

College of Natural Sciences and Mathematics
Minutes of Virtual Council of Chairs Meeting
February 1, 2021

All members except Uma Garimella, present.

Agenda Items:

- Bear Necessities Days will be held on February 15, 17, and 19th. There will be a maximum of 20 people per session. Box lunches will be provided and Chairs are welcome to attend sessions to meet with prospective students.
 - Location will be LSC 100 from 10:30am to 12:40pm.
- Dean Adams discussed the importance of awarding our scholarships through our committee and encouraging students to not only write a thank you note acknowledging the award but a follow up note on how the award helped them with their research and education. Discussion followed.
- The annual CNSM Poster Symposium will be held on April 23rd. It will be a live virtual event. Presentation abstracts are due on April 12th.
- UCA has made arrangements for all employees to receive the COVID-19 vaccine through Conway Regional. Please help get the word out to faculty and staff who want to get vaccinated.
- Summer courses will be largely online to allow for preparation of the buildings for the Fall semester. Face to Face summer courses will need to be approved by the Dean. UCA's current plans are for a return to normalcy for the Fall semester. Online courses for the Fall will need to go through regular approval channels.
- A new grade appeal process will be coming out shortly that will limit both reasons and time frame for students to appeal grades.
- Encourage faculty to work on improving student experiences in the classroom and developing positive relationships with our students. Too much time is being spent on policing attendance and watching video feeds for cheating instead of working with students to improve performance.

Other Items

- Be sure to send in Chair reports as this information is needed for our annual reports to the President and various grant agencies.
- Please send copies of software to John Black so he can better help in resolving issues and keep backup copies for reinstallation.

Chair Reports:

Brent Hill, Biology

- Two Biology graduate students were recognized during the inaugural 3 Minute Thesis competition on our campus. Billy Huggins won first place and Lucas Ratz was runner-up.
- Steve Karafit - The 5th edition of the 1440 Lab manual has come out.

- Matthew Gifford - Published two papers in 2020, one with a former grad student and one with a high school student (David Adams).
- Undergraduate, Calvin Vick, awarded a SURF
- Amrita Puri - My grad student, Taylor Dague, recently successfully defended and submitted her thesis in December. We also presented related work at LSU Shreveport's Research and Industry Day conference in November, and recently had a paper accepted in the journal *Attention, Perception, & Psychophysics*.
- Ginny Adams had a paper accepted with two M.S. students leading the paper:
 - "Rediscovery of the Pallid Shiner, *Hybopsis amnis*, in the Black River System of Arkansas and Missouri Including Notes on Ecology and Life History" has been accepted into Southeastern Fishes Council Proceedings. Daniel P. Morrill, Calvin R. Rezac, Ginny Adams, S. R. Adams, and Robert Hrabik
- Ginny Adams has 6 students presenting at the Arkansas American Fisheries Society next week- 2 graduate and 4 undergraduate.
- Last November, 7 students presented at the Southeastern Fishes Council Meeting and the Adams lab received multiple awards:
 - Cashner Full Oral Presentation Award Best Undergraduate: Willow Newman, Turning Up the Heat: Thermal Tolerances of Fishes in the Kings River, Arkansas
 - Suttikus Lightning Talk Awards (UCA Sweep)
 - 1st Place: Calvin Rezac, Rediscovery of the Pallid Shiner, *Hybopsis amnis*, in the Black River System of Arkansas and Missouri
 - 2nd Place: Jessica Rath, Does Gut Length of *Luxilus pilsbryi* Vary in Response to Stream Drying?
 - Tied for 3rd Place: Grace Davenport, Do Farm Ponds and Small Impoundments Influence Fish Assemblages in the Black River Watershed in Arkansas? and Reagan Spinelli, Morphological and Dietary Responses of Fishes to Stream Drying.
- Ginny Adams, Reid Adams, and Hal Halvorson were awarded a two year grant (\$158,250) from the Department of Env. Quality: Data Collection for the Development and/or Revision of Water Quality Criteria for Wadeable Streams in the Eastern Gulf Coastal Plains Ecoregion Ouachita River Basin.
- Hal Halvorson co-organized a special issue of the journal *Freshwater Biology* on microbial interactions in freshwater ecosystems, which was published in July 2020 and includes an introductory review paper summarizing the special issue:
 - Halvorson, H.M., Wyatt, K.H., and Kuehn, K.A. Ecological significance of autotroph-heterotroph microbial interactions in freshwaters. *Freshwater Biology* 65: 1183-1188.
- Hal Halvorson was awarded a National Science Foundation EPSCoR grant, titled "From Ecosystems to Evolution: Harnessing Elemental Data to Detect Stoichiometric Control-Points and their Consequences for Organismal Evolution". The grant will last the duration of 4 years and is a total of \$6.2 million across 4 different EPSCoR states, of which UCA has been awarded \$563,000.
- Coleman Little was put on the Arkansas Monarch Conservation Partnership, Monarch and Pollinator Research Committee, as the Arkansas Native Bee Expert. He presented at the 2020 AR Monarch and Pollinator Forum.
- Candice Thomas's undergraduate student, Emily Newberry, was awarded a SURF grant in the amount of \$2,750 as well as a SURGE grant from the Honors College in the amount of \$1,600 for her project "A Nutritional Intervention to Attenuate Upper Respiratory Tract Infections in Distance Runners".
- David Dussourd has several publications:

