Condensed Matter, and 2 manuscripts for Physical Review B.

On March 27, Jia-An Yan volunteered to participate in 2015 STEM Career Fair at the Timonium Elementary School. He has illustrated many interesting physics phenomena for elementary kids.

James Overduin refereed one article for Annals of Physics (May)

TU News story: "Can Einstein be outsmarted?" James Overduin (May 1)

Joel Moore presented on road salt and water quality issues to the Reservoir Technical Group of the Baltimore Metropolitan Council based on work done using the facilities of the Urban Environmental Biogeochemistry Laboratory.

Joel Moore reviewed a proposal for an NSF program in the Surface Earth Processes Section of the Division of Earth Sciences.


Student Achievements

Mr. Bradley Yost, a graduate student performing research under the mentorship of Dr. Vera Smolyaninova, was presented with a Graduate Student Research Award for your thesis entitled, “The Optical Properties of a Ferrofluid in Applied Magnetic Field: Hyperbolic Metamaterial”
Student Achievements

Cacie Hart (Student in the Applied Physics Master's program) was selected to participate in the Young Physicists' Forum (YPF) which was held in conjunction with the March Meeting of the American Physical Society. YPF is a joint venture between the American Physical Society and the Chinese Physical Society. Cacie presented a poster on her research at the forum meeting.


Natalie Ferrone presented a poster entitled “Effect of post-deposition heat treatment on the properties of CaMnO$_3$ thin films” at the Towson University Student Research Expo, April 23, 2015. Coauthors: Adeel Chaudhry, Bridget Lawson, David Houston and Cacie Hart (Faculty Mentor: Rajeswari Kolagani and Grace Yong).


Two undergraduate student posters at the TU Research Expo: D. Zile, "A gravitational analog for Faraday's induction law" and K. Wilcomb, "A new way to visualize black-hole interiors" (April 23)

Three undergraduate student posters at the TU Honors Convocation: Nathan Prins, Kielan Wilcomb and Daniel Zile (April 26)

Two public presentations by undergraduate research student Kielan Wilcomb: “Black holes” (TU's Watson-King Planetarium, May 15 and Howard County Astronomy League, Columbia, May 21)

Beth Leidich (Geology track, Environmental Science) presented a poster at the TU Research Expo entitled, "Planetary accretion from e-chondrites," based on research that she did with Greg Shofner (Geology lecturer).

Brett Caldwell, Brian Hamby, & Michael Leckner (Geology majors) presented a poster at the TU Research Expo entitled, "Comparison of ocean-island basalts from disparate tectonic environments by geothermobarometry and spinel composition," based on work they did with Michael Mengason (Geology visiting assistant professor).

Corey Mueller (Geology major) presented a poster at the TU Research Expo entitled, "Quantifying Controls on Chemical Weathering Fluxes: Urban to Rural Watersheds," based on work she did with Joel Moore using the facilities of the Urban Environmental Biogeochemistry Laboratory.

Corey Mueller (Geology major) presented a poster at the Soil to Sea Meeting, University of Delaware entitled, "Quantifying Controls on Chemical Weathering Fluxes Across Rural to Urban Watersheds," based on work she did with Joel Moore using the facilities of the Urban Environmental Biogeochemistry Laboratory.

On May 6, five physics students, Natalie Ferrone, Cacie Hart, Bridget Lawson, Emileigh Shoemaker, and Kielan Wilcomb, accompanied by Jennifer Scott, visited the Blakehurst Retirement Community, where they met and spoke with Dr. Anne McKusick, a Blakehurst resident who worked on the historic "Manhattan Project", in Oak Ridge, TN in 1944-45. The visit was facilitated by former TU President Dr. Maravene Loeschke as part of a project she is undertaking to provide TU students mentoring experiences with Blakehurst residents Raj Kolagani helped to coordinate the meeting.
Student Accomplishments and Activities

The Environmental Science Program had three successful M.S. defenses:

Kim Russell "The Effect of Restoration Treatments and Flooding Regime on Plant Community Distributions in Restored Geographically Isolated Wetlands". Advisor: Dr. Vanessa Beauchamp.


Additionally, 9 non-thesis students completed the Research Practicum course and their degree: Shannon McKenrick, Sam Hayden, Bruna Carvalho, Vera Koskelo, Greg Zuknick, Matt Nicodemus, Robert Jenkins, James, Brown, and Kaitlyn Milman.

Allison Ricko (MS candidate in Environmental Science) received a 2015 Education Award from the American Chemical Society Division of Agrochemistry. The award provides travel funds for Allison to present her research at the ACS National Meeting this August in Boston, MA. Allison’s thesis advisor is John Sivey.

Beth Leidich (Geology track, Environmental Science) presented a poster at the TU Research Expo entitled, "Planetary accretion from e-chondrites," based on research that she did with Dr. Greg Shofner (Geology lecturer).

Kasey Bolyard, and ENVS M.S. student in Dr. Gresens’ lab, is carrying out her thesis research on the effects of an herbicide "safener" using ecotoxicological assays on the midge Chironomus riparius. Her work is being supported by a fellowship from the Maryland Water Resources Center.

Kelly Nellenbach, also in Dr. Gresens’ lab, has initiated an undergraduate research project comparing how biological diversity and habitat quality of several streams in the Owings Mills area have changed over the past dozen years, given that one tributary of Red Run has experienced extensive urban development in its catchment, whereas the others have retained fairly stable land use over this period.

Grants

Christopher Salice was the co-lead on a funding from the National Institute for Mathematical and Biological Synthesis (NIMBioS). The project title is “Predictive Systems Models for the Ecological Risk Assessment of Chemicals”. The funding covers travel to four, week-long workshops for 12-15 scientists from around the world.

Publications and Presentations


Joel Moore presented on road salt and water quality issues to the Reservoir Technical Group of the Baltimore Metropolitan Council based on work done using the facilities of the Urban Environmental Biogeochemistry Laboratory.

The Jess and Mildred Fisher College of Science & Mathematics

Mission Statement

Through rigorous and high quality undergraduate programs in a wide variety of scientific, computing and mathematical disciplines and graduate programs in research-based, practice-based, applied and interdisciplinary fields, FCSM prepares its students to live and work productively in a scientific and technological world and to pursue learning throughout their lives. Faculty members engage both their undergraduate and graduate students through interactive teaching, advising, basic and applied research, and collaborative activities internally and externally. They form partnerships both to serve the metropolitan community as well as to meet regional, national and international needs. The result is dedicated, innovative, flexible, and highly prepared individuals who excel in graduate school, professional school, and careers in industry, government and teaching.

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