

# **College of Science Board of Trustees Report May 12-August 10, 2015**

## **Students**

### **UAH College of Science Undergraduate Fulbright Exchange Students Presents Research Paper at International Conference.**

Kilian Zuchan, an undergraduate Fulbright scholar exchange student in Biological Sciences from Rostock, Germany, was accepted to do a poster presentation at the Willi Hennig Society Conference in New York City, June 28-July 2, 2015.

### **UAH College of Sciences Master's Student starting Doctoral Program at Indiana University**

Kara McMillion is starting a doctoral program in the Department of Ecology and Evolutionary Biology at Indiana University after earning an M.S. in Biological Sciences from UAH.

### **UAH College of Science Graduate Student Receives Prestigious NESSF Fellowship.**

Anthony DeStefano received a prestigious NASA Earth and Space Science Fellowship which provides 3 years of support as a research assistant. He will work with Department of Space Science faculty member Jacob Heerikhuisen on modeling the properties and transport of neutral atoms from the boundaries of the heliosphere.

### **UAH College of Science Graduate Student receives NESSF scholarship renewal.**

Mr. Xiaocan Li, a graduate student of Dr. Gang Li, Associate Professor in the department of Space Science received a \$30K renewal of the NESSF scholarship from NASA in July.

### **UAH College of Science Student Receives First Chemistry Internship**

UAH College of Science undergraduate Kelly Steinberg is the first Department of Chemistry student to receive an internship, which is at A-P-T Research, Inc.

## **Faculty**

### **UAH College of Science Distinguished Professor and Chair Awarded Prestigious Asia Oceania Geosciences Society Axford Medal:**

**Dr. Gary Zank**, Distinguished Professor and Chair of the Department of Space Science, was recently recognized internationally and received the prestigious Asia Oceania Geosciences Society Axford Medal. The Axford Medal is the highest honor given by the Asia Oceania Geosciences Society for recognition of outstanding achievements in geosciences.

### **UAH College of Science Professor Interviewed by the American Association for the Advancement of Science**

UAH Physics Professor **Dr. Richard S. Miller** was interviewed by AAAS Science regarding his recent research, “Lopsided ice on the moon points to past shift in poles.”

### **UAH College of Science Professors Receive NSA Research Grant.**

In a successful research collaboration effort between College of Engineering and College of Science, Dr. David Coe, **Dr. Letha Etzkorn**, **Dr. Sun-il Kim**, Dr. Jeff Kulick, and Aleksandar Milenkovic received a research grant from the National Security Agency to study cybersecurity issues focusing on cyber physical and cloud applications.

### **UAH College of Science Professor Promoted to Senior Member of ACM.**

UAH Computer Science Professor **Dr. Timothy Newman** was promoted to Senior Member of the Association for Computing Machinery (ACM).

## **Outreach**

### **UAH College of Science Professor Appears As Guest on Science Friday.**

UAH Physics Professor **Dr. Richard S. Miller** appeared as a guest on Science Friday with Ira Flatow, broadcast nationally on Public Radio International, where he discussed using muons to probe the interiors of solar system bodies.

### **UAH College of Science Department Completes Summer REU Program**

The NSF funded Research Experience for Undergrads that runs as a partnership between the Center for Space Plasma and Aeronomic Research (CSPAR) and the Solar Physics group at the NASA Marshall Space Flight Center (MSFC), just completed its fourth summer program, the first summer of a new 5 year grant that was awarded earlier this year.

### **UAH College of Science Joint Space Weather Summer Camp Completes 5<sup>th</sup> Year**

The Joint Space Weather Camp, where undergraduate students begin in Huntsville by attending a special program at the US Space and Rocket Center and conclude in Germany, completed its 5<sup>th</sup> year.

## **Internal Awards**

### **UAH College of Science Assistant Professor Receives UAH Individual Investigator Distinguished Research Award.**

UAH Biological Sciences Assistant Professor **Dr. Luciano Matzkin** was awarded a UAH Individual Investigator Distinguished Research Award Program. “Reproductive incompatibilities: A tool for the biological control of insect pests”.

**UAH College of Science Professors Receives UAH Outstanding Faculty/Staff Mentor Award.**

UAH Chemistry Associate Professor **Dr. Emanuel Waddell** received the UAH Outstanding Faculty/Staff Mentor Award in Spring 2015.

## College of Science Publications

Bono, J., Killian, E. O., **Matzkin, L. M.** (2015). Connecting genotypes, phenotypes, and fitness: Harnessing the power of CRISPR/Cas9 genome editing. *Molecular Ecology*. 24:3810-3822.

**Ng, J.D.**, Baird, J.K., Coates, L., Garcia-Ruiz, J.M., Hodge, T.A. and Huan, S. (2015). Large volume protein crystal growth for Neutron Macromolecular Crystallography. *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 71:358-370.

Pusey, M., Barcena, J., Morris, M., Singhal, A., Yuan, Q. and **Ng, J.D.** (2015). Trace fluorescent labeling for protein crystallization. *Acta Crystallogr Sect F Struct Biol Cryst Commun*. 71:806-814.

“Small-Scale Magnetic Islands in the Solar Wind and Their Role in Particle Acceleration Part 1: Dynamics of Magnetic Islands near the Heliospheric Current Sheet” by O.Khabarova, **G.P. Zank, G. Li, J.A. le Roux, G.M. Webb**, A. Dosch, V.V. Zharkova, and O.E. Malandraki, *ApJ*, 808, 181. Doi: 10.1088/0004-637X/808/2/181, 2015.

“MHD Modeling of the Outer Heliospheric Structures Around the Heliopause”, by H. Washimi, **G.P. Zank**, Q. Hu, T. Tanaka, and K. Munakate, *ApJ*, 809, 16, doi:10.1088/0004-637X/809/1/16, 2015

“Multi-Symplectic Magnetohydrodynamics”

**G. M. Webb**, J. F. McKenzie and **G. P. Zank**

*Journal of Plasma Physics* / Volume 80 / Issue 05 / October 2014, pp 707 – 743

“Evidence of the Solar EUV Hot Channel as a Magnetic Flux Rope from Remote-Sensing and In-Situ Observations”, H. Q. Song, Y. Chen, J. Zhang, X. Cheng, B. Wang, Q. Hu, **G. Li**, and Y. M. Wang, *ApJL*, 808, L15, (2015)

Scott R. Kleespies, Williamson N. Oloo, **Anusree Mukherjee**, Lawrence Que, Jr., “C–H Bond Cleavage by Bio-inspired Nonheme Iron(IV)-Oxo Complexes, Including the Hydroxylation of n-Butane” *Inorg. Chem.* 2015 54, 5053-5064

Ulkoski, D., Meister, A., Busse, K., Kressler, J., and **Scholz, C.** “Synthesis and structure formation of block copolymers of poly(ethylene glycol) with homopolymers and random copolymers of L-glutamic acid  $\gamma$ -benzyl ester and L-leucine in water”, *J Colloid Polym Sci* , **2015**, 293, 2147-2155

“A survey of chemical compositions and biological activities of Yemeni aromatic medicinal plants.” Bhuwan K. Chhetri, Nasser A. Awadh Ali, and **William N. Setzer**. *Medicines*, 2015, 2, 67-92. This paper is taken largely from the M.S. (Chemistry) thesis of Bhuwan Chhetri.

“Chemical composition of Nardostachys grandiflora rhizome oil from Nepal – A contribution to the chemotaxonomy of Nardostachys.” Prabodh Satyal, Bhuwan K. Chhetri, Noura S. Dosoky, Ambika Poudel, and **William N. Setzer**. *Natural Product Communications*, 2015, 10(6), 1067-1070.

“Antileishmanial activities of compounds isolated from *Sassafras albidum*.” Divya Pulivarthy, Kelly Marie Steinberg, Lianet Monzote, Abel Piñón, and **William N. Setzer**. *Natural Product Communications*, 2015, 10(7), 1229-1230. This paper is based on the Undergraduate Honors Thesis of Kelly Marie Steinberg.

“Aromatic and medicinal plants with anti-diabetic potential from India: A review.” Rakesh J. Joshi, **William N. Setzer**, and Valdir F. da Veiga Junior. *American Journal of Essential Oils and Natural Products*, 2015, 2(4), 22-28.

“Composition and bioactivity of the essential oil of *Tanacetum parthenium* from a wild population growing in Tajikistan.” Farukh S. Sharopov, **William N. Setzer**, Salomiddin J. Isupov, and Michael Wink. *American Journal of Essential Oils and Natural Products*, 2015, 2(4), 32-34.