

DAKOTA STATE UNIVERSITY



SUMMER 2020



HELLO FROM THE COLLEGE OF BIS

A MESSAGE FROM THE DEAN

The Spring semester seemed to move seamlessly into the Summer term, as the College of BIS faculty and staff continued to provide classes in online formats and to work remotely instead of in our offices on campus. We missed having events such as the honors banquet and graduation ceremonies in person so we could celebrate accomplishments with our students and fellow DSU faculty and staff, but we certainly congratulate everyone!

In looking back over the Summer, we did find that alternative methods were used for meetings and conferences that were held – can you say “Zoom”? The annual ACBSP Conference (business program accrediting organization) and AHIMA’s Assembly on Education Symposium (health information management educators) both had attendees virtually from the College of BIS. In this newsletter, I’ll tell you about the great faculty, students and graduates who made online presentations at events such as information systems conferences and webinars, as well as some earlier presentations made in person.

We had a virtual accreditation site visit from CAHIIM for the Master of Science in Health Informatics and Information Management (MSHIIM) in June which went very well. Thank you to all of the faculty and staff who worked to prepare for that! When we receive successful accreditation of our graduate program, health information management at DSU will be recognized for quality education at associate, baccalaureate, and master’s levels, which will make us very unique!

The Fall term will find people returning to campus, with several Covid-related procedures and policies in place for our health and safety. We will continue to monitor the status of the pandemic and guidelines as we navigate the uncertainty, with flexibility, resilience, and care for our students, staff and faculty. As one of my cousins was fond of saying, “It’s all good!”



Sincerely,

Dr. Dorine Bennett

Dr. Dorine Bennett



CURRICULUM

Several Curriculum Items Approved

During the August SD Board of Regents meeting, several curriculum items were approved for the College of BIS.

We are very excited that we added minors in international business, marketing, and project management as opportunities for our students. These are in addition to our current minors and our other recent new minor in finance technology (FinTech).

We also added a Certificate in Project Management to our curriculum, for both degree-seeking students and those who just would like the certificate. This 18-credit certificate will help to prepare them to complete initial professional certification from the Project Management Institute (pmi.org) through their online 150-question multiple-choice exam to become a Certified Associate in Project Management (CAPM).

The BBA in Finance was approved to be offered 100% online, joining the wide variety of options available from the College of BIS via the internet. It is our goal to ensure that our coursework is relevant, timely, and beneficial, and these programs will contribute to the success of our graduates.



RESEARCH

Welcome



We welcome Dr. Hafiz M. Ali to DSU and the College of Business and Information Systems as a postdoctoral researcher. He received BS (Computer Science) from 'The Islamia University of Bahawalpur, Pakistan' in 2003, MS (Computer Science) from 'PAF-Karachi Institute of Economics and Technology, Pakistan' in 2007, and Ph.D. (Engineering Science) from 'Simon Fraser University, Burnaby, BC, Canada' in 2019. He worked as a teaching assistant and as a lecturer in computer science (and engineering science) for various courses such as Mathematics, Computer Programming, Computer Networks, Algorithms, etc. In addition, he worked as a Quality Assurance, Data, and Software Support Engineer in Gfk-Etilize about three years. He authored and co-authored several peer-reviewed conferences/journal papers. His current research interests include Computationally Challenging Optimization Issues, Approximate Algorithm Design, Evolutionary Computation, and Data Science.

AMCIS 2020

The annual Americas Conference on Information Systems (AMCIS) is viewed as one of the leading A+ IS conferences for presenting the broadest variety of research done by and for IS/IT academicians. For the first time this conference was held virtual. Participants had the opportunity to move around online tables and discuss the research as if you were actually at the conference face to face.

