

# COLLEGE OF NATURAL SCIENCE and MATHEMATICS

## Minutes of Council of Chairs Meeting – April 15, 2019

A meeting of the Council of Chairs of the College of Natural Sciences and Mathematics was held on Monday, April 15, 2019. Stephen Addison presided; members present: Ginny Adams, Emre Celebi, Pat Desrochers, Carl Frederickson, Ramesh Garimella, Uma Garimella, and Brent Hill. Members absent: Stephen O'Connell. Guest: Aimee Poynter, CNSM Development Officer

### Agenda Items:

1. March 4, 2019 minutes approved with minor revisions.
2. The 25th Annual CNSM Student Research Symposium is April 19th. We will be announcing the recipients of the AURS and Southwestern Energy research awards during the symposium, please encourage faculty to attend.
3. Support for teacher specialists in the STEM Institute is being terminated. Uma is looking at opportunities to partner with departments and will pay faculty for leading workshops. Funding will come through invoicing school districts for services.
4. Please remind faculty that study day is not to be used as an extra day of class by scheduling events that students feel compelled to attend.
5. Provost Poulter plans to seek a Sponsored Programs Director. Discussion followed on needs and current issues with the Graduate School and funding decisions.
6. Dean Addison distributed enrollment numbers for summer and admission numbers for fall. Discussion followed on numbers, communication of enrollment dates, attrition rates in sequenced courses (service courses), and issues with advising nursing students.
7. Please let Aimee know when alumni visit campus so she can start building relationships with them. She can also provide contacts for alumni so we can invite them to department events on campus.
8. It is important that we check Award Spring regularly and set up committees to award foundation scholarships by May 15th.

### Other Items/Announcements

- The CNSM End of Year celebration is May 2nd at UCA Downtown.

### Chair Reports:

## Computer Science

Dr. Emre Celebi reported:

- Ahmad Alsharif successfully defended his dissertation, “Secure and Efficient Data Collection with Access Control and Multicast Schemes for Smart Grid AMI Networks”, at the Department of Electrical and Computer Engineering in Tennessee Tech University.
- Ahmad Alsharif published an article in the IEEE Access journal, “EPDA: Efficient and Privacy-Preserving Data Collection and Access Control Scheme for Multi-Recipient AMI Networks”.
- Mahmut Karakaya’s graduate student, Recep Hacisoftaoglu, made an oral presentation at the 16th Annual Conference of the Midsouth Computational Biology & Bioinformatics Society (MCBIOS ’19), held in Birmingham, AL.
- Sinan Kockara gave an invited talk, “Does AI Pose Threat to Dermatologists?”, at the 4<sup>th</sup> Annual Southern Dermatology Research Consortium event, organized in UAMS.
- Sinan Kockara, Tansel Halic and their students published two articles in the BMC Bioinformatics journal, “Local Edge-Enhanced Active Contour for Accurate Skin Lesion Border Detection” and “Partition-based Optimization Model for Generative Anatomy Modeling Language (POM-GAML)”.
- Olcay Kursun published an article in the Military Medicine journal, “Quantification of Mild Traumatic Brain Injury via Cortical Metrics: Analytical Methods”.
- Olcay Kursun’s student presented a paper, “Automated Monitoring of Customer Service Quality Using Deep Learning Facial Expression Recognition System”, in the Southwest Decision Sciences Fiftieth Annual Meeting, held in Houston, TX.
- Yu Sun and her students participated in the STEM Night event at the Ruth Doyle Middle School.
- Karen Thessing attended the Arkansas STEM Summit 2019 Conference, held in Little Rock, AR.
- Karen Thessing and her students participated in the Science Night event at the Bob Courtway Middle School.
- Emre Celebi and his colleagues guest edited the March issue of the IEEE Journal of Biomedical and Health Informatics (J-BHI). With an impact factor of 3.85, J-BHI is ranked as one of the top 3 (out of 57) Health Information Management Journals according to H-index.
- Emre Celebi and his colleagues published two articles in the IEEE Journal of Biomedical and Health Informatics, “Dermoscopy Image Analysis: Overview and Future Directions” and “Guest Editorial: Skin Lesion Image Analysis for Melanoma Detection”.
- Emre Celebi and his colleagues published an article in the Signal Processing: Image Communication journal, “Diverse Adversarial Network for Image Super Resolution”.

