SERGIU DASCALU

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EDUCATION

09/2001 PhD in Computer Science, Dalhousie University, Halifax, Nova Scotia, Canada.
Dissertation: "*Combining semi-formal and formal notations in software specification: An approach to modeling time-constrained systems*". Advisor Dr. Peter Hitchcock.

06/1982 MS in Automatic Control and Computers, Polytechnic Institute of Bucharest, Romania.
Advisor Dr. Traian Ionescu.

ACADEMIC WORK

07/2014 –present	Professor, Department of Computer Science & Engineering, UNR
07/2008 – 06/2014	Associate Professor, Department of Computer Science & Engineering, UNR
07/2002 – 06/2008	Assistant Professor, Department of Computer Science & Engineering, UNR
07/2020 – present	Co-Director (with Dr. Fred Harris), Software Systems Lab, CSE Dept., UNR
07/2003 – 07/2020	Director, Software Engineering Laboratory (SOELA), CSE Department, UNR
08/2013 – 07/2020	Co-Director, Cyber Infrastructure Lab (CIL), CSE Department, UNR
09/1993 – 09/2001	Lecturer and Research Assistant, Faculty of Computer Science, Dalhousie University, Halifax, Nova Scotia, Canada
09/1985 – 08/1993	Assistant Professor (09/1985–09/1990) and Associate Professor I (09/1990–08/1993), Faculty of Automatic Control and Computers, Polytechnic University of Bucharest, Romania

RESEARCH AREAS

My main research interests are in **Human-Computer Interaction** (interaction design, virtual reality environments, user/usability studies, applications of brain computer interfaces), **Software Engineering** (software engineering for scientific research, software environments and tools, simulation environments), and **Data Science** (sensor data acquisition systems, data visualization, database systems). I have also worked on topics pertaining to **Collaborative Systems** and **Computer-aided Education**.

Funded projects are listed on pages 12-16 of this CV. Peer-reviewed **publications** are on pages 17-37. Invited **presentations** are detailed on pages 38-40.

TEACHING AT UNR [2002 – present]

Since joining UNR in July 2002 I have taught: CS 425/CS 625 Software Engineering (**capstone**), CS 426 Senior Projects in Computer Science (**capstone**), CPE 426 Senior Projects in Computer Engineering (**capstone**), CS 320 Interaction Design, CS 420/CS 620 Human-Computer Interaction, CS 709B Advanced Software Project Management and Development, CS 790M Graduate Seminar on Human-Computer Interaction, CS791M Graduate Topics on Human-Computer Interaction, CS 790Z Graduate Seminar on Software-Engineering Topics, CS 791Z Graduate Topics on Software Engineering, CS 493/CS 693/CS 793 Independent Studies on: Software Engineering, Human-Computer Interaction, Database Systems, Programming Languages, Object-Oriented Programming, and Modeling & Simulation.

All the above were new course developments. I applied for and obtained **capstone course designation** for CS 426 Senior Projects in Computer Science (in 2004) and CPE 426 Senior Projects in Computer Engineering (in 2007). Also, I created the **new courses** CS 420/CS 620 Human-Computer Interaction (in 2006) and CS 320 Interaction Design (in 2009).

Until 2014, my regular **teaching workload** used to be two classes per semester (6 credits), typical for UNR CSE faculty at that time. As a research-active faculty since 2014 my teaching workload has been 2+1 courses a year.

Between 2002 and 2022 I taught each Fall CS 425/CS 625 Software Engineering (except in 2017 when I was in sabbatical, and in 2015 and 2019 when I had a course load reduction). Also, between 2003 and 2020 I taught each Spring CS 426 Senior Projects in Computer Science (except in 2010 and 2019). These are the two **capstone courses** of the UNR CSE Department. I have also taught (by rotation) the undergraduate courses CS 320 Interaction Design and CS 420/620 Human-Computer Interaction as well as graduate courses with focus on Software Engineering and Human-Computer Interaction CS709B, CS 790M, CS 791M, CS 790Z, and CS 791Z.

On the **previous scale 1 to 5** (***with 5 being the best***), the **weighted average of my student evaluations** for the **65** course sections that I taught at UNR between Fall 2002 and Spring 2016 was **4.45/5.00** (**985** respondents in total, out of **1,509** students who took these courses). In 2016-2017 I was in sabbatical.

On the **current scale 1 to 4** (***with 4 being the best***), the **average of my student evaluations** for the **21** course sections that I taught at UNR between Fall 2017 and Fall 2024 is **3.53/4.00 for the overall quality of the course** and **3.59/4.00 for the overall quality of the instructor's teaching** (**604** respondents in total, out of **1,305** students who took these courses). In 2023-2024 I was again in sabbatical.

Based on the above course evaluations, in **22.5 years** at UNR I taught **86 course sections** that include both undergraduate and graduate courses, with **a total of 2,814 students**. This gives an average of **125 students instructed per year.** The above course sections do not include a large number of courses without formal student evaluations, such as Independent Study, Direct Study, Internship, Thesis, and Dissertation courses. Currently, in Spring 2025, I teach CS 491/691 Data Visualization with a total of 44 students (24 undergraduate and 20 graduate).

TEACHING ABROAD – University of Grenoble, France [January 2012]

In January 2012, part of their "English Week," I was invited by the University Pierre Mendès-France, Grenoble, France to teach a week-long course on Human-Computer Interaction. About 120 first- and second-year undergraduate students attended this short course, finalized with a 2-hour written exam. In June 2013 I visited again the University of Grenoble, this time for a 3-week collaborative research work.

PAST TEACHING: Lecturer, School of Computer Science, Dalhousie University, Halifax, Canada [1993 – 2001]

At Dalhousie University I taught the 3rd and 4th year courses *Software Engineering*, *Software Development with Ada*, *Database Management Systems*, and *Computer Organization for Electrical Engineers* (the latter centred on the 80x86 assembly language). I was responsible for course contents, preparation and presentation of lectures and tutorials, grading of the exams, and supervision of teaching assistants. In total, I have taught **12** three-credit courses at Dalhousie, while also working as a Graduate Research Assistant in Professor Peter Hitchcock's software engineering group.