Every year its papers and panel presentations are selected from over 700 submissions, and the AMCIS proceedings are in the permanent collections of libraries throughout the world. ([AMCIS 2020 Proceedings](#)) The College of BIS had a number of faculty and students accepted for inclusion for the 2020 conference:

[A Method for Gamifying Online Discussions](#)

Authors: Brian Bovee, Thomas Jernejcic, Omar El-Gayar

[Multi-Stage Transfer Learning System with Light-weight Architectures in Medical Image Classification](#)

Authors: Rajesh Godasu, Omar El-Gayar, Kruttika Suttrave

[Towards Deep Learning for Weed Detection: Deep Convolutional Neural Network Architectures for Plant Seedling Classification](#)

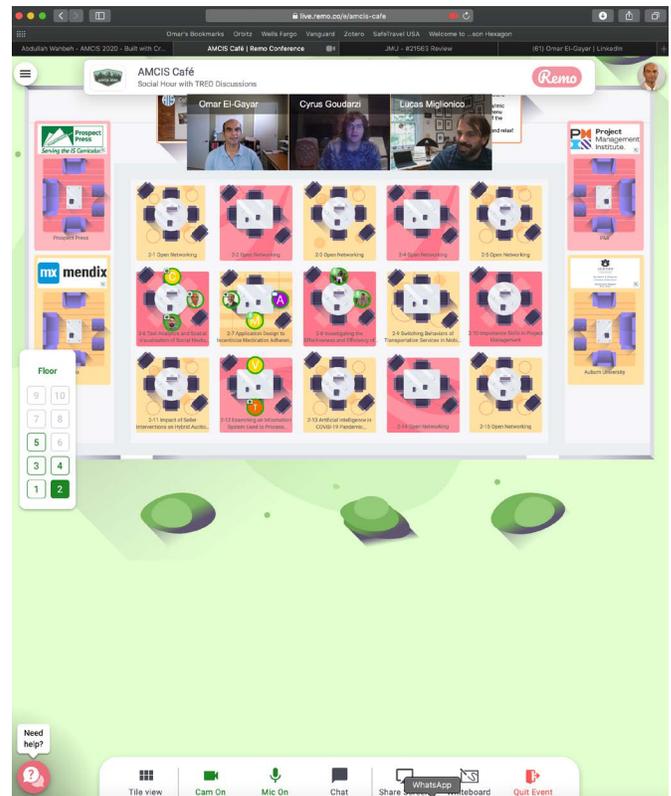
Authors: Martinson Ofori, Omar El-Gayar
Nominated for "Best Paper Award"

[Citizen Trust in the United States Government: Twitter Analytics Measuring Trust in Government Sentiments](#)

Authors: Glenn Papp, Omar El-Gayar, Petter Lovaas

[BYOD-Insure vs Existing Modalities for BYOD Security Assessment: A Comparison Study](#)

Authors: Melva M. Ratchford, Yong Wang, Cherie Bakker Noteboom, Omar El-Gayar



[Credibility Analysis of News on Twitter using LSTM: An exploratory study](#)

Authors: Piyush Vyas, Omar El-Gayar

[Health Risks of e-cigarettes: Analysis of Twitter Data Using Topic Mining](#)

Authors: Abdullah Wahbeh, Mohammad Al-Ramahi, Omar El-Gayar, Tareq Nasralah

[Designing Decision-Support Systems for Secondary School Counselors](#)

Authors: Kodey Crandall, Cherie Bakker Noteboom, Dave Bishop

[Antecedents of Product Owner Preference for Agile Software Development](#)

Authors: Dave Bishop, Pam Rowland, Cherie Bakker Noteboom

[Health Risks of e-cigarettes: Analysis of Twitter Data Using Topic Mining](#)

Authors: Abdullah Wahbeh, Mohammad Al-Ramahi, Omar El-Gayar, Tareq Nasralah

[Early Public Outlook on the Coronavirus Disease \(COVID-19\): A Social Media Study](#)

Authors: Giridhar Reddy Bojja, Martinson Ofori, Jun Liu, Loknath Sai Ambati

NYCWIC 2020

A research paper titled “A Multi-stage Multi-domain Transfer Learning System (MSMDTLS) to Predict Microbially Induced Corrosion (MIC) Using Biofilms Imaging” jointly authored by Dr. David Zeng and two doctoral students, Kruttika Sutrave and Rajesh Godasu, was accepted for a poster session at the New York Celebration of Women In Computing (NYCWIC 2020) Conference. Microbially Induced Corrosion (MIC) causes deterioration of metals and is among the major problems in various industries. The researchers propose a novel Multi-stage Multi-domain Transfer Learning System (MSMDTLS) for MIC prediction tasks at the micro-to-nano scales that transfer knowledge learned with non-biofilm images to biofilms.