## Mathematics

Dr. Ramesh Garimella reported:

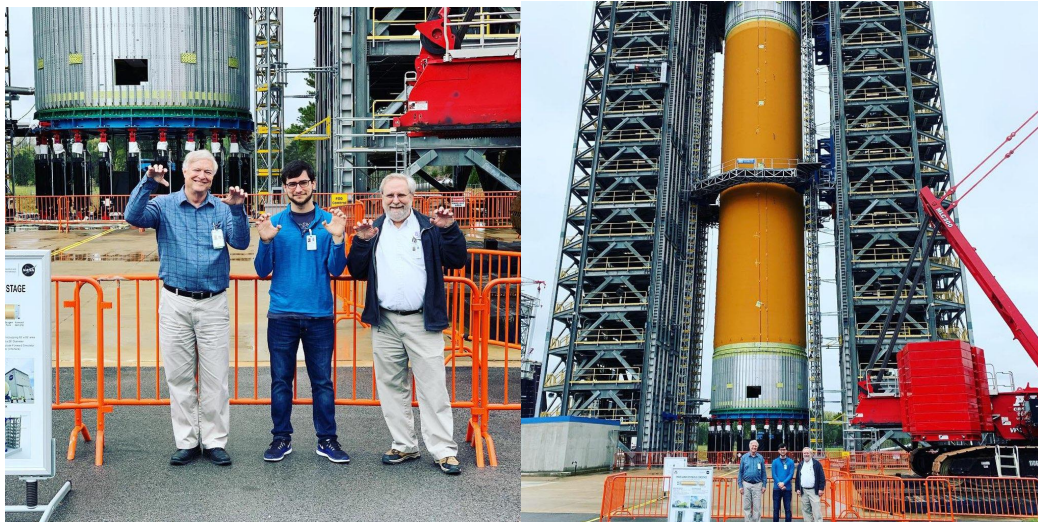
- Two former faculty members, all current faculty members and staff, and 13 alumni and friends contributed to a Math Fund on the Day of Giving.
- Dr. Jeff Beyerl and Yinlin Dong took four mathematics majors – Monica Davanzo, Courtney Coney, Gage Scroggins and Camden Shaw – to participate in a math competition at the OK-AR Section of Mathematical Association of America MAA conference in Tahlequah, OK at the end of March.

- The search for two permanent lecturer positions earlier this spring was successful. Offers were made and were accepted.
- Provost Office is replacing all old iMACs in the Math Lab.
- The Arkansas Council of Mathematics Teachers State Math Contest will be held on UCA campus on April 27<sup>th</sup>. Four hundred students from all over the state have been invited to participate in the contest to be held in the Math Department. Dr. Charles Watson, Dr. Pinchback and Ms. Loi Booher are the local organizers of the contest.
- Last week, revised Math Department Bylaws were approved.
- Last week, Math Department approved a process and criteria for yearly review of TT faculty by the DPAC in addition to annual review of the chair mandated by the UCA policies

## Physics

Dr. Carl Frederickson reported:

- Drs. Azida Walker, Leah S. Horton, and Sharon Mason presented a poster entitled “Enhancing Equity in STEM Disciplines through Interdisciplinary Course Design” at the 2019 Diversity, Equity, and Student Success Engaged Inclusivity: Perceptions, Realities, and Aspirations conference sponsored by the Association of American Colleges & Universities March 28 - 30, 2019 in Pittsburgh.
- Two physics majors made oral presentations at the 103rd meeting of the Arkansas Academy of Science.
  - Ashley Cotnam presented “Laser Trapping of Polystyrene Beads Using Optical Tweezers,” in the Physics/Chemistry session.
  - Russell Jeffery presented “Pointing Isn't Rude: A Proof-of-Concept HAP Stabilizer,” in the Geoscience session. Russell received the first-place award for undergraduate oral presentation in this category.
- Five physics majors made poster presentations at the 103rd meeting of the Arkansas Academy of Science.
  - Nick Scoles presented “Development of an Acoustic Field Scanner,” in the Physics category.
  - Yelaman Zhenis presented “Investigating relationship between strain applied to Rat's Leg bone and bone's mechanical strength,” in the Physics category.
  - Kayce Conville presented “A Real Time Automated Microclimate System,” in the Physics category.
  - Jordan Rhoades presented “Protostellar Outflows in L1448,” in the Physics category.
  - Isaac Raphael “An Investigation of Thermoelectric Element Power Generation and Heat Pumping Ability,” in the Engineering category.
- Dr. Frederickson and Nick Scholes visited NASA's Marshall Space Flight Center and the Missile Defense Administration at the Redstone Arsenal in Huntsville, Alabama on April 4th and 5th. They were hosted by UCA Physics alumnus John Ellis ('81) and distinguished alumnus Ralph Carruth ('75).



Ralph Carruth, Nick Scholes, and Carl Frederickson in front of the hydrogen tank for NASA's new Space Launch System. The tower is 20 stories tall.

- Dr. Burriss's Meteorology class presented the 6th Super Science Saturday on April 13th. This program runs in partnership with Community Connections a non-profit organization in central Arkansas providing extra-curricular activities for children with special needs and support for their families. There were 21 children who attended. All 14 students from her class this semester participated along with 15 former students who volunteered and 3 alumni (2 from physics), Renee Brock Clemente and Jeremy and Lauren Lusk.