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Celebrating Work Anniversaries

for

October 2020

Thank you for all your hard work & dedication!

- Jason Kerkvliet – 10 years
- Lauri Sohl – 8 years

Past Newsletters

All the CNS newsletters have been uploaded for accessibility. You can view any past issue here:
www.bit.ly/CNS_Newsletters

Updates from Dean Charlene Wolf-Hall

Here we are. October is ending. We celebrate homecoming and Hobo Day in a different way and are a few weeks away from Thanksgiving. Some of you will be voting for the first time. So much going on.

This Hobo Day we will host our inaugural College of Natural Sciences Dean's Advisory Board meeting. We have an outstanding group of college supporters who will serve as the founding members of the board. We will include more information about the board in our November newsletter, so stay tuned.

This issue highlights recent activity in the college. Note the research update from Associate Dean Radhey Kaushik. The college has support to help with grant proposals. I encourage eligible students to consider the [NSF Graduate Research Fellowship program](#) and others. Give yourself enough time to work on a good proposal and let Dr. Kaushik know if

you need help or guidance. Associate Dean Matt Miller can also help guide students to high level scholarship opportunities. **You can do this!**

Faculty and Staff, I encourage your participation in the Advancement Through Assessment, Resources, and Community (A2RC) Community Dialogues coming up on November 6, 13 and 20th. More information is available on [InsideState](#). Let me know if you would like to learn more about these efforts and the [ASPIRE initiative](#).

There is so much incredible talent in this college. We love to highlight your successes in these newsletters and brag about the wonderful work you are all doing to our friends and stakeholders. Please let me know if you have suggestions for items we can highlight.

Keep up your good work and efforts as we move through the end of the fall semester. Thank you for all you do. Go Jacks!

Science@SDState

Awards & Recognition

Grants Awarded within CNS, September 2020

- **Darci Fink, PI** | Chemistry & Biochemistry | National Institutes of Health | Mechanisms of Lymphatic Vascular Transitions: Regression to Recurrent Lymphangiogenesis

2020 Sigma Xi Graduate Student Competition

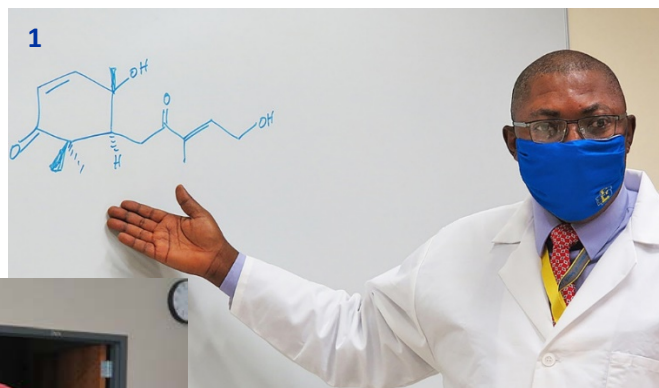
- Winning Graduate Research Proposals
 - Ph.D. Proposals:
 - **Haydee Torres**, 2nd place | Chemistry & Biochemistry | Advisor: Dr. Adam Hoppe
 - M.S. Proposals:
 - **Aastha Acharya**, 1st place | Biology & Microbiology | Advisor: Dr. Yang Yen
 - **Camille Massmann**, 2nd place | Biology & Microbiology | Advisors: Dr. Bishnu Karki & Dr. Bill Gibbons
 - **Jawata Saba**, 3rd place | Geography & Geospatial Sciences | Advisor: Dr. Darrell Napton
- Winning Graduate Research Papers
 - Ph.D. Papers:
 - **Obed Gyamfi**, 3rd place | Chemistry & Biochemistry | Advisor: Dr. Brian Logue
 - M.S. Papers:
 - **Andrea Zavadil**, 2nd place | Biology & Microbiology | Advisors: Dr. Bishnu Karki & Dr. Bill Gibbons

October 2020 Media Coverage of the College

1. **Kennedy Nyongbela Dogjinga** | Chemistry & Biochemistry | SDSU joins the IIE Scholar Rescue Fund Alliance
2. **Abdullah Al Maruf** | Physics | SDSU Society of Physics Students chapter wins national research award
3. **Dr. Robert McTaggart** | Physics | Society of Physics Students names McTaggart Outstanding Chapter Advisor



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Student Club Spotlight: Geography Club

The Geography Club at SDSU was founded in 1974, when the department's graduate program was established, and boasts the longest running student-organized geography convention in the nation!