- Trejo BK, Gifford ME, Dussourd DE. 2021. Energetic cost of girdling in a notodontid caterpillar, *Oedemasia leptinoides*. *Arthropod-Plant Interactions* in press.
- Dussourd DE. 2021. Does secretory canal architecture dictate the sabotage behaviors of insect folivores? *Arthropod-Plant Interactions* 15: 71–81. doi.org/10.1007/s11829-020-09798-x
- Dussourd DE. 2020. Mommy says I have to wear a mask. Children’s book published through Amazon KDP.
- Arijit Mukherjee’s former undergraduate student, Ha Ram Kim, recently got accepted at the University of Illinois Urbana-Champaign and University of Chicago for a PhD in Biomedical Engineering.
- Grant Wiggins defended his MS thesis in July, 2020 and was offered a position as a Research Associate at LSU AgCenter in Baton Rouge, LA.
- Arijit Mukherjee published a paper in the *Plant Molecular Biology* (IF= 4.1) journal last year.
- Devyn Ruiz gave an oral presentation at the AR INBRE symposium.

Pat Desrochers, Chemistry

- Major turnover in staff including new hires:
 - Jamie Freeman hired as new chemical hygiene officer (July 2021)
 - Chris Emmerling hired as new lab coordinator (Aug 2021)
 - Sherry Purdy hired as new department admin assistant
- Two papers published by faculty and students in *J. Chemical Education*
 - Jacob White, Kimberly Costilow, Jacob Dotson, Robert Mauldin, Mattie Schanandore, Denise Shockley Guided-Inquiry Experiment for Teaching the Calibration Method of Standard Addition in the Analysis of Lead with Graphite Furnace Atomic Absorption Spectroscopy *J. Chem Ed.* ASAP 12-06-20
<https://doi.org/10.1021/acs.jchemed.0c00433>
 - Emily H. Trinh, Anna M. Wolff, and Gregory R. Naumiec T₁ Measurement by NMR Inversion Recovery: An Upper-Division Undergraduate Experiment in Advanced NMR Techniques Demonstrating the Concept of Contrast-Enhanced MRI *J. Chem Ed.* ASAP 12-22-20 <https://doi.org/10.1021/acs.jchemed.0c00663>
- ACS Student chapter recognized as an Outstanding Chapter for 2019-2020, placing them once again in the top 10% of chapters nationwide. G. Naumiec and F. Yarberr faculty advisers.

Emre Celebi, Computer Science

- Computer Science undergraduate student Skyler Austen has been awarded the prestigious SANS Cyber FastTrack Scholarship (\$22,000) based on his performance in the nationwide Cyber FastTrack competition.
- Emre Celebi has been elected to the grade of Fellow of SPIE, the international society for optics and photonics, for his contributions to medical imaging.
- A recent study from the Stanford University (doi.org/10.1371/journal.pbio.3000918), ranked Emre Celebi 1,191 out of 215,114 researchers in the field of Artificial Intelligence and Image Processing.