The NYCWIC regional conference is modeled after the international Grace Hopper Celebration of Women in Computing Conference. The conference intends to promote the academic, social and professional growth of all who attend. Students, faculty and technology leaders meet to share research, learn about computing opportunities, network with other women in academia and industry and explore issues common to women in computing. The conference, originally scheduled for April 3-4, 2020, unfortunately had to be cancelled due to the COVID-19 pandemic.

HICSS 2020

The Hawaii International Conference on System Sciences (HICSS) has been known worldwide as the longest-standing working scientific conference in Information Technology Management. Since 1968, HICSS has provided a highly interactive working environment for top scholars from academia and the industry from over 60 countries to exchange ideas in various areas of information, computer, and system sciences. Over 600 papers were submitted for the 53rd Hawaii International Conference on System Sciences (HICSS) 2020 conference. Six of those accepted were from DSU's College of BIS:

- » Boit, J., & El-Gayar, O. (2020). [Topical Mining of Malaria Using Social Media. A Text Mining Approach.](#)
- » Bojja, G. R., & Liu, J. (2020). [Impact of IT Investment on Hospital Performance: A Longitudinal Data Analysis.](#)
- » El-Gayar, O., Leung, P., & Scharl, A. (2020). [Introduction to the Minitrack on Analytics and Decision Support for Green IS and Sustainability Applications.](#)
- » McNeil, M., Noteboom, C., Liu, J., El-Gayar, O., & Llanso, T. (2020). [Matching Possible Mitigations to Cyber Threats: A Document-Driven Decision Support Systems Approach.](#)
- » Mitchell, D., & El-Gayar, O. (2020). [The Effect of Privacy Policies on Information Sharing Behavior on Social Networks: A Systematic Literature Review.](#)
- » Sandouka, K., & Noteboom, C. (2020). [The Use of Embedded Interaction Mechanisms for Low-Level Analysis Tasks.](#)



Omar with Damion Mitchell, a DSU Ph.D. IS online student from Jamaica

A number of faculty and students attended the conference, and during the conference, Dr. Omar El-Gayar chaired a mini-track within the "Decision Analytics, Mobile Service and Service Science" track titled "Analytics and Decision Support for Green IS and Sustainability Applications".



Omar and Cherie and four of our Ph.D. IS students (from left to right: Omar El-Gayar, James Boit, Kari Sandouka, Giridhar Bojja, Cherie Noteboom and Damion Mitchell)

NRT Project

Dr. Chris Olson received a subaward for NRT project ID 1828302 - Collaborative Research: NRT: Cyber-Physical-Social System for Understanding and Thwarting the Illicit Economy. This National Science Foundation Research Traineeship (NRT) collaborative award to four South Dakota universities (South Dakota School of Mines and Technology, University of South Dakota, South Dakota State University and Dakota State University) will provide graduate students with the scientific knowledge and professional skills and training needed to become next-generation leaders in the fight against counterfeiting. Dr. Ashley Podhradsky of DSU is the principal investigator for the project and Dr. Olson will be the accessibility specialist helping to create ADA-compliant and highly accessible modules, quizzes, and other components within the State's learning management system.

Covid-19 Research

During the spring and summer, Dr. David Zeng worked with a group of researchers (faculty members from USD and SDSU) to contribute to the state government (state epidemiologist's office) to predict the spread of Covid-19 in the state. Dr. Zeng applied his expertise in data analytics and machine learning, submitted his findings of the effects of social distancing, number of unreported cases and other factors on spread using extended susceptible-infectious-recovered (SIR) models. David also converted part of his models into a programming assignment for his summer Programming for Data Analytics class. The assignment was received very well by the students.