Normally, the club would be busy planning the department's holiday party and spring picnic, among other events and outreach and travel. Things look a little different this year, though! While some events have been canceled, the club is working on plans to shift the annual Geography Convention completely online.

The Geography Convention hosted at South Dakota State University is the longest running student-organized geography convention in the nation. It's a state and regional conference, so not only are there attendees from the USGS EROS Data Center and from local state agencies, there are also attendees from all around the country! The president of the American Association of Geographers (AAG) attends every year and participates as the keynote speaker, a long-running tradition that the club is proud to continue at this spring's convention.

This club is open to everyone! Aside from planning the convention, meetings often include geography trivia games. These practice sessions help the team prepare for the GeoBowl competition at the regional AAG meeting. SDSU is currently the reigning champion (2019) for the Great Plains / Rocky Mountain GeoBowl competition! And when things get back to usual, the club also spends time organizing events around Geography Awareness week, helping with the Geography Bee for the Brookings School District, and planning other ways to engage with the Brookings community and promote Geography Awareness.



Pictured above: some members met to clean up the portion of Highway 14 that the club sponsors

Pictured left: 2019 GeoBowl

Club Info

- **What:** Geography Club
- **When:** Every 2 weeks
- **Where:** Zoom for now due to COVID, Wecota 002 normally
- **Who:** the Geography Club is open to everyone!
- **Club Leadership**
 - President: Thomas White
 - VP: Levi Jayom
 - Secretary: Julie Leidholt
 - Treasurer: Kwadwo Dwomoh
 - Faculty Advisor: Kimberly Johnson Maier
- **How to join:** Contact the president, Thomas White (thomas.white@sdstate.edu) or message via Jacks Club Hub
- **Social media links:**
 - Facebook
 - Instagram
 - LinkedIn
 - Snapchat
 - Twitter
 - TikTok



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College of Natural Sciences

Open PRAIRIE data for September 2020

- Data across the whole College of Natural Sciences:
 - 2,700 downloads at 307 institutions in 108 countries
 - 45 new works posted, for a total of 844
- For the second month in a row, *Monitoring Pollen Counts and Pollen Allergy Index Using Satellite Observations in East Coast of the United States* was the most frequently downloaded piece last month at 162 downloads. This thesis is by past M.S. student Murat Cagatay Kececi, who was an advisee of Dr. Xiaoyang Zhang.



Research Update – Dr. Radhey Kaushik, Associate Dean for Research

One of the important aspects of a productive research program is to have significant grant funding which starts with submission of excellent grant proposals. In this regard, College of Natural Sciences (CNS) recently sponsored two grant writing initiatives:

1. Grant proposal writing workshop was offered on Sept 24-25, 2020 through zoom. Twenty faculty, research staff, post-doc and graduate students from CNS participated in this program. Dean office paid for workshop expenses and workbooks for every participant.
2. Grant writing workbooks, focused on NSF, USDA and NIH grant formats, are available with Layne Manson in the College of Natural Sciences Dean office. Faculty members are encouraged to loan and use these workbooks in their grant writing efforts.
3. NSF CAREER 2021 Award training program organized by SDSU Office of Research Assurance & Sponsored Programs (ORASP) will run from Sept 2020-July 2021. Three CNS faculty members are participating in this year long program and CNS Dean Office is funding this training.

Please note that CNS 'Grant proposal preparation and submission' support is available to all CNS faculty members. Two staff members, Courtney Jones and Julie Westberg from CNS along with CAFES grant office will provide grant support to CNS faculty members.

1. Courtney Jones (stationed in Chem and Biochemistry Dept, Avera Health & Science 363; Email: Courtney.jones@sdstate.edu) will help all Chemistry and Biochemistry Dept faculty members.
2. Julie Westberg (stationed in Geography Dept., and GSCE, Wecota Hall 115; Email: Julie.Westberg@SDSTATE.EDU) will help Physics, Geography and GSCE faculty members.
3. Biology and Microbiology faculty members will continue to get grant submission support and services from CAFES grant office unless further notified.

Please contact Dr. Radhey Kaushik, Associate Dean for Research whenever you need help in grant preparation and submission and he will direct you to right grant support person.

Where did your interest in science begin?

Darrell Napton, Ph.D.

*Professor Emeritus, Department of
Geography & Geospatial Sciences*

My science interest was kindled by watching the transformation of two worlds and curiosity about why they changed and where the changes were leading.