PAST TEACHING: Assistant Professor [1985-1990] & Associate Professor I [1990 -1993], Faculty of Automatic Control & Computers, Polytechnic University of Bucharest, Romania

At the Polytechnic of Bucharest, the top engineering university in Romania, I was instructor for several courses, including *Microprocessor-based Process Control Systems, Software Engineering, Programming Languages, Industrial Automation,* and *Fundamentals of Automatic Control*. I supervised over 20 final year diploma theses and conducted research in the areas of microprocessor-based control and user-interface design for real-time systems. As Assistant Professor, my teaching load, including lectures, labs, and tutorials, was 12 hours a week. This changed to 9 hours a week when I was promoted to Associate Professor rank I (in Romanian "sef de lucrari"). I also co-authored books and papers and delivered presentations at various conferences and symposia. Between 1985 and 1990 I served as member of the Faculty of Automatic Control and Computers' annual committee for admissions, with hundreds of applicants taking 3 written exams, each of 3 hours, on Mathematics (Algebra and Analysis; Geometry and Trigonometry) and Physics.

ACADEMIC SUPERVISION

GRADUATE ADVISEMENT

PhD students advised who graduated (11) [3 of them co-advised]

- **Sonu Jose** [co-advised with Dr. Sushil Louis]. *Bayesian Network Structure Learning and its Application on Simulation-based Learning*. PhD in Computer Science and Engineering dissertation (October 2020).
- **Alex Redei**. *Applications and Evaluation of a Motion Flight Simulator*. PhD in Computer Science and Engineering dissertation (January 2019).
- **Jalal Kiswani** [co-advised with Dr. Fred Harris]. *Smart-Cloud: A Framework for Cloud Native Applications Development*. PhD in Computer Science and Engineering dissertation (Jan 2019).
- **Rui Wu** [co-advised with Dr. Fred Harris]. *Framework for Large Data Processing Under Constrained Resources*. PhD in Computer Science and Engineering dissertation (May 2018).
- **Saul Reed**. *Recursive Hyperspheric Classification*. PhD in Computer Science and Engineering dissertation (April 2018).

- **Likhitha Ravi**. *AVISTED: Analysis and Visualization Toolset for Environmental Data*. PhD in Computer Science and Engineering dissertation (January 2018).
- **Qiping Yan**. *Geospatial Metadata Community Adaptor: Applying XSLT Technologies to Geographic Metadata to Address Interoperability and Compatibility Issues.* PhD in Computer Science and Engineering dissertation (May 2014).
- **Ivan Gibbs**. *A Separation-based UI Architecture with a DSL for Role Specialization*. PhD in Computer Engineering dissertation (December 2013).
- **Sohei Okamoto**. *SUNPRISM: A Software Framework for Climate Change Research*. PhD in Computer Engineering dissertation (December 2011).
- **Muhanna Muhanna**. *RTSIS: Real-Time Supervisor Intervention Software for Scenario Modification in CAVE Applications*. PhD in Computer Engineering dissertation (August 2011).
- **Sermsak Buntha***. CAVEMANDER: An Approach and Software Platform for Building Command & Control Applications in CAVE*. PhD in Computer Engineering dissertation (July 2009).

Master students advised who graduated (61) [56 theses, 5 professional papers; 21 co-advised]

- **Zach Estreito** [co-advised with Dr. Fred Harris], *Cyberinfrastructure for IoT-Based Environmental*
- *Monitoring: Advancements with LoRaWAN,* MS in CSE, thesis (December 2024).
- **Hunter Petersen**, Using Decentralized Networks and Distributed Ledger Technologies for Foreign Aid Distribution and Reporting*,* MS in Computer Science & Engineering (CSE) thesis (Dec. 2022).
- **Nick Alvarez** [co-advised with Dr. Engin Arslan], USA Rail Planner: A User-focused Web-scraping Solution for Rail Travel Planning in the United States*,* MS in Computer Science & Engineering (CSE) thesis (December 2022).
- **Zachary Black**, Decentralized Finance: Using Visualization to Demonstrate Core Concepts and Research Applications*,* MS in Computer Science & Engineering (CSE) thesis (May 2022).
- **Brianna Blain-Castelli** [co-advised with Dr. Fred Harris], *Hardware- and Software-Based Cyberinfrastructure Architecture,* MS in CSE, thesis (April 2022).
- **Andrew Munoz** [co-advised with Dr. Fred Harris], *LDAT: A Web Data Visualization Tool for LiDAR Point Cloud Data Analysis,* MS in CSE thesis (August 2021).
- **Adam Cassell** [co-advised with Dr. Shamik Sengupta]. *Navigating Cyberthreat Intelligence with CYBEX-P: Dashboard Design and User Experience.* MS in CSE thesis (May 2021).
- **Arjun Gopinath** [co-advised with Dr. Elie Hajj]. *Software Solution for New Vehicle Operating Cost Models*. MS in CSE thesis (May 2021).
- **Alexis Tudor** [co-advised with Dr. Richard Plotkin]. *Photometry+: A Scientific Pipeline and Teaching Tool*. MS in CSE thesis (April 2021).
- **Xiang "Eric" Li** [co-advised with Dr. Fred Harris], *Private Multi-Cloud Architectural Solutions for NRDC Data Streaming Services*, MS in CSE thesis (December 2020).
- **Amr Aala Abdelhady**, *iMedCare: All in One*, MS in CSE thesis (August 2020).
- **Luyueh Chuang**, *Behavior Sharing Social Network Application: Cimee*, MS in CSE thesis (August 2020).
- **Aritra Bera**, *ASR: Ari Screen Reader for Website Applications*, MS in CSE thesis (August 2020).
- **Alex Yovev**, *Microservice Architecture for FinTech Software*, MS in CSE thesis (August 2020).
- **Chris Ginac** [co-advised with Dr. Sushil Louis], *BEE: Bettering Emergency Evacuations*, MS in CSE thesis (January 2020).
- **Connor Scully-Allison** [co-advised with Dr. Fred Harris], *Keystone: Streaming Data Management Model for the Environmental Sciences,* MS in CSE thesis (May 2019).
- **Vinh Le** [co-advised with Dr. Fred Harris*], Microservice-Based System for Environmental Science Software Applications,* MS in CSE thesis (August 2018).
- **Hannah Munoz** [co-advised with Dr. Fred Harris], *CSEWIS: Cloud and Snow Estimates from Webcam Image Streams,* MS in CSE thesis (August 2018).