Dr. Omar El-Gayar was involved in research that was designed to identify topics, opinions, and recommendations discussed by medical professionals about the coronavirus pandemic outbreak on social media platform, Twitter. Using a mixed-method approach blending the capabilities of social media analytics and qualitative analysis, the researchers analyzed coronavirus related tweets posted by medical professionals and examined their content. They used qualitative analysis to explore the collected data in order to identify relevant tweets and uncover important concepts about the phenomenon using qualitative coding. Unsupervised and supervised machine learning techniques and text analysis were used to identify topics and opinions. Data was collected from 119 medical professionals on Twitter about the coronavirus pandemic. A total of 10,096 English tweets were collected from the identified medical professionals between December 1, 2019 and April 1, 2020. Tweets were mainly focused on actions and recommendations (28%) needed to control the pandemic. Many tweets warned about misleading information (20%) which could lead to more cases infected with the virus. Other tweets discussed general knowledge and information (9%) about the virus as well as concerns about the healthcare systems and workers (9%). The remaining tweets discussed information about symptoms associated with COVID-19 (8%), immunity (7%), testing (6%), and virus infection and transmission (5%). The research resulted in a journal publication: Wahbeh, A., Nasrallah, T., Al-Ramahi, M., & El-Gayar, O. (2020). Insights into COVID-19: Mining Physicians' Opinions on Social Media. *JMIR Public Health and Surveillance*. <https://doi.org/10.2196/19276>

Medical Research Webinar

In July, Dr. David Zeng hosted a webinar for a group of undergraduate students at USD, as part of a NIH-funded summer research program for undergraduate researchers. The title of his presentation is "Big Data and Deep Learning techniques in Medical Research". During the presentation, Dr. Zeng promoted the Data Analytics and IS graduate programs at DSU. Dr. James Boit, a recent graduate of DSU, presented his research using deep learning techniques for medical image analysis.

COLLABORATIONS

DSU and USD Partner for MSN Degree

DSU's Health Information Management (HIM) Program has been working with USD Nursing Program on plans to offer a Master of Science in Nursing (MSN) with specialization in Nursing Informatics and e-Health Degree Program starting as soon as Spring 2021. While USD will provide many of the courses in the program, DSU will provide the expertise in health informatics. HIMS 742, Healthcare Informatics, Information Systems and Technology and HIMS 743, Advanced Topics in Health Informatics and Health Information Management will be offered by DSU in the program. The program has been approved by the SD Board of Regents (SDBOR).

DSU and MN West Community and Technical College Sign Articulation Agreement

After obtaining approval from the SD Board of Regents, DSU's HIM Program recently signed an articulation agreement with MN West Community and Technical College to accept transfer credits from their AAS degree in Health Information Technology into DSU's Health Information Administration BS degree. The articulation agreement will help to inform transferring students which courses will transfer into the HIA program at DSU.



STUDENT ORGANIZATION NEWS



PBL National Success

Congratulations to all the PBL students who competed at nationals! DSU PBL broke a new record for bring back two 1st place awards and all seven participants earned top 10 placings.

The students competed at the Future Business Leaders-Phi Beta Lambda (FBLA-PBL) Leadership conference. FBLA-PBL is a career and business student organization headquartered in Virginia. This year's competition differed from years past due to the COVID-19 pandemic. While the competition was initially supposed to take place in Salt Lake City, Utah, DSU students joined over 10,000 attendees in participating in an online National Leadership Experience. More information on DSU's participation is available on DSU's news website.



Jacia Christiansen - 1st place in Cost Accounting

Lindsey Vogl - 1st place in Accounting Analysis and Decision Making

David Weidler - 4th place in Entrepreneurship Concepts

Andrew Rotert - 4th place in Programming Concepts

Lindsey Vogl - 5th place in Impromptu Speech

Jacia Christiansen - 6th place in Marketing Concepts

Tavyn Hallan - 9th place in Future Business Executive

Honors List

Congratulations to the College of BIS students who achieved a grade point average of 3.5 to 4.0 to qualify for the President's Academic Honors List. A total of 585 full-time and 197 part-time students qualified for the 2020 spring semester at Dakota State University (DSU) in Madison, S.D. A complete list is available on DSU's [website](#).

Eye on KELOLAND

College of BIS graduate, Lindsey Vogl, is included in the Eye on KELOLAND television feature, titled "[Opening a new chapter during a pandemic](#)".



Graduation Celebration

Congratulations to this College of BIS graduate! Dr. David Zeng and his doctoral student James Boit celebrated James' recent graduation from our PhD in IS program before Dr. Boit departed for his tenure-track position at a public university in Michigan where he will teach Data Analytics. The photo was taken on 8/16 in Sioux Falls.

Master's Degree Scholarship

Congratulations, Caitlin Pick, for being awarded the master's degree scholarship from South Dakota Health Information Management Association. Caitlin is majoring in the Master of Science in Health Informatics and Information Management (MSHIIM) program.