I grew up on a Midwestern general farm where my family grew corn, milo, oats, wheat, and clover and alfalfa hay to add soil nitrogen, beef cattle to sell and eat, chickens for eggs and to eat, hogs to sell and eat, and dairy cattle to milk. One of my first memories was my father's last horses being trucked away and replaced by a small tractor. By the time I graduated from high school, the world had changed. Farming had industrialized, farmers had specialized, and the scruffy wildlife friendly farm had become a "clean" industrial farm, focused on growing corn and soybeans, and mostly was devoid of wildlife. I was fascinated by that transition.

The world of science arrived through the cyclops eye of television. Sputnik was launched the year we got our first television, and TV brought each step of the emerging Space Age into our living room. TV shows provided facets of science and science fiction from reruns of Frank Buck's "Bring 'Em Back Alive" to Buck Rogers serials. The buffet of science and fiction on television fueled my imagination and curiosity. By high school I subscribed to several science magazines and read as much science and science fiction as I could. The first moon landing took place three months after high school graduation. What a wonderful time to learn to love science!

My interests about these transforming worlds of science and land change converged when I discovered geography. Three questions emerged that have guided my teaching and research: Why and how did people change land?, What are the consequences of land change?,

and How can people become better stewards of the Earth and live here sustainably? I have applied these questions to both my research and teaching. For example, the questions guided my research during the decade that I spent using satellite imagery to understand U.S. land change at the USGS Earth Resources Observation and Science (EROS) Center. The questions also provided the foundation for my teaching. For example, during the years that I taught Geography of the Future, I used the questions to apply geography ideas to help students understand the geographic attributes of pandemics and how to prepare for the next (this) one.

My first steps toward science led to a rewarding path that I continue to follow.

Footnote: By coincidence, Frank Buck's grandson became my first Teaching Assistant.

Deadlines

• Faculty Annual Reviews – Part A

If you have not done so already, please submit Part A of your FAR to your department head ASAP.

➤ These were due on **October 15th**

• CNS Teacher of the Year Award

See the 9/15 email from sdsu.naturalsciences@sdstate.edu for more information on how to nominate yourself or others.

➤ Nominations are due by **November 2nd at 5pm**

• CNS Science as Art Competition

See the last page of this newsletter for full information; \$100's of prizes are waiting to be awarded!

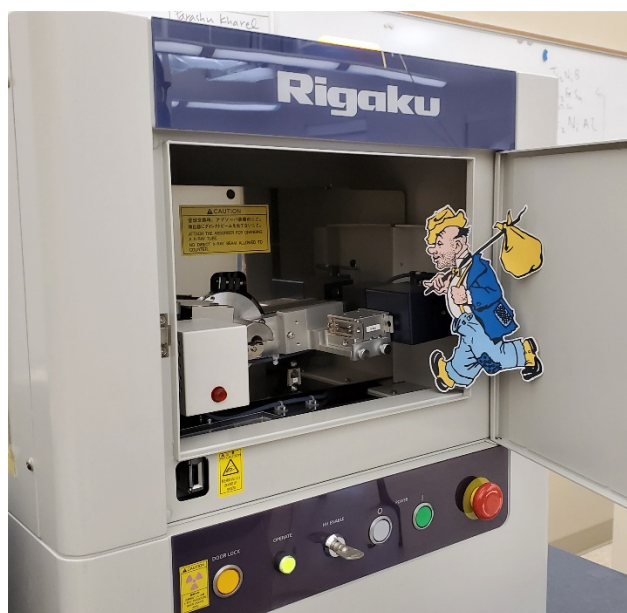
➤ Submissions are due by **December 11th at 5pm**

Engage with Faculty Senate!