Stephen O'Connell, Geography

- Dr. Yaqian He was recently awarded a \$40,000 grant from the NASA EPSCoR RID program. The grant will support Dr. He's efforts in using unmanned aerial vehicles (UAVs) in the analysis of land use and land productivity patterns in Arkansas. Matt Connolly is a Co-PI on this grant.

Ramesh Garimella, Mathematics

- The STEMteach Math Education program is now nationally recognized by the NCTM SPA Review. Dr. Todd Abel and the Mathematics Education committee spearheaded the review with the excellent help from folks across the campus. Here is an excerpt from the report as noted by Dr. Donna Wake of COE.
 - *Section V of the program report provides strong evidence that the faculty use assessments to improve candidate performance and the program of study. Several courses are being examined for opportunities to deepen content knowledge.*
- Dr. Danny Arrigo and his master's student Joseph Vander Grift had a paper "Contact Symmetries of a Model in Optimal Investment Theory" accepted for publication in the Journal Symmetry.
- A paper titled "Boundary feed forward and feedback control for the exponential tracking of the unstable high-dimensional wave equation" authored by Dr. Weijiu Liu has been accepted for publication in the Journal of Mathematical Analysis and Applications.
- Dr. Jason Martin has an invited talk titled "Videos Developing a Conceptual Foundation for Calculus." at the Florida International University's Mathematics Education seminar on January 29, 2021.
- Dr. Lisa Skultety is working with Dr. Uma Garimella of the UCA STEM Institute to provide PD for teachers and coordinating a tutoring program for Harris Elementary School.
- Dr. Lisa Skultety served as an invited panelist for an NSF CADRE Webinar on Academic Job Searches.
- Plans are underway to host the annual ACTM Math contest virtually this spring. Usually it is hosted on UCA campus with about 300 students invited to participate from various schools across the state. Dr. Garth Johnson is the state director for the contest. Drs. Carolyn Pinchback and Loi Booher are the regional directors.
- Dr. Nesrin Sahin is a part of a three member team (others are Dr. M. Karakaya and Dr. R. Aygun of Kennesaw State University) that submitted an NSF Proposal titled "Student Lapse and Content Window Management for Remote Education."
- Dr. Todd Abel will be named Associate Vice-President for Awards for the Association of Mathematics Teacher Educators (AMTE) at the annual conference on February 12.

Carl Frederickson, Physics

- Dr. William Slaton has received a grant to work with Conway Corporation on issues with connecting solar systems to the general power distribution network. This will provide support students as well as equipment.
- Drs. Uma Garimella and William Slaton are working with members of the UCA Robotics Club to mentor a middle school robotics team in Little Rock.
- Dr. Andrew Mason presented a paper titled, "Evaluating Explicit Incentives to Correct Mistakes in Upper-Division Electromagnetism" at the virtual Winter Meeting of the American Association of Physics Teachers on January 9th.
- The Engineering Physics Advisory Board met via Zoom on January 29th from 2-5pm.

Mathilda Hatfield, CNSM Director of Development

- Development is preparing an Annex Fundraising Plan. There are Annex building and Space naming opportunities. Funds raised are for CNSM programs and equipment endowments.
- One donor area of focus is with long-time CNSM vendors. I'm working on identifying vendors and companies that hire our graduates.
 - Jan. 27, 2021 we welcomed Thermo Fisher Scientific AR Sales Rep, Kristina Lovin, to tour the LSC Annex and CCCS. Over the past 15 years, UCA has ordered \$4 Million of educational equipment. (CNSM and CHBS). When asked, Kristina agreed to meeting again to discuss possible partnerships and sponsorship.
- Dates to mark:
 - Feb. 25 or 26 - CNSM Advisory Board meeting. - Details will be shared this week.
 - Thursday, March 11 - Day of Giving - Begin now communicating to your constituents
 - Saturday, April 10 - Laurels & Stripes Night of Distinction honoring Lavon Morton and Teri Jordan