Featured Ph.D. Student

Martinson Ofori, a Ph.D Information Systems student, was interviewed by the Sioux Falls Business Journal for an article titled, [DSU graduate programs offer students exceptional opportunities to enhance their career](#) published by Jodi Schwan.

Featured CIS Student

Jeremie Sopko, a recent graduate from the Computer Information Systems undergraduate program, was featured in a DSU news article titled "[Sopko Thrives With Flexibility of Online Degree](#)".



AWARDS

True Trojan Hexagon Award

It was a pleasure to see the College of BIS represented for three of the True Trojan Hexagon Awards! The True Trojan recognizes those who are committed to the mission of Dakota State University and harbor characteristics essential to DSU success.

He or she unites with other True Trojans, under these goals and principles:

- » Illustrates Trojan Pride
- » True to himself/herself and ideals
- » True to coworkers
- » Hardworking and dedicated to their career and other involvements
- » Holds the DSU Experience and membership of the DSU Family near and dear to their heart

Shannon Vostad was a nominee for the CSA Outstanding Contributor Award. This award recognizes someone who consistently goes above and beyond, while performing at high standard and solves problems and improves work situations without being prompted. The employee demonstrates reliability, perseverance, and focuses on results. They also share knowledge of DSU practices, resources, and skills.

The Health Information Management (HIM) Department was a nominee for the Team of the Year Award. This award is recognition of a team that exemplifies collaboration and cooperation. The team inspires and works towards a bold vision for success at DSU and takes initiative to improve values and efficiency of the services they provide. They embrace change as an opportunity for growth and innovation.

Dr. Cherie Noteboom was a nominee and the winner of the Faculty Outstanding Contributor Award. This is a student nominated award which recognizes the commitment to student success. Faculty members are the core of DSU as they mentor, inspire, and teach students, contribute to research and creative activity, as well as engage in significant service.

Congratulations to each of the nominees, and a big “Way to go!” for Dr. Noteboom!



PROGRAM NEWS

Accreditation

DSU has applied for accreditation of the Master of Science in Health Informatics and Information Management program from the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM). After reviewing the application materials, peer reviewers conducted a virtual site-visit June 18th and 19th. Students, program graduates, HIM faculty, program advisory board members, and DSU key administrators participated in the Zoom site visit. A final decision regarding accreditation will be made in the fall.

Coding Certificate Ranked Top 5

DSU's Healthcare Coding Certificate was ranked in the [Top five for Best Medical Billing and Coding Schools Online published by Edu Med!](#) DSU's Healthcare Coding Certificate program is 31 credits and focused on industry standards for coding and billing, using International Classifications of Diseases (ICD) and Current Procedural Terminology (CPT) code sets.



FACULTY AND STAFF NEWS

DSU News

Dr. Omar El-Gayar was interviewed for an article about changes at DSU. He noted how incredibly responsive faculty have been to student needs through innovative curricula, flexible delivery with expanded online course and program offerings, and a proactive pursuit of support for an expanded scholarship program. The complete article is available on DSU's [website](#).

Longevity

During the first eight months of 2020, nineteen faculty and staff in the College of BIS were recognized for their years of service to the State of South Dakota. We'd like to congratulate and say thank you to these people for providing a cumulative total of 296 years of service!

Shannon Vostad – 18 years	Omar El-Gayar - 20 years
Linda Parks - 10 years	Dan Talley - 24 years
Robert Girtz - 7 years	David Bishop - 14 years
Chris Olson - 15 years	Deb Tech - 21 years
Rena Spohn - 10 years	Jim McKeown - 30 years
Jun Liu - 8 years	Julie Wulf Plimpton - 4 years
Cherie Noteboom - 27 years	Ronghua Shan - 22 years
Jack Walters - 15 years	Dorine Bennett - 33 years
Yenling Chang - 9 years	Insu Park - 6 years
David Zeng - 3 years	



THE COLLEGE OF BUSINESS AND INFORMATION SYSTEMS

NEWSLETTER



PROGRAM CURRICULUM

DSU Catalog

catalog.dsu.edu/

Curriculum Changes

public-info.dsu.edu/curriculum/

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ACCREDITATION OR APPROVAL

The College of Business and Information Systems offers programs that have been accredited or approved by meeting national standards.

