

NEWS

Letter from the Chair



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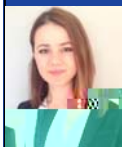
HIGHLIGHTS

- x Starving new undergraduate and graduate degrees in Chemical Biology
- x New Interdisciplinary Science and Engineering Building opening Fall 2020
- x 160 undergraduate majors (24 graduating in 2019)
- x 40 full time graduate students (recently graduated 5 Ph.D. and 6 M.S. students)
- x Over \$1 million in grant expenditures in FY20, recent grant awards from NSF and NIH (including 3 R01s, an R21, and an R15)
- x 45 publications last year

Pharmacology/Physiology, leading to a well-rounded degree for students who want to continue their studies in professional/graduate school or want to work in industry. Details about specifics of these programs can be found here: <https://catalog.slu.edu/colleges-schools/arts-sciences/chemistry/chemical-biology-pharmacology-bs/> and <https://catalog.slu.edu/colleges-schools/arts-sciences/chemistry/chemical-biology-ms/>.

We have always had great students, both undergraduate and graduate. We have information on some of their awards later in the newsletter. In terms of the numbers, we have continued to grow as a department. We currently have almost 160 undergraduate majors, and we are graduating 24 undergraduate chemistry majors in 2019 (15 biochemistry and 9 chemistr

Meet the Faculty



Asmira Alagic - Chemistry
Education

Charles Kirkpatrick -
Inorganic and Associate
Department Chair

Jamie Neely - Inorganic



Christopher Arnatt -
Organic

Istvan Kiss - Physical

Robert Perkins –
Chemistry Education

Christy Bagwill - Organic
Chemistry Education

Bruce Kowert - Physical

Daria Sokic-Lazic –
Chemistry Education

Dana Baum -
Biochemistry and Graduate
Program Coordinator

Michael Lewis - Organic

Brian Woods – Chemistry
Education

Paul Bracher - Organic

Piotr Mak - Physical

Brent Znosko –
Biochemistry and
Undergraduate Program
Coordinator

Steven Buckner -
Analytical

Scott Martin -
Bioanalytical and
Department Chair

Emeritus Faculty

Alexa Serfis

Doug Crandell - Chemistry
Education

Ryan McCulla - Organic

Staff

Ashely Baltz - Electronics Technician

Mike Briscoe - Machinist and Glass
Shop

Elena Castiaux - Assistant General
Chemistry Lab Coordinator

Jessica Hartling - Assistant Organic
Chemistry Lab Coordinator

Fahu He - NMR Lab Manager

Angela Jouglard - Grants
Development Specialist

Shontae Williams - Administrative
Assistant II

James Edwards -
Analytical

Marvin Meyers -
Medicinal & Organic

Paul Jelliss - Inorganic

**Jennifer
Monahan** -
Analytical

Asmira Alagic - In fiscal year 2017-2018, I have endeavored on a new adventure of implementing active learning modules in large chemistry lectures and smaller laboratory settings. After attending multiple workshops on Active learning design and implementation, I partnered with 3 other faculty members in the department to write a grant proposal to aid in development and execution of active learning modules across all large general chemistry, GOB, and basic chemistry courses. Thankfully our proposal was fully funded, allowing us to spend the summer of 2018 developing these new active learning modules. The modules are currently being implemented and data on effectiveness is being collected.

As a fun note, in spring 2018 I ran a marathon relay with another faculty member and couple of chemistry graduate students. Later in the fall, I trained and ran a half marathon with former gen chem students.

Chris Arnatt - Dr. Arnatt was awarded a Saint Louis University Research Growth Fund Award for buying equipment for the synthetic chemistry laboratories in the department. The department now has 4 automated combiflash flash chromatography units, an automated microwave synthesizer, and waterless condensers. This equipment will be used to further

the department's research and teaching mission.

Dana Baum - Dr. Baum was named to the Provost's Science/Engineering@SLU Task Force in Fall 2017. This task force looked at the role and the future of science and engineering at SLU and has provided recommendations that are currently being shared and discussed with the campus as a whole. In research news, the Baum Lab has recently published in the journal *Aptamers* on herbicide-specific aptamers and continues an exciting collaboration with researchers at the University of Missouri-Columbia that is supported by NASA.

Christy Bagwill - Dr. Bagwill teaches Principles of Chemistry lecture and labs, and organic labs. This is an exciting time as we are preparing to move to newly renovated lab space in Macelwane Hall. Stay tuned to find out more about these developments! Dr. Bagwill was also part of a team of Chemistry faculty members that were awarded a KEEN grant that focuses on the development of new teaching methodologies that encourage entrepreneurial mindset.

Paul Bracher - In 2018, the Bracher Group celebrated the graduation of its first Ph.D. student, Thomas Campbell. Members of the group traveled to

give presentations in Galveston (Origins of Life Gordon Conference), Atlanta (Center for Chemical Evolution), and Philadelphia (SMASH NMR Conference). The group's research on potassium and the origin of life was covered by HEC-TV (<https://youtu.be/OwTaZbEiEeo>). Finally, Paul's story from the March 2018 Story Collider is available online at KWMU/St. Louis Public Radio (<https://bit.ly/2G2zDH3>).

Steven Buckner - Calvin Nyapete defended his dissertation in the summer of 2018 (Synthesis and

develop a universal chemical tagging system (with the Arnatt Lab) to boost mass spec sensitivity for all small molecules. This past year we've published in the Analytical Chemistry (ACS), Analyst (RSC), Analytica Chimica Acta, Journal of Chromatography A, Cell Metabolism, and a Fundamental Review for Analytical Chemistry.

Paul Jelliss - Dr Jelliss has been teaching General Chemistry courses throughout the year, including the Summer session. Research time is split between synthesizing and developing novel nanomaterials and studying metallocarborane complexes. A small portion of his time has been dedicated to helping run a start-up business,

published 3 papers, and Prof. McCulla was awarded the Graduate Student Association's Mentorship Award, which honors one outstanding mentor at the university each year. 'f0 a

Arnatt

O'Dea, A., Sondergard, C., Sweeney, P., and Arnatt, C. K. (2018) A series of indole-thiazole derivatives acts as GPER agonists and inhibit breast cancer cell growth, *ACS Med. Chem. Lett.* *9*, 901-906.

Petroff, J. T., Skubic, K. N., Arnatt, C. K., and McCulla, R. D. (2018) Asymmetric dibenzothiophene sulfones as fluorescent nuclear stains,

Kiss

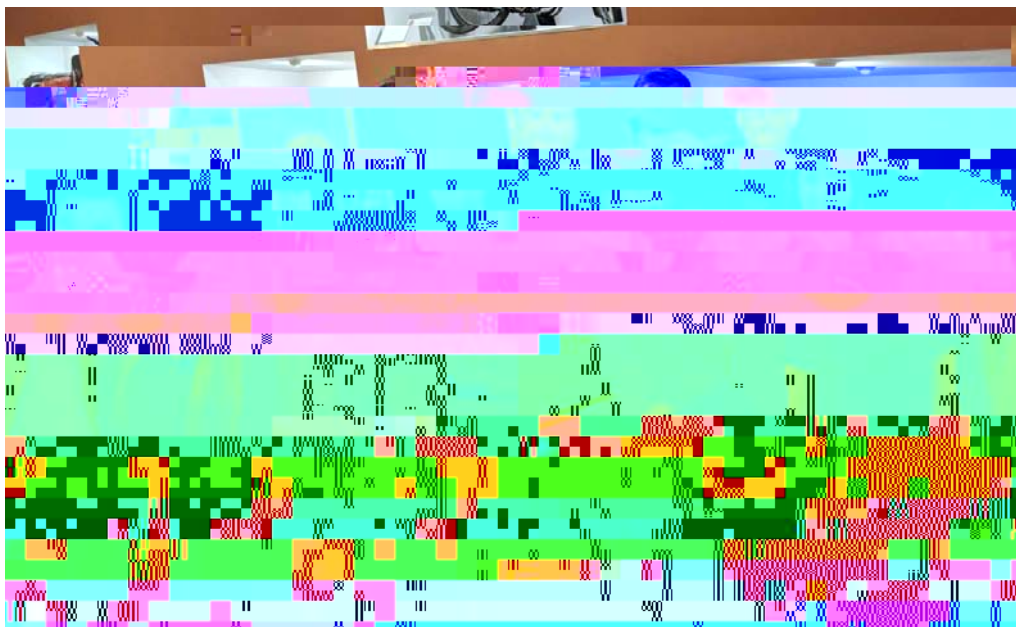
Wang, S., Herzog, E. D., Kiss, I. Z., Schwartz, W. J., Bloch, G., Sebek, M., Granados-Fuentes, D., Wang, L., and Li, J.-S. (2018) Inferring dynamic topology for decoding spatiotemporal structures in complex heterogeneous networks, *Proc. Natl. Acad. Sci. U.S.A.* *115*, 9300-9305.

Kevrekidis, Y. G., Kiss, I. Z., Kori, H., and Krischer, K. (2018) Introduction to focus issue: In memory of John L. Hudson: Self-organized structures in chemical systems, *Chaos* *28*, 045001.

Dahlhaus, R., Kiss, I. Z., and Deddermeyer, J. C. (2018) On the relationship between the theory of cointegration and the theory of phase synchronization, *Stat. Sci.* *33*, 334-357.

Departmental Award Winners

Outstanding Freshman Chemistry Student.....	San Kwon
Vincent Spaziano Memorial Scholarship.....	Conor Honan
Hugh B. Donahoe Award in Organic Chemistry.....	Roe Dar
American Chemical Society Undergraduate Award in Analytical Chemistry.....	Roe Dar
Upperclassmen Chemistry Scholarship.....	Daniel Ranciglio
Saint Louis Section American Chemical Society	
Outstanding Junior Chemistry Award.....	Sravya Ainapurapu
American Chemical Society Undergraduate Award in Physical Chemistry	Kimberly Tomchak
James D. Collins Award for Excellence in Student Academic Achievement.....	Holly Kleinschmidt
American Chemical Society Undergraduate Award in Organic Chemistry	Mingyu Choi
American Chemical Society Undergraduate Award in Inorganic Chemistry	Sravya Ainapurapu
CRC Press Chemistry Achievement Award (Undergraduate)	Rishi Patel
Royal Society of Chemistry Certificate of Excellence (Undergraduate)	Mingyu Choi
American Institute of Chemists Outstanding Senior Student Award	Kimberly Tomchak
CRC Press Chemistry Achievement Award (MS).....	Elizabeth Hayter
Royal Society of Chemistry Certificate of Excellence (MS)	Corey Richards
American Institute of Chemists Outstanding Masters Student Award	Jack Samuelian
Carol M. and Joseph R. Franks Graduate Award in Chemistry	Rio Rebrian
CRC Press Chemistry Achievement Award (PhD)	Alexandra Harrison
American Institute of Chemists Outstanding PhD Student Award.....	Yifan Liu
Royal Society of Chemistry Certificate of Excellence (PhD)	Katie Richardson
SLU Chemistry Department Teaching Award	Katie Sanders and John Throgmorton



Alumni Update

We would love to hear from you. Please fill out this brief form here:

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