CONNOR SCULLY-ALLISON

Phone: (775) 771-1469
cscully-allison@nevada.unr.edu

4799 Bradford Ln
Reno NV, 89519

EDUCATION

MS COMPUTER SCIENCE AND ENGINEERING — May 2019 (Expected)
University of Nevada Reno
GPA 3.98

BS PHILOSOPHY — May 2012
University of Nevada, Reno
History, Minor
GPA 3.78

HONORS AND AWARDS

Community Fellow, Earth Science Information Partners (ESIP)	2018
Outstanding Teaching Assistant of 2017, UNR CSE Department	2018
Outstanding Teaching Assistant of 2017, UNR Graduate Assoc. (Nominated)	2018
Outstanding Graduate Student of 2017, UNR Graduate Assoc. (Nominated)	2018
Maude F. Dimmick Endowment Scholarship, UNR	2017
Mildred Knezevitch Endowment Scholarship, UNR	2009
Governor Guinn Millennium Scholarship**,** UNR	2007

GRANTS AND PROPOSALS

Funded Proposals

Automatic Database & Microservice Generation from Structured Ontologies, PI, August 1, 2018 - August 1, 2019, ESIP, $3000 (Awarded).

Related Experience

Writer/Contributor, Grant Application, *Broadening the Usage of the NRDC by Exploring New Application Domains and Markets*, UNR, PI S. Dascalu, co-PIs F. Harris, S. Strachan, L. Yang, NSF-EPSCoR project continuation, Dec 1, 2018 - Dec 31, 2019, $75,000, submitted October 1, 2018 (under review).

Writer/Contributor, Grant Application, *Advancing CUAHSI's Data Management Platform with a Machine Learning and Test-Based Automated Quality Control Web Application*, CUAHSI Hydroinformatics Innovation Fellowship, PI Chao Chen (Idaho State University), co-PIs Connor Scully-Allison (University of Nevada, Reno), Rui Wu (Eastern Carolina University), $5,000, submitted Sep 30, 2018 (under review).

Writer/Contributor, Grant application, *Specialized Personnel for Advanced Engineering Education in the Era of Big Data*, UNR internal, Differential Fee proposal, PI Sergiu Dascalu (University of Nevada, Reno), Aug 2018-July 2021, $299,700, submitted Feb 2, 2018 (Declined).

Writer/Contributor, NSF Proposal #1835756 HDR Elements: *Software:QA/QC Tools to Drive FAIR Data Practices in Sensor-Based Science*, $600,000, submitted April 2018 (Declined).

RESEARCH EXPERIENCE

SYSTEM ADMINISTRATOR, Nevada Research Data Center 2018 to *Present*
University of Nevada, Reno

- Maintain and develop software for two Windows-based sever clusters comprised of over 10 physical machines and 21 virtual machines. These dual clusters provide data ingestion, storage and management services for a large interdisciplinary research team funded by an NSF-EPSCoR grant (2013-2018). Maintaining these clusters requires constant communication with many stakeholders, advanced networking skills and a thorough understanding of Windows server software.

GRADUATE RESEARCHER, Cyberinfrastructure Lab 2016 to *Present*
University of Nevada, Reno

- Near-Real-Time Autonomous Quality Control (NRAQC): Developed a web service and web-based UI that autonomously tests time-series environmental measurements flowing in from multiple remote sites across rural Nevada. The tests performed determine the quality of incoming data without need for constant human examination and intervention. Stakeholders are an interdisciplinary group of earth scientists and computer scientists.
    - **Technologies & Practices**: Python, Flask, Angular 4, SQL, Docker, QC Metadata Standards, Data Management, Academic Writing, Interdisciplinary Research, Agile Development Practices
- NRDC Quality Assurance Application: As part of a small, interdisciplinary team, developed a cross platform metadata management application with a fellow graduate researcher. Written in JavaScript, this project used Ionic to build versions of this application for Android or iOS devices.
    - **Technologies & Practices**: Angular.js, Ionic, Mobile Application Development, Front-end Development, Metadata Management, Interdisciplinary Communication, Interdisciplinary Research, UX/UI, Agile Development Practices
- (Advised) NRDC interface to CHORDS: Advised and managed a team of four undergraduate students on a year-long project focused on developing an API that connected the NRDC Database to an EarthCube funded software package: Cloud Hosted Real Time Data Services for the Geosciences (CHORDS).
    - **Technologies & Practices**: Team Management, Project Management, Interpersonal Communication, Conflict Management, Software Engineering Practices