- **Jose Painumkal** [co-advised with Dr. Fred Harris]. *Solutions for Improving Model Simulation in the Virtual Watershed Platform,* MS in CSE thesis (August 2017).
- **Ashok Reddy Raju Padmaraju**. *NRDC Data Steward: Repository for Sharing NRDC Research Data and Results*. MS in CSE thesis (December 2016).
- **Angela Chan**. *Integration of Assistive Technologies into 3D Simulations: Exploratory Studies*. MS in CSE thesis (December 2016).
- **Ben Brown**. *Flight of Fancy: Exploring the Integration of Educational Content in Computer Games*. MS in CSE thesis (August 2016).
- **Md Moinul Hossain**. *A Software Environment for Watershed Modeling*. MS in CSE thesis (Aug. 2016).
- **Lisa Paul Palathingal**. *Data Processing Toolset for the Virtual Watershed Project*. MS in CSE thesis (May 2016).
- **Vamsi Krishna Raju Alluri**. *User-Controlled Information Transfer between Digital Devices with a Gestural Input Component*. MS in CSE thesis (December 2015).
- **Rui Wu**. *Environment for Large Data Processing Using MongoDB* .MS in CSE thesis (Dec. 2015).
- **Alex Redei**. *A Software Method for Automating Chemical Cell Lysis of Mammalian Cells for the Forensic Sciences.* MS in Computer Science (CS) thesis (December 2013).
- **Andrew Dittrich**, *ATMOS: A Data Collection and Presentation Toolkit for the Nevada Climate Change Portal*. MS in Computer Science (CS) thesis (December 2012).
- **Ivan Gibbs**, *Workflow Job Manager for NCCP*. MS in CS thesis (December 2012).
- **Aarti Dhone** [co-advised with Dr. Fred Harris]. *A Video Library Management Software Toolkit for the Nevada Climate Change Portal.* MS in CS thesis (August 2012).
- **Victor Ivanov** [co-advised with Dr. Fred Harris]. *VIVA: A Survey Management Toolkit.* MS in CS thesis (August 2011).
- **Bilal Nemutlu**. *OptiETL*. MS in CS thesis (April 2011).
- **Colin King**. *JScaffold: A RAD Solution for Java MVC Applications*. MS in CS thesis (Dec. 2010).
- **Sridhar Reddy Anumandla** [co-advised with Dr. Phil Goodman]. *Modeling Oxytocin-Induced Neurorobotic Trust and Intent Recognition in Human-Robot Interaction*. MS in CS thesis (Nov. 2010).
- **Cory Fleming**. *Mood Maestro: Therapeutic Software for Helping Alleviate Depression*. MS in CS thesis (November 2010).
- **Jigar Patel**. *EnduRan: A Web Application for Racing Events*. MS in CS thesis (April 2010).
- **Eugene Essa** [co-advised with Dr. Fred Harris]. *ACAT: ABET Course Assessment Tool*. MS in CS thesis (April 2010).
- **Sathya Chandrasekar**. *Web-based eBook Generator*. MS in CS thesis (August 2009).
- **Kai Huang**. *A Survey of Existing Climate Change Data Portals and A Prototype Design for the Nevada Climate Change Portal.* MS in CS professional paper. (August 2009).
- **Hrishikesh Kulkarni**. *Mobile Food Ordering System.* MS in CS thesis (January 2009).
- **Sravanthi Yendluri**. *Mobile Prescription*. MS in CS thesis (August 2008).
- **Moynul Haque**. *DCarS: Driving Rules Software for Handheld Devices*. MS in CS thesis (Aug 2008).
- **Nic Herndon**. *ATTITUDE: A Tidy Touchscreen Interface to a UML Development Environment.* MS in CS thesis (August 2008).
- **Sagar Talekar.** *WEBSTORM: Web-based Support Tool for the Organization of Requirements Modeling*. MS in Computer Engineering thesis (August 2008).
- **Olusegun Akinwale**. *DuoTracker: Tool Support for Defect Data Collection & Analysis*. MS in Computer Engineering thesis (December 2007).
- **Burcu Nemutlu**. *PocketBaby: PDA Software for Monitoring Pregnancy Evolution*. MS in CS thesis (June 2007).
- **Michael McMahon, Jr**. *Enhanced Management of Network Devices*. MS in CS thesis (May 2007).
- **Juan Quiroz** [co-advised with Dr. Sushil Louis]. *Interactively Evolving User Interfaces*. MS in CS thesis (May 2007).

- **Muhanna Muhanna**. *Exploration of Human-Computer Interaction Challenges in Designing Software for Mobile Devices*. MS in CS thesis (May 2007).
- **Robert Larmore**. *VHome 3D Web-Based Viewer*. MS in CS thesis (December 2006).
- **Mubeen Parkar**. *A Web-Based Software Solution to Support CLASSE Assessment*. MS in CS thesis (December 2006).
- **Tihomir Calic**. *Exploration of Model Driven Architecture Capabilities via Comparative Utilization of MDA Tools.* MS in CS thesis (December 2006).
- **Eric Fritzinger**. *Tools for Creating Use Cases and Scenarios*. MS in CS thesis (June 2006).
- **Sohei Okamoto**. *WIDE: Web Interface Development Environment*. MS in CS thesis (Dec. 2005).
- **Ning Hao**, *Design Patterns Automation with Template Library*. Prof. paper in CS (Feb 2005).
- **Sermsak Buntha**, *Simulator for Naval Surface Warfare Training*, MS in CS thesis (Dec. 2004).
- **John Jusayan**, *Stratified Programming Integrated Development Environment*, MS in CS thesis (Dec. 2004).
- **Maryann Chandy**, *Software Solutions for Assisting the Learning of Students with Disabilities*, Professional paper in CS (October 2004).
- **Gigi Shum**, *Combining Semi-Formal and Formal Notations in User Interface Specification*, Professional paper in CS (December 2003).
- **Carol Freinkel**, *An Approach for Combining UML and TLA+ in Software Specification*, MS in CS thesis (November 2003).
- **Manish Nilawar**, *A UML-based Approach for Testing Web Applications*, Professional paper in CS (July 2003).

PhD students currently advised (6; 5 of them co-advised)

- **Nicole Beaulieu**. PhD student in Computer Science and Engineering. Specialization area: *Software Engineering*. Expected graduation: May 2025 [co-advised with Dr. Emily Hand].
- **Hudson Lynam**. PhD student in Computer Science and Engineering. Areas: *Human-Computer Interaction, Augmented Reality*. Expected grad.: August 2025 [co-advised with Dr. Eelke Folmer].
- **Vinh Le**. PhD student in Computer Science and Engineering. Areas: *Software Engineering, Human-Computer Interaction*. Expected graduation: Dec. 2025 [co-advised with Dr. Fred Harris].
- **Hossein Jamali**. PhD student in Computer Science and Engineering. Areas: *Software Engineering, Human-Computer Interaction, Data Science*. Expected graduation: May 2026 [co-advised with Dr. Fred Harris].
- **Rojin Manouchehri**. PhD student in Computer Science and Engineering. Areas: *Human-Computer Interaction, Virtual Reality*. Expected graduation: May 2027.
- **Zach Estreito**. PhD student in Computer Science and Engineering. Areas: *Software Engineering, Human-Computer Interaction*. Expected graduation: December 2027 [co-advised with Dr. Fred Harris].