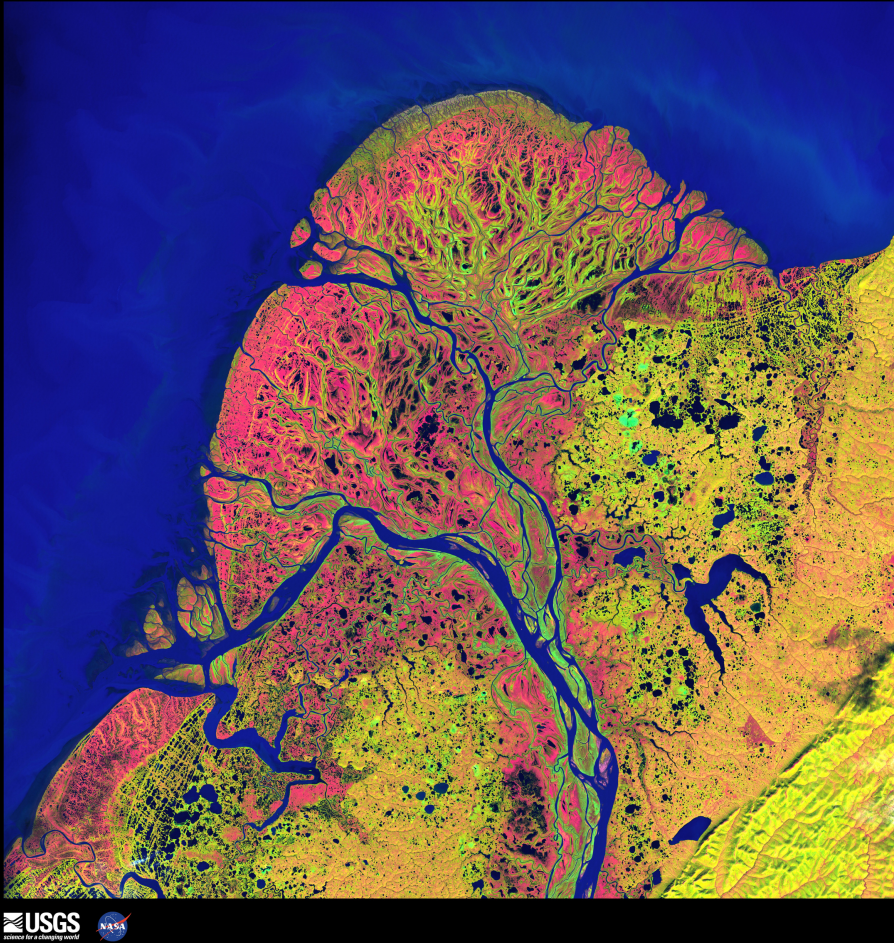
As noted on the SDSU Faculty Senate webpage, "The Faculty Senate is an elected body that develops and disseminates ideas for University improvement, engages in ongoing communication with the SDSU administration, contributes to the formation of general University policy, and performs those duties and functions especially allocated to or assumed by the faculty, subject to the limitations imposed by the laws of the State of South Dakota and the rules of the South Dakota Board of Regents (BOR)."

Your input into issues addressed by Faculty Senate is important! The agenda and minutes for meetings can be found [here on InsideState](#). CNS faculty are encouraged to communicate their questions and concerns to the College of Natural Sciences faculty senators: Madhav.Nepal@sdstate.edu; Judy.Vondruska@sdstate.edu; William.Matson@sdstate.edu or attend the full Faculty Senate meeting yourself. Your faculty senators also hold periodic informational meetings with the college so please look for those announcements and join the conversation.

#whereswil? Weary Wil is visiting all four departments in the college over Hobo Week! See if you can correctly guess the location and each instrument shown ... then check out the captions on our social media through Friday to see the answers and learn more!



COLLEGE OF NATURAL SCIENCES SCIENCE AS ART COMPETITION



From the USGS EROS Center
"Earth As Art", Collection #3:

After beginning in northern British Columbia and flowing through Yukon in Canada, the Yukon River crosses Alaska, USA, before emptying into the Bering Sea. Countless lakes, sloughs, and ponds are scattered throughout this scene of the Yukon Delta. The river's sinuous, branching waterways seem like blood vessels branching out to enclose an organ. It is one of the largest river deltas in the world, and currently (2010) protected as part of the Yukon Delta National Wildlife Refuge.

ENTRY DEADLINE: 5 P.M. ON DEC. 11TH, 2020

The College of Natural Sciences is in its second year of existence and just moved into a permanent space in the Avera Health & Science Center. We need your help to decorate our new walls! The hope is that this space will inspire all who enter to become scientists. With that, the College of Natural Sciences is announcing a new annual art competition.

This year, the challenge is to create a piece that's complementary to the USGS EROS print shown above. This print (approx. 2 feet x 2 feet) will be hung in the new college office.

- **WHO:** Two submission categories - 1) Faculty/Staff, 2) Students
- **WHAT:** An original work of art in any medium is eligible; ideas to get your creative juices flowing include photographs of petri dishes, microscope images, paintings, etc.
- **HOW:** Submit your artwork virtually at scienceasart2020.questionpro.com
- **REWARD:** In each category, first place receives \$300 and second place receives \$100
- **OTHER DETAILS:** Winners will be chosen by popular voting; winning pieces will be displayed in the CNS reception area for one year, after which they'll be auctioned to support fundraising, or returned to the original artist.



THANKS TO THE GEOGRAPHY & GEOSPATIAL SCIENCES DEPARTMENT FOR DONATING THE PRINT & FRAMING

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