TEACHING EXPERIENCE

University of Nevada, Reno August 2018 to *Present*
CO-INSTRUCTOR, Computer Science and Engineering

- **CS 791 - Human Computer Interaction** (Graduate Level): In my capacity as a co-instructor alongside Dr. Sergiu Dascalu, I presented multiple full-period lectures to a class of 17 Master & PhD students on the subject of Human Computer Interaction, with an emphasis on empirical research. I also assisted with grading, advising and preparing class materials for presentations.

University of Nevada, Reno August 2017 to *Present*
TEACHING ASSISTANT, Computer Science and Engineering

- Lead a team of four graders in grading homework, tests and documentation for a year-long, project oriented, undergraduate capstone course comprised of two semester-long courses: CS 425, Software Engineering and CS 426, Senior Projects in Computer Science. Over the last two years as a TA for these courses, I lectured several times on course content, presented on my research lab and pitched two projects for students to take on. In 2017/2018 there were 125 students in these classes, in 2018 there are currently 105 students.

Truckee Meadows Community College, Reno Dec 2015 to Sep 2016
ADJUNCT INSTRUCTOR**,** Adult Basic Education

- Full instructor for two classes on math fundamentals with an emphasis on GED and Accuplacer test preparation. In this position, I prepared lesson plans and class materials, graded homework and exams, and personally tutored and advised students. Class sizes were taken by about 40 students.

PUBLICATIONS

Journal Publications

Connor Scully-Allison, Vinh Le, Eric Fritzinger, Scotty Strachan, Frederick C. Harris, Jr., and Sergiu M. Dascalu "Near Real-time Autonomous Quality Control for Streaming Environmental Sensor Data," *Procedia Computer Science*, Vol 126, pp. 1656-1665, 2018.

Connor Scully-Allison, Hannah Munoz, Vinh Le, Scotty Strachan, Eric Fritzinger, Frederick C. Harris, Jr., and Sergiu Dascalu "Advancing Quality Assurance Through Metadata Management: Design and Development of a Mobile Application for the NRDC," *International Journal of Computers and Their Applications*, Vol 25, No 1, pp. 20-29, March 2018.

Rui Wu, Connor Scully-Allison, Moinul Hossain Rifat, Jose, Thomas Painumkal, Sergiu Dascalu, and Frederick C Harris, Jr., "Virtual Watershed System: A Web-Service-Based Software Package for Environmental Modeling." Accepted to: *Advances in Science, Technology and Engineering Systems Journal* (ASTESJ), 2018

Journal Papers in Review

Connor Scully-Allison, Rui Wu, Yang Zhou, Ying Kong, Shanyue Guan, Chase Carthen, Jose Thomas Painumkal, Frederick C Harris, Jr., and Sergiu Dascalu, "Water Models in a Cloud: A PRMS Scenario Tool using Budget, User Feedback Control and File Transportation Acceleration Framework." Submitted to: *Information Journal,* 2018

Conference Papers

Ryan Devaney, Sanya Gupta, Vinh Le Connor Scully-Allison, Frederick C. Harris, Jr., and Sergiu Dascalu "Overlay: an Educational Disc Covering Puzzle Game" in *Proceedings of the ISCA 27th International Conference on Software Engineering and Data Engineering* (SEDE 2018) October 8-10, New Orleans, LA, pp. 91-96.

Pattaphol Jirasessakul, Zachary Waller, Paul Marquis, Vinh Le, Connor Scully-Allison, Scotty Strachan, Frederick C. Harris, Jr., Sergiu M. Dascalu "Generalized Software Interface for CHORDS," in *Proceedings of the ISCA 27th International Conference on Software Engineering and Data Engineering* (SEDE 2018), October 8-10, New Orleans, LA, pp. 9-14.

Hannah Munoz, Connor Scully-Allsion, Vinh D. Le, Scotty Strachan, Fredrick C. Harris, Jr., and Sergiu M. Dascalu "A Mobile Quality Assurance Application for the NRDC" in *Proceedings of the ISCA 26th International Conference on Software Engineering and Data Engineering* (SEDE 2017) October 2-4, San Diego, CA, pp. 30-36.