Master students currently advised (7; 4 of them co-advised)

- **Araam Zaremehrjardi**. Area: *Human-Computer Interaction*. Expected graduation: August 2025.
- **Maryam Ghaed**. Area: *Data Science*. Expected graduation: August 2025.
- **Kaden Nesch**. Area: *Data Science*. Expected graduation: August 2025.
- **Nikhil Sharma**. Area: *Software Engineering*. Expected graduation: August 2025.
- **Levi Scully**. Area: *Virtual Reality*. Expected graduation: December 2025.
- **Abderrahmane Lazizi.** Area: *Human-Computer Interaction*. Expected graduation: May 2026.
- **John Montesa.** Area: Human-Computer Interaction. Expected graduation: May 2026.

Examination Committees - PhD students who graduated from UNR (38)

- **Yifan Zhang** (2024). PhD in Computer Science and Engineering*. Deep Learning for Multivariate Time Series Forecasting*. Advisors: Dr. Fred Harris (UNR) and Dr. Rui Wu (ECU).
- **Shuvo Kumar Paul** (2024). PhD in Computer Science and Engineering. *Enhancing Human-Robot Collaboration through a Multi-Module Interaction Framework with Sensor Fusion: Object Recognition, Verbal Communication, Users of Interest Detection, Gesture and Gaze Recognition*. Advisors: Dr. Mircea Nicolescu and Dr. Monica Nicolescu.
- **Tapadhir Das** (2023). PhD in Computer Science and Engineering*. An Investigation of the Factors Influencing the Postsecondary Success of Nevada GEAR UP Students Using Logistic Regression*. Advisor: Dr. Shamik Sengupta.
- **Evangelos Balios** (2022). PhD in Chemical Engineering*. An Innovative Membrane Distillation-Crystallization Process for Brine Treatment*. Advisor: Dr. Sage Hiibel.
- **Kimberly Hopkinson** (2021). PhD in Educational Leadership*. An Investigation of the Factors Influencing the Postsecondary Success of Nevada GEAR UP Students Using Logistic Regression*. Advisor: Dr. Janet Usinger.
- **John Fox** (2021). PhD in Mining Engineering. *Evaluation of Existing Subsurface Cooling Systems Worldwide and Development of Efficient Cooling Methods and Systems Based on Renewable Energy Sources*. Advisor: Dr. Karoly Kocsis.
- **Aaron Walker** (2021). PhD in Computer Science and Engineering. *WOPR: A Dynamic Cybersecurity Detection and Response Framework*. Advisor: Dr. Shamik Sengupta.
- **Majed Al Zayer** (2019). PhD in Computer Science and Engineering. *Universal Usability of Virtual Reality*. Advisor: Dr. Eelke Folmer.
- **Yan Yan** (2019). PhD in Computer Science and Engineering. *Robust Fuzzy Cluster Ensemble on Cancer Gene Expression Data*. Advisor: Dr. Fred Harris.
- **John Volk** (2018). PhD in Geological Sciences. *Advances in Hydrologic Modeling*. Advisor: Dr. Scott Tyler.
- **Satish Badepalli** (2017). PhD in Computer Science and Engineering. *Network Behavior in Thin Film Growth Dynamics*. Advisor: Dr. Murat Yuksel.
- **Ahmet Soran** (2017). PhD in Computer Science and Engineering. *Multi-core Parallel Routing*. Advisor: Dr. Murat Yuksel.
- **William Grussenmeyer** (2017). PhD in Computer Science and Engineering. *Making Spatial Information Accessible on Touchscreens for Users Who Are Blind and Visually Impaired*. Advisor: Dr. Eelke Folmer.
- **Suman Bhunia** (2017). PhD in Computer Science and Engineering. *Survivability against Intelligent Adversary in Next-Generation Wireless Networks.* Advisor: Dr. Shamik Sengupta.
- **Siming Liu** (2015). PhD in Computer Science and Engineering. *Evolving Effective Micro Behaviors in RTS Games.* Advisor: Dr. Sushil Louis.
- **Ahmed Akl** (2015). PhD in Civil Engineering*. Time-Dependent Analysis of Posttensioned Bridge Hinge Curl***.** Advisor: Dr. Saiid Saiidi.
- **Damien Ennis** (2014). PhD in Computer Science and Engineering. *Using Pre- and Post-Process Labeling Techniques for Cluster Analysis*. Advisor: Dr. Fred Harris.
- **Chris Ballinger** (2014). PhD in Computer Science and Engineering. *Co-evolutionary Approaches to Generating Robust Build-Orders for Real-Time Strategy Games*. Advisor: Dr. Sushil Louis.
- **Ilias Apostolopoulos** (2014). PhD in Computer Science and Engineering*. Exploring the Use of Wearables to Enable Indoor Navigation for Blind Users*. Advisor: Dr. Eelke Folmer.

