Good News

College of Science, Engineering and Technology,
Faculty and Staff Achievements
February – June 2016

Biological Sciences majors: Kwame Okoku Akyeampong, Ali Oku and Uyi Jefferson Imasuen took the SILVER award for Mayo Clinic's Innovative Minds Partnering to Advance Curative Therapies (IMPACT) research seminar at Rochester's Mayo Clinic on March 5th. The title of their piece was "During critical periods of heart development, abnormal activity of the myocyte enhancer factor 2C (MEF2C) as a result of irregular Notch signaling, folic acid levels, and/or genetic mutations is the underlying cause of HLHS (Hypoplastic Left Heart Syndrome).

David Sharlin was recently awarded a 2-year, $50,000 grant from the American Thyroid Association to investigate the effects of developmental hypothyroidism on the production of local brain-derived insulin-like growth factor 1 (IGF-1). The grant is based on the notion that untreated or poorly treated congenital hypothyroidism is associated with a number of permanent neurocognitive deficits, but the molecular and cellular basis for these deficits are largely unknown. The lab will test the hypothesis that these deficits result, in part, from altered IGF-1 action during critical periods of brain development.

David Sharlin, Michael Bentley, and Patrick Sexton in Athletic Training recently had their Strategic Priority Funding (SPF) initiative funded. The proposal was entitled, "Next Generation Anatomy: Acquisition of an Anatomage Table." The acquired Anatomage Table will integrate into anatomy education at MSU, since it is the most technologically advanced anatomy visualization system for education and provides true anatomy, in life-size scale, from imaged cadavers to generate dissectible high-resolution 3D gross male and female body plans. The software also provides a library with 120 pathological examples that translate to radiological/surgery case review, patient consultation, research purposes, and education. The proposal was a collaboration between the Department of Biological Sciences and Department of Human Performance/Athletic Training. The full proposal can be found here: https://www.mnsu.edu/planning/priorities/next_generation_anatomy.pdf

Presentations

*Jones, Brooke. (April 2016).Using In situ hybridization to localize FAM171B expression. National Conference on Undergraduate Research (NCUR), University of North Carolina- Asheville.

*Xiong, Ka. (April 2016). Expression and localization of the novel polyglutamine protein FAM171B. Minnesota Academy of science, University of MN- Twin Cities.

Publications

Bentley, Michael, Hann, CR, Fautsch, MP. (2016). Anatomical variation of human collector channel orifices. *Invest Opthalomol Vis Sci 57*: 1153 – 1159.

Department of

Chemistry and Geology

Publications

Evgeni I. Get'man, Stanislav N. Loboda, Alexey V. Ignatov, Vadim V. Prisedsky, Mohammed A. B. Abdul Jabar, a**nd Lyudmyla I. Ardanova,** (2016). IIIsomorphous substitution of rare-earth elements in lacunary apatite $Pb_8Na_2(PO_4)_6$. *Inorganic Chemistry,* Volume 55, Issue 5, pp 2165–2173. DOI: 10.1021/acs.inorgchem.5b02571

Students in the Information Security Student Organization competed at the 2016 Minnesota Collegiate Cyber Defense Competition (CCDC). They placed 3rd in the competition. The students competing included Zach Orum (Team Captain), Jesse Aland, Sarah Day, Eduardo Herrera-Velasquez, Joshua Jordi, Brad Kosel, Myles Landais, and Dan Salmon. Brad Ammerman (adjunct faculty in the CIS department) and Sarah Kruse were the team's coaches.

Publications

Ferrillo, Paul A. and **Christophe Veltsos**. (2016). Next-level cybersecurity incident response trends 2016. *The Corporate Governance Advisor May/June 2016*. (http://www.wklawbusiness.com/store/products/corporate-governance-advisor-prod-ss10676171/paperback-item-1-ss10676171)

CONSTRUCTION MANAGEMENT
MINNESOTA STATE UNIVERSITY, MANKATO

Publications

Shim, E. and **Kim, S. J.** (2016). Markup distribution, front-loading, optimization. The Journal of Technology, Management, and Applied Engineering, 32(1), 2-26.

Vincent Winstead was a speaker at an ASME Energy Workshop on April 23rd and gave a presentation on wind energy technology.

Publications

Hayee, M.I., Huang, D., Khaliq, M., Lian, J., Nadimpalli, S. **Winstead, V.**, Wu, X., **Zhang, Q.** (2016). Application of local error method to SSSF simulation of vector propogation in dispersion compensated optical links.Springer Photon**.** *Network Communications Journal*.

Megat Hamari, P.S., Min, H., Nadimpalli, S. Shrestha, S., Xing, L.. **Zhang, Q**., Zhu, L. (2016). Local error method with pre-calculated step-sizes for the simulation of signal propogation in vector fiber channel. *CLEO*. (Accepted)

Department of Mathematics and Statistics

Deepak Sanjel and Prashant Narayan K.C. presented the seminar presentation, “Application of Survival Analysis in Actuarial and Medical Research.” (Slides are available here: http://mavdisk.mnsu.edu/sanjed/)

Publications

Mohammed-Awel, J., Ngonghala, C.N., Prosper, O., **Zhao, Ruijun**. 2016. Interplay between insecticide-treated bed-nets and mosquito demography: implications for malaria control.” *Journal of Theoretical Biology* 397: 179 – 192.

Department of Mechanical & Civil Engineering

Students in the college chapter of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) advised by Dr. Sungwon S. Kim in the Mechanical Engineering Program in the Mechanical Engineering Program won national scholarships from ASHRAE. Aldo Kusnardi was selected to receive $10,000 and Ryley Davis was selected to receive $3,000 for their outstanding scholastic and leadership abilities, character, and potential service to the heating, ventilation, air conditioning and refrigeration (HVAC&R) profession. Congratulations to Aldo and Ryley for their accomplishment!

MSU,M civil engineering students won third place overall in the 2016 Midwest Regional Concrete Canoe Competition in Ames, Iowa, on April 23, 2016. Eighteen students attended and participated in business presentations and canoe races at a local lake with 9 other universities in the Upper Midwest.

Kah Wong, an adjunct instructor, successfully co-authored and submitted the article, “Suzaku X-ray Observations of the Nearest Non-Cool Core Cluster, Antlia: Dynamically Young but with Remarkably Relaxed Outskirts,” to the *Astrophysical Journal,* and is currently undergoing peer review. In March, NASA accepted Wong’s research proposal, and Wong was awarded 14 hours of observation time as the project’s Principle Investigator from the NASA NuSTAR hard X-ray space observatory to conduct research on a supermassive black hole. In April, Wong was appointed to be a committee member of a science working group for the next generation X-ray space observatory, the Athena Mission, of the European Space Agency (ESA).

Submissions for the Next Issue of “Good News”

Email achievements (conference presentations, grants, fellowships, publications, etc.) to Deb Spreng (deborah.spreng@mnsu.edu) to be included in the next issue of “Good News.”