Connor F. Scully-Allison, Hirav Parekh, Frederick C Harris, Jr., and Sergiu M. Dascalu "Analysis of User Experience and Performance at Initial Exposure to Novel Keyboard Input Methods" in *Proceedings of the 2017 International Conference on Computers and Their Applications* (CATA 2017) March 20-22, 2017, Waikiki, HI, pp. 72-78.

Conference Papers in Review

Connor Scully-Allison, Sergiu M. Dascalu, Rui Wu, Lee Barford, Frederick C Harris, Jr. "Data Imputation With an Improved Robust and Sparse Fuzzy K-Means Algorithm." Submitted to: *Proceedings of the 16th International Conference on Information Technology: New Generations* (ITNG 2019) April 1-3, 2019, Las Vegas, NV.

PRESENTATIONS AND INVITED LECTURES

Paper Presentation, "Overlay: an Educational Disc Covering Puzzle Game," 2018 *International Conference on Software Engineering and Data Engineering* (SEDE 2018) October 8-10, New Orleans, LA.

Conference Session, "Quality Control and Information Quality," 2018 ESIP Summer Meeting: Realizing the Socioeconomic Value of Data, July 20, 2018.

Conference Session, "The Usability Test Framework & NRAQC," 2018 ESIP Summer Meeting: Realizing the Socioeconomic Value of Data, July 20, 2018.

Invited Talk, "Near Real-Time Autonomous Quality Control for the Nevada Research Data Center," ESIP Information Quality Research Group (Online), June 20, 2018.

Presentation, "The Nevada Research Data Center," Cyberinfrastructure Days, University of Nevada, Reno. March 2, 2018

Invited Talk, "Quality Control and Usability," ESIP Usability Research Group (Online), January 28, 2018.

Workshop, "LaTeX, an Introduction," UNR CSE Graduate Student Club Workshop, November 12, 2017

Presentation, "The Nevada Research Data Center," University of Nevada, Reno, September 14, 2017

Presentation, "The Nevada Research Data Center," Cyberinfrastructure Days, University of Nevada, Las Vegas. May 2, 2017

Paper Presentation, "Analysis of User Experience and Performance at Initial Exposure to Novel Keyboard Input Methods," 2017 International Conference on Computers and Their Applications (CATA 2017), Waikiki, HI. March 22, 2017.

PROFESSIONAL AFFILIATIONS

UNR Computer Science and Engineering Graduate Student Club, 2017 – *Present*
President (2017-2018), Member (2018-2019)

Earth Science Information Partners (ESIP), 2017-*Present*
Community Fellow (2018 – *Present*), Member of Multiple Internal Research Groups

PROFESSIONAL SERVICE

Committees:

- Graduate Student Representitive for CoEN Differential Fees Committee
    - 2M Dollar Budget

Peer-Reviewed Articles for:

- International Journal on Computers and Their Applications (IJCA)

COMPUTER SKILLS

Programming: Python, CUDA, C, C++, JavaScript, SQL, CSS, HTML, LaTeX, TypeScript, Bash
Platforms/Frameworks: MPI, Flask, CVXPy, PyCUDA, Pytest, NumPy, MatPlotLib, MPI, Angular(JS), Ionic, Git, GitHub, TravisCI, Docker, Linux, Windows, Windows Server 2012, Hyper-V, IIS
Applications: Overleaf, Adobe Photoshop, Adobe Illustrator, Adobe Premiere, Draw.io

REFERENCES

Dr. Sergiu M. Dascalu,
Professor
Computer Science and Engineering
University of Nevada, Reno
1664 N. Virginia St, Reno, NV 89557
Email: dascalus@cse.unr.edu

Dr. Frederick C. Harris Jr.,
Professor
Computer Science and Engineering
University of Nevada, Reno
1664 N. Virginia St, Reno, NV 89557
Email: Fred.Harris@cse.unr.edu

Dr. Scotty Strachan
Director of Cyberinfrastructure
Office of Information Technology
University of Nevada, Reno
1664 N. Virginia St, Reno, NV 89557
Email: strachan@unr.edu