- **Roger Hoang** (2014). PhD in Computer Science and Engineering. *An Extensible Component-based Approach to Simulation Systems on Heterogeneous Clusters*. Advisor: Dr. Fred Harris.
- **Johnathan Kendler** (2013). PhD in Electrical Engineering. *Study of Multiple ASE-Noise Effects and a Filtering Solution in Soliton Propagation through Optical Fibers*. Advisor: Dr. B. Rawat.
- **Brad Towle** (2013). PhD in Computer Science and Engineering. *An Auction Behavior-Based Robotic Architecture for Service Robots.* Advisor*:* Dr. Monica Nicolescu.
- **Hakan Kardes** (2012). PhD in Computer Science and Engineering. *A Graph Theoretic Perspective on Internet Topology Mapping.* Advisor: Dr. Mehmet Gunes.
- **Tony Morelli** (2011). PhD in Computer Science and Engineering. *Natural User Interfaces*. Advisor: Dr. Eelke Folmer.
- **Navid Fallah** (2011). PhD in Computer Science and Engineering. *Mixed Reality Indoor Navigation System for the Visually Impaired.* Advisor: Dr. Eelke Folmer.
- **Mukesh Motwani** (2011). PhD in Computer Science and Engineering. *Third Generation Watermarking: Applied Computational Intelligence Techniques.* Advisor: Dr. Fred Harris.
- **Suat Mercan** (2011). PhD in Computer Science and Engineering. *Virtual Directional Multicast for Overlay Networks.* Advisor: Dr. Murat Yuksel.
- **Laurence Jayet Bray** (2010). PhD in Biomedical Engineering. *A Circuit-Level Model of Hippocampal, Entorhinal and Prefrontal Dynamics Underlying Rodent Maze Navigational Learning.* Advisors: Dr. Fred Harris and Dr. Phil Goodman.
- **Ashkan Voosoghi** (2010). PhD in Civil Engineering. *Post-Earthquake Evaluation & Emergency Repair of Earthquake-Damaged RC Bridge Columns Using CFRP*. Advisor: Dr. Saiid M. Saiidi.
- **Juan Quiroz** (2010). PhD in Computer Science and Engineering. *Creative Design Using Collaborative Interactive Genetic Algorithms*. Advisor: Dr. Sushil Louis.
- **Rakhi Motwani** (2010). PhD in Computer Sci. and Eng. *A Voice-Based Biometric Watermarking Scheme for Digital Rights Management of 3D Mesh Models.* Advisor: Dr. Fred Harris.
- **Bei Yuan** (2009). PhD in Computer Science and Engineering. *Towards Generalized Accessibility of Video Games for the Visually Impaired.* Advisors: Dr. Eelke Folmer and Dr. Fred Harris.
- **Anil Shankar** (2008). PhD in Computer Science and Engineering. *SYCOPHANT: A Context Based Generalized User Modeling Framework for Desktop Applications*. Advisor: Dr. Sushil Louis.
- **Sara Nasser** (2008). PhD in Computer Science and Engineering. *Fuzzy Sequence Classification and Assembly of Environmental Genomes*. Advisor: Dr. Fred Harris.
- **Chris Miles** (2007). PhD in Computer Science and Engineering. *Co-Evolving Real-Time Strategy Game Players*. Advisor: Dr. Sushil Louis.
- **Beifang Yi** (2006). PhD in Computer Science and Engineering. *A Framework for a Sign Language Interfacing System*. Advisor: Dr. Fred Harris.

Examination Committees - Master students who graduated (76) [75 UNR, 1 Canada]

2024: **Jared Vlach; Niloofar Malekghaini**
2022: **Chris Lewis, Justin Colby**
2021: **Andrew Flangas**
2020: **James Schnebly, Vineeth Rajamohan, Lucas Calabrese**
2019: **Navin Adhikari, Taylor Schwartz, Kurt Anderson**
2018: **Andy Garcia**
2017: **Aswathi Mohan, Hirav Parekh**
2016: **Ben McInroy (external, Trent University, Canada), Pratyusha Potpally, Raja Singh, Cameron Rowe, Daniel Chavez, Nolan Burfield, Jessica Smith**

2015: **Christine Johnson, Thomas Kelly**
2014: **Torbjorn Loken, Nathan Jordan, Halim Ates, Devyani Tanna**
2013: **Gareth Ferneyhough, Burkay Sucu, Alex Fiannaca**
2012: **Vinitha Khambadkar, Chad Feller, Corey Thibeault, Claire Shelton, Jon Fox**
2011: **Joe Vesco, Scott Cozen, Bugra Oktay, Dan Ramos, Quan Zou, Cody White**
2010: **Hema Narayanan, Ramesh Mulupuri, Joe Mahsman**
2009: **Manjari Sapre**
2008: **Devrin Lee, Roger Hoang, Johnathan Kendler, David Brown, Chris Franklin, Jeff Wallace, Radha Kuna, Leandro Basallo, Michael Smith, Jesse Phillips, John Kenyon**
2007: **Brad Towle, William Brandstetter, Michael Dye, Janet Snape, Saul Reed, Phani Dogiparthi, Michael Penick**
2005: **Satish Badepalli, Joe Jaquish, Jeff Stuart, Marcel Levi, Rajasekhar Yakkali, Latthaporn Bunyaplanan**
2004: **Bei Yuan, Laurel Jones, James Arseneau, Brian Westphal, Meenakshi Iyer**
2003: **Kedar Deshpande, Xingyi Li.**

External Examiner for PhD dissertations by students from other universities (8)

- **David Egan**, Prof. Doctorate in Science and Engineering, Anglia Ruskin University, Cambridge, England, UK (2024)
- **William August Sawyerr**, PhD in Science and Technology, Anglia Ruskin University, Cambridge, England, UK (2018)
- **Kenneth J. Spiteri**, PhD in Science and Technology, Anglia Ruskin University, Cambridge, England, UK (2017)
- **Amir Ashamalla**, PhD in Engineering and Information Science, University of Technology Sydney (UTS), Australia (2017)
- **Jitendra Singh Thakur**, PhD in Computer Science and Engineering, Indian Institute of Information Technology, Design and Manufacturing, Jabalpur, India (2017)
- **Raini Hassan**, PhD in Computer Science, International Islamic University of Malaysia (2015)
- **Marc Colangelo**, PhD in Computer Science, McMaster University, Canada (2011)
- **1 PhD candidate** from Monash University, Australia (2010)

Examination Committees - PhD students currently in their program of study at UNR (7)

- **Suman Rath** (passed PhD comprehensive exam). Advisor Dr. Shamik Sengupta.
- **Chase Carthen** (passed PhD comprehensive exam). Advisor Dr. Fred Harris.
- **Mayamin Hamid Raha** (passed PhD comprehensive exam). Advisor Dr. Alireza Tavakkoli.
- **Ignacio Astaburuaga** (passed PhD comprehensive exam). Advisor Dr. Shamik Sengupta.
- **Zeynab Maghsoudi** (passed PhD comprehensive exam). Advisor Dr. Fred Harris.
- **Ayesh Meepaganithage.** Advisors Dr. Mircea Nicolescu, Dr. Monica Nicolescu.
- **Jeremiah Paul.** Advisor Dr. Richard Plotkin.

Examination Committees - Master students currently in their program of study at UNR (1)

- **Michael Wilson.** Advisor Dr. Fred Harris.

POSTDOCTORAL FELLOWS ADVISED (5)

[all co-advised with Dr. Fred Harris]

- Dr. Rakhi Motwani (2010-2011)
- Dr. Adrienne Breland (2011-2012)
- Dr. Sohei Okamoto (2011- 2012)
- Dr. Laurence Jayet Bray (2011- 2013)
- Dr. Riad Belkhatir (2016/1- 2016/5)

PROFESSIONALS SUPERVISED (7)

Eric Fritzinger, Software/Data Engineer (2009-2018)
Mike McMahon, Software/Data Engineer (2009-2014)
John Jusayan, Software Engineer (2014-2016)
Vinh Le, Software/Data Engineer (2015-2018)
Dr. Scotty Strachan, Env. Research Coord. (2013-2018)
Dr. Richard Kelley, Research Assistant Prof. (2013-15)
Hannah Munoz, Software Engineer (2017-2018)

UNDERGRADUATE ADVISEMENT

UNDERGRADUATE STUDENTS CURRENTLY ADVISED ON RESEARCH (3; 1 of them co-advised)

- **Quinn Contaldi**. Areas: *Compilers, Data Visualization*. Co-advised with Dr. Fred Harris.
- **Ethan Claire**. Area: *Human-Computer Interaction.*
- **Carmine Potirniche**. Areas: *Software Engineering. Human-Computer Interaction*.

RESEARCH AWARDS OBTAINED BY UNDERGRADUATE STUDENTS under my advisement (19 awards, 30 students)

- 4 groups of students received NSF EPSCoR CIP grants of $5,000 each (two in 2007 and two in 2008): Erik Hanchett, Harold De Armas, Ray Lee, Zack Norcross; Christian Fey, Ayako Okamoto, Cirel Menor; Joe Mahsman, Matt Sgambati, Roy Hemenway, Joey Bennett; Del Jackson, Nhan Diep, Tyler Kayser, Scotty Jones [15 students];
- 5 students received NSF NV EPSCoR Undergrad Research Opportunities (UROP): C. Fleming (2006-07), B. Tackitt ('07-08), M. Whipple ('07-08), J. Larsen ('09-10), S. Komarov (2010-11);
- 3 students received UNR Honors Undergrad Research Awards (HURA), valued at $2,000 each: Benjamin Seelbinder (2008-2009), Valjean Clark (2009-2010), and Steve Komarov (2009-2010).
- 7 students received the UNR General Undergraduate Research Awards (GURA), valued at $1,000 (the first 5), $1,200 (the 6th), or $1,500 (the 7th): Adam Olenderski, Robert Larmore, Robert Sandstrom, Brent Devaney, Namit Chawla, James Motta, and Raymond Lee.

NEVADA GOVERNOR'S CUP AWARDS for groups of students I advised (4 groups, 13 students)

- 1 group of 2 undergrad students, Andrew Costello and Ian Lermusiaux, qualified to the final phase of Nevada Governor's Cup 2006, for which they received a $1,000 award.
- 1 group of 4 undergrad students plus 1 grad student, co-advised with Dr. S. Louis (main advisor) received the 2nd prize at Nevada Governor's Cup 2007 ($10,000 award): David Carr, Ben Menesini, Austin Stanhope, and Mark Harmer (undergrads) + Juan Quiroz (grad student).
- 1 group of 4 undergrad students received the 2nd prize at Nevada Governor's Cup 2008 ($10,000 award): Del Jackson, Nhan Diep, Tyler Kayser, Scotty Jones.

- 1 group of 3 undergrad students, Ben Brown, Wesley Lee, and Jeff Greenspan, qualified to the final phase of Nevada Governor's Cup 2009, for which they received a $1,500 award.

UNDERGRADUATE STUDENTS HIRED ON RESEARCH CONTRACTS (over 30 students on over 10 projects):

Derek Eiler, Nathan Penrod, Herman Leong, Steve Christmann, Daniel Johnson, Eric Marantette, Brian Tackitt, Tyler Winters, William Groesbeck, Sam Delaney, David Keele, Katie Ceglia, Mike Picerno, Ben Seelbinder, Amanda Sou, Curtis Richardson, Javier Garcia, Troy Sedgwick, Ryan Jones, Jake Velez, James Arthur, Steve Komarov, Abba Terrobias, Eric Tilly, Nick Ceglia, Chris Ginac, Tim Shaw, Katie Gilgen, Nick King, Marco Antonio Marques Pinheiro, Royal Stewart, Vinh Le, Alexandra Younkes.

MENTOR FOR HONORS STUDENTS (20):

David Porterfield (2007), Ben Seelbinder (2009), Valjean Clark (2010), Steve Komarov (2011), Issa Beckun (2012), Joanne Navarro (2012), Preston Bergstorm (2013), James Bridegum, Robert Roeder (2014), Brian Goga (2016), Josh Curtis (2016), Douglas Yan – co-advised (2016), Miguel Henares – co-advised (2016); Zach Young (2018), Cayler Miley - co-advised (2018), Jay Li - co-advised (2018); Eugen Nelson (2019), Kripash Shrestha (2020), Gavin McCoy Claire (2022), John Nunley (2023).

ADVISOR FOR VISITING INTERNATIONAL UNDERGRADUATE STUDENTS (1): Marco Antonio Marques Pinheiro (visiting from Brazil) (2013).

ADVISOR FOR THE UNR 2020 NASA DESIGN CHALLENGE TEAM: 4 undergraduate students from 4 departments**.** *Space Challenge II: Create robotic systems to explore lava tubes on the Moon for human habitation*. October 2019 - March 2020. Advised: Alexis Tudor - CSE, Matt Smith - ME, Trent Snyder - CEE, Noah Huerta – Physics.

PUBLICATIONS co-authored with UNR undergraduate students:

- Over 15 peer-reviewed journal articles, with over 25 undergraduate students co-authors;
- Over 100 peer-reviewed conference papers, with over 120 undergraduate students co-authors.

EXHIBITIONS (42 events)

- 14 Computer Science & Engineering **Senior Projects Workshops/College of Engineering Capstone Innovation Days** (2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2016, 2018, 2019) with about 600 CSE student participants in total;
- 8 Nevada Undergraduate Research Symposium (NURS) and UNR Research Poster Conference events (with 46 student participants);
- 4 College of Engineering Public events (with 9 students involved); and
- 16 sessions at international conferences (with over 50 undergraduate students who attended them and presented their research papers).

CSE UNDERGRADUATE STUDENTS who after completing their BS in CS at UNR continued to work with me as advisor in graduate programs (30):

- Among these, 21 received their MS in CS degree working under my advisement: John Jusayan, Eric Fritzinger, Sohei Okamoto, Gigi Shum, Juan Quiroz, Robert Larmore, Michael McMahon, Nic Herndon,

Cory Fleming, Colin King, Victor Ivanov, Alex Redei, Vinh Le, Hannah Munoz, Adam Cassell, Alexis Tudor, Andrew Munoz, Alex Yovev, Brianna Blain-Castelli, Zachary Black, Nick Alvarez.

- Three of the students, Sohei Okamoto, Alex Redei, and Juan Quiroz, also earned their PhD in Computer Science & Engineering degrees from UNR (the first two with me as advisor, while Juan Quiroz's main advisor was Dr. Sushil Louis).
- Currently in their graduate programs, working with me as their advisor, are 2 PhD students (Vinh Le, Zach Estreito) and 4 MS students (Levi Scully, Araam Zaremehrjardi, Kaden Nesch, John Montesa).

GRANT APPLICATIONS FUNDED

[in reverse temporal order, **67** in total: 22 as PI, 15 as Co-PI, 28 as advisor/mentor, 1 as senior personnel, and 1 as external collaborator]

Notes*:* Total amount of funds of the 67 awards is about **$67.2 million,** consisting of**:**
External funds of about **$55.34 million** (45 awards)
Funds from NSHE of **$11.71 million** (part of 4 large multi-state awards)
Internal funds (from UNR) of about **$144,000** (22 awards).
Educational grants are marked with ***;*** Student awards are marked with **#**

[67] *CSSI: Elements: Innovating for Edge-to-Edge Climate Services*. NSF, Federal. Award # 2209806. **Sergiu Dascalu (PI)**, **Stephanie McAfee (co-PI), Scotty Strachan (co-PI), Frederick C. Harris Jr. (co-PI)** – all UNR. Funded: **$589,234**. Submitted: December 2021, **Start date: August 2022, End date: July 2025.**

[66]* *Impact of Utilizing Immersive Virtual Reality and Dynamic Assessment on Mining Engineering Education from the Community of Inquiry Perspective*. NSF, Federal. Award #2202640. **Pengbo Chu (PI), Sergiu Dascalu (co-PI)**, **Leping Liu (co-PI), Li-Ting Chen (co-PI), Ying Yang (co-PI)** – all UNR. Funded: **$849,689.** Submitted: October 2021, **Start date: July 2022, End date: June 2025.**

[65]* *Collaborative Research: IUSE: EHR: A Student-Centered Personalized Learning Framework to Advance Undergraduate Robotics Education*. NSF, Federal. **Dave Feil-Seifer (UNR PI), Sergiu Dascalu (UNR Co-PI), Fred Harris (UNR Co-PI), Rui Wu (ECU PI), Matthew Berg (ECU Co-PI), and Marjorie Ringler (ECU Co-PI);** Funded: **$600,000**. UNR part (all in CSE Department, College of Engineering): **$320,214**. Submitted: July 2021, **Start date: June 2022, End date: May 2025.**

[64] *Brussels Belgium Travel to IEMSS-2022*. International travel award from UNR. INTERNAL. For **Sergiu Dascalu**. Funded: **$1,500.** Period: **May-July 2022**.

[63] *Dependable Internet of Things Applications (DITA)*. An NSERC CREATE project, Canada. **PI: Dr. Marin Litoiu, DITA Scientific Director, York University, Canada**. Professors involved**: Hausi Muller**, U. of Victoria; **Eleni Stroulia**, U. of Alberta; **Alberto Leon-Gracia**, U. of Toronto; **Lauren Sergio**, York U.; **Natalija Vlajic**, York U**.; Jenn McArthur**, Ryerson U.; **Manos Papagelis**, York U.; **Marios Fokaefs**, Poytechnique Montreal; **Sotirios Liaskos**, York U.; **Norha Milena Villegas Machado**, Universidad Icesi, Columbia; and **Sergiu Dascalu, UNR, USA (external collaborator)**. Funded: **$1.65 million (CAD) to participating Canadian universities.** Period: **2018-2024**.

[62] *The Solar Energy-Water-Environment Nexus in Nevada*. NSF EPSCoR RII Track 1. **Role Sergiu Dascalu: Organization (UNR) PI** and **CI lead scientist.** Project PI and State Director: currently, **Dr. Fred Harris (UNR);** formerly, until December 2018, **Dr. Gayle Dana (DRI**). The other organization PIs are Dr. Robert Boehm and Dr. Jacimaria Batista (UNLV), and Dr. Markus Berli (DRI). Period: **June 1, 2013 – May 31, 2023**. Since May 2019 the project received funded annual extensions from NSF. Funding: **$26,384,000** (**$22,384,000** from NSF and **$4,000,000** from the NSHE). Budget at UNR that

I have managed: about **$9.0 million**, of which the CI group's budget for research and development under my supervision has been about **$4.4 million**.

[61]* *REU Site: Cross-disciplinary Research Experience for Undergraduates on Big Data Analytics in Smart Cities*. NSF, Federal. **Yang, Lei (Principal), Yan, Feng (Co-Principal), Dascalu, Sergiu (Supporting),** Harris, Frederick C (Supporting), Lin, Hui (Supporting), Alexis, Kostas (Supporting), Holmes, Heather (Supporting), Zhao, Dongfang (Supporting). **$324,000**. Submission Date: August 2019, **Start Date: April 2020, End Date: March 2023.**

[60]# *Automatic Database and Microservice Generation from Structured Ontologies*, Sponsored by ESIP - Earth Science Information Partners, Federal. **Scully-Allison, Connor (Principal), Dascalu, Sergiu (co-advisor)**, **Harris, Frederick C (co-advisor**). **$3,000**. Submission Date: June 2018, Date Awarded: August 1, 2018, End Date: July 31, 2019.

[59]# *Graduate Student Fellowship, ESIP 2018 - 2019*, Sponsored by ESIP - Earth Science Information Partners. Federal. **Scully-Allison, Connor (grad student, Principal), Dascalu, Sergiu (co-advisor),** Harris, Frederick C (co-advisor). **$2,000.** Submission Date: June 2018, Date Awarded: August 2018, End Date: July 2019.

[58]* *Mobile Devices for Computer Science Teaching and Experimentation,* INTERNAL (Differential Fees**). Liu, Siming (Principal), Dascalu, Sergiu (Co-Principal),** Folmer, Eelke (Co-Principal), Louis, Sushil (Co-Principal), La, Hung (Co-Principal). Sponsored by CSE UNR, University of Nevada, Reno, **$11,480**. Submission Date: April 2018, Date Awarded: April 2018, End Date: June 2018.

[57]* *Developing GPU Infrastructure for UNR Big Data and Robotics Training and Research*, INTERNAL (Differential Fees), Sponsored by CSE UNR, University of Nevada, Reno. **La, Hung (Principal), Dascalu, Sergiu (Co-Principal),** Yang, Lei (Co-Principal), Yan, Feng (Principal), Harris, Frederick C (Co-Principal), Zhao, Dongfang (Co-Principal), Louis, Sushil (Co-Principal), Bebis, George (Co-Principal), Feil-Seifer, Dave J (Co-Principal), Liu, Siming (Co-Principal). **$38,800**. Submission Date: April 2018, Date Awarded: April 2018, End Date: June 2018.

[56]# *Modeling Error Learning-based Post-Processor Framework for Hydrological Models*. NSHE NSF EPSCoR Impact Awards for Publications. **Role: PI and graduate student advisor** (for PhD candidate **Rui Wu**). Collaborating faculty: Dr. Lei Yang, Dr. Fred Harris. Period: December 1, 2017 – May 31, 2018. Funding: **$5,000**.

[55] *Adaptive Data Analysis Framework for Renewable Energy Prediction*. NSHE NSF EPSCoR Impact Awards for Publications. **Role: Collaborating faculty**, PI Dr. Lei Yang. Period: July 1, 2017 – May 31, 2018. Funding: **$5,000**.

[54] *Collaborative Research: The Western Consortium for Watershed Analysis, Visualization, and Experiments (WC-WAVE)*. NSF EPSCoR RII Track 2. **Role: Sr. personnel/organization (UNR) co-PI**. Project PI: Gayle Dana (DRI and Nevada NSF EPSCoR Office), with 3 co-PIs in Nevada and about 25 senior personnel in NV, NM, and ID. Idaho PI: Dr. Peter Goodwin (University of Idaho and ID NSF EPSCoR Office), New Mexico PI: Dr. William Michener (University of New Mexico and NM NSF EPSCoR Office). UNR PI: Frederick C. Harris, Jr. Period: August 1, 2013–July 31, 2017. Total funding: **$6,000,000** (each state: **$2,000,000**; UNR budget: **$872,700**).

[53] *Nevada Infrastructure for Climate Change Science, Education, and Outreach*. NSF EPSCoR, RII Track 1. **Role: UNR Co-PI, leader cyber group** (the group's budget was about **$2,100,000**), with PI Gayle Dana and co-PIs Nick Lancaster, Tom Piechota, and Scott Mensing. Period: Sept. 1, 2008 – Aug. 31, 2013. Funding: about **$21,700,000** (consisting of **$15,000,000** from NSF and about **$6,700,000** from Nevada System of Higher Education).

[52] *Cyberinfrastructure Development for the Western Consortium of Idaho, Nevada, and New Mexico.* NSF EPSCoR RII Track 2. **UNR co-PI**, with Gayle Dana (Nevada PI), Fred Harris (UNR PI), Darko Koracin (DRI PI), and Kent Crippen (UNLV PI). Period: September 15, 2009 – August 31, 2013. Total: **$6,000,000.** Nevada part**: $2,000,000.** UNR/CSE Dept. part: **$554,000**.

[51] *Large-Scale Biologically Realistic Models of Brain Dynamics Applied to Intelligent Robotic Decision Making.* **Co-PI** with Phil Goodman (PI) and Fred Harris (co-PI). Office of Naval Research. ONR Program on Computational Neuroscience, Brain Machine Interface, and Human-Robot Interaction. October 1, 2009 – March 31, 2013. **$827,400**.

[50]* *Bally Technologies Sponsored Student Project in Computer Science and Engineering*. Role: **PI**. Bally Technologies, Reno, NV. Period: April 15 – July 31, 2011. **$10,300**.

[49] *Western Tri-State Innovative Working Group (IWG): CyberScience Scenarios for Focused CI Developments.* **Co-PI** with Karl Benedict, University of New Mexico (PI) and Dan Ames, Idaho State University (co-PI). NSF EPScoR. August 1 – December 31, 2010. **$12,700**.

[48] *Integrated Environmental Modeling Software Systems Innovative Working Group*. **Co-PI** with Dan Ames (PI, Idaho State University) and Karl Benedict (co-PI, University of New Mexico). Western Tri-State Consortium Innovative Working Group proposal solicitation. January 10, 2010 – March 25, 2010, **$9,000**.

[47] *Bally Technologies Sponsored Student Project in Computer Science and Engineering*. **Co-PI**, with Eelke Folmer (PI). Bally Technologies, Reno, NV. Period: Jan. 31 – June 1, 2010. **$9,900**.

[46]**#** *Adaptation of the Nevada Climate Change Data Portal Interface to Small Screen Mobile Devices.* **Mentor** for student Steve Komarov (co-advised with Dr. Donica Mensing). NSF EPSCoR Undergrad Research Opportunity Program (UROP). Dec. 2010 - May 2011. **$4,300**.

[45]* *Losing the Lake: Promoting Sustainability Awareness through Educational Computer Simulations of Lake Mead Water Levels and Water Supply to Las Vegas Valley.* **Co-PI**, with Michael Nussbaum (PI, UNLV), Gale Sinatra (co-PI UNLV), Kent Crippen (co-PI, UNLV) and Fred Harris (co-PI, UNR). NSF EPSCOR/NSHE Climate Change Interdisciplinary Science Teams proposal solicitation. Period: September 1, 2009 – August 31, 2011. **$199,300.**

[44]* *Bally Technologies Sponsored Student Project in Computer Science and Engineering*. **PI**, with Eelke Folmer (co-PI), and Murat Yuksel (co-PI). Bally Technologies, Reno, NV. Period: January 31, 2009 – June 15, 2009. **$12,380**.

[43]* *PC Doctor Sponsored Student Project in Computer Science and Engineering.* **PI.** PC Doctor, Inc., Reno. Period: January 1, 2009 – Sep. 15, 2009. **$10,320.**

[42]**#** *Muse Interactive.* **Advisor** for the group of students: Ben Brown, Wes Lee, and Josh Greenspan. Nevada Governor's Cup – qualified for finals (one of top 6 undergraduate teams out of 25). April 2009. **$1,500**.

[41]**#** *Visualization of Transect Data.* **Advisor** with Franco Biondi (co-advisor) for student Joel Larsen. Nevada NSF EPSCoR RII-Track II Undergrad Research Awards. Period January 1, 2010 – May 31, 2010. **$4,300**.

[40]**#** *iPhone Teacher's Companion.* **Mentor** for student Steve Komarov. UNR Honors Undergraduate Research Awards (HURA). January 1 - May 31, 2010. **$2,000**.

[39]**#** *Research on a New Interaction Paradigm for Personal Computers.* **Mentor** for student Valjean Clark. UNR