

VII-A-Awards

2015 Barbara Stull Graduate Student Award and Undergraduate Student Award

Committee Report

July 22, 2014

Award Committee:

David McCurdy, Chair,
Daniel Autrey
Xiaoyun "Shawn" Chen

The Awards Committee evaluated, conferred by e-mail and agreed upon the recipient of the 2015 Barbara Stull Graduate Student Award as well as the Undergraduate Student Award recipients. Each committee member independently reviewed the nominated candidates with a pre-determined set of criteria and came to the same conclusions regarding the awards recipients.

1. Barbara Stull Graduate Student Award:

In evaluation of the three outstanding candidates for the graduate student award, the committee unanimously selected **Jay P. Kitt** as the 2015 recipient. The two other nominees considered were Lynn Zhang and Leland Gee. A brief Bio for Jay Kitt follows.

Jay Kitt graduated with a Bachelor of Science from the University of Utah in 2011. As an undergraduate he began pursuing research with Joel Harris and working on the use of confocal Raman microscopy in porous chromatographic silica particles. For progress in this research, Jay was awarded the 2011 Department of Chemistry Undergraduate Research Award. After graduating, Jay continued research in the Harris lab, pursuing a Ph.D. in Analytical Chemistry. As a graduate student, Jay's research and teaching have both been recognized. In 2012, he was awarded a research fellowship in the National Science Foundation's Nanobiosensors, Nanomaterials, and Microfluidics IGERT program. That same year, his excellence in teaching assistant in the undergraduate analytical chemistry courses was honored with the 2012 W.W. Epstein Outstanding Educator award. In the fall of 2014, the Coblenz Society recognized Jay's research in Raman spectroscopy with a Coblenz Student Award. Currently, Jay is continuing his Ph.D. research focused on using confocal Raman microscopy to probe interfacial

environments within nanoporous materials and optical-trapping confocal Raman microscopy to investigate phospholipid vesicle phase-transitions. Jay is the Chair of the University of Utah Student Section of the Society for Applied Spectroscopy and has been a student volunteer multiple times at the SciX meeting.

2. **Undergraduate Student Awards:**

There were four nominations for the undergraduate student awards. In evaluation of these candidates, the committee once again independently came to the same conclusions regarding the awards. We recommend that all 4 students receive the undergraduate student award. Though probably not necessary, our evaluations of these candidates included identical rankings of the candidates in the order of strength of the nominations. The recipients we recommend are: 1) Michaella Raglione , 2) Patrick Skrodzki, 3) Jason Becker, and Allen Walker. A brief Bio for each recommended awardee follows.

Michaella Raglione was nominated for the SAS Undergraduate Student Award by Dr. John Wasyluk from Bristol-Myers Squibb Co. and Dr. Peter J. Larkin from Cytec Industries Inc. Michaella is a junior student at the University of Delaware, majoring in chemistry with a minor in biochemistry. She is an active member of Alpha Omega Epsilon, the sorority for Engineering and Technical Science and is a Teaching Assistant for the introductory lab course for chemistry and biochemistry majors. In her 2014 summer intern she actively participated in a research project investigated the amorphous-to-crystalline transformation of indomethacin using both mid-frequency and low-frequency Raman spectroscopy, under the guidance of Dr. Wasyluk and Dr. Larkin. As a result of her efforts, a manuscript has been submitted to Applied Spectroscopy for review this past February (#15-07926) entitled “Applications of low frequency and mid frequency Raman spectroscopy to characterize the amorphous-crystalline transformation of indomethacin”.

Patrick J. Skrodzki, an undergraduate Senior in the School of Nuclear Engineering at Purdue University, was nominated for the SAS Undergraduate Student Award by Dr. Prasoon Diwakar who is a post-doctoral research associate in the same group. Patrick’s ongoing involvement in research began Summer 2015 through the Summer Undergraduate Research Fellowship (SURF) program at Purdue University within the Center for Materials Under eXtreme Environments (CMUXE). Relevant research topics include laser-material interaction (i.e. laser ablation and its applications, namely laser-induced breakdown spectroscopy (LIBS)), other spectroscopy methods, nuclear forensics, and low-temperature plasma physics and applications among others. He currently works through the Summer Undergraduate Laboratory Internship (SULI) program at Pacific Northwest National Laboratory (PNNL) on relevant projects involving emission and absorption spectroscopic

methods. Following the summer he plans to resume his work in understanding fundamental phenomena in various spectroscopic techniques with CMUXE group at Purdue. Furthermore, he plans to finish his undergraduate work at Purdue University in 2016 Spring term and pursue a graduate degree in a field relevant to nuclear engineering.

Jason Becker, who has recently completed his junior year as a nuclear engineering major in the School of Nuclear Engineering at Purdue University, was nominated for the SAS Undergraduate Student Award by Dr. Prasoona Diwakar, a post-doctoral research associate in the Center for Materials Under eXtreme Environments (CMUXE) Plasma Laboratories at Purdue University. After completing his freshman year, Jason participated in the Summer Undergraduate Research Fellowship (SURF) program at Purdue University during the Summer 2014 and has since conducted research in the use of laser-induced breakdown spectroscopy (LIBS) for the detection of nuclear materials. His research interest involves developing methods to improve the LIBS technique, such as double-pulse LIBS and the use of femtosecond pulsed-lasers as opposed to standard nanosecond lasers. A recipient of a prestigious Nuclear Forensics Undergraduate Scholarship (NFUS), Jason conducted research at the Pacific Northwest National Laboratory (PNNL) on the nuclear application of emission and absorption spectroscopy during the Summer 2015. After graduation, Jason plans to pursue a Ph.D. in laser-produced plasmas.

Allen J. Walker was nominated for the SAS Undergraduate Student Award by Dr. Ahmed Lakhani, Assistant Professor in the Department of Science at Calumet College of St. Joseph (CCSJ) in Whiting, Indiana. Allen is a junior student, majoring in computer information systems with a minor in applied mathematics and science. In addition to being a member of the CCSJ cross-country and track-and-field teams, he serves as a student tutor for introductory physics and statistics courses and assists in training graduate students in best tutoring practices. Since September 2014, he has actively conducted research, under the direction of Dr. Lakhani, in the theoretical application of the coupled oscillator model to explain dipole-dipole coupling of the Amide I bonds in the infrared spectra of peptides and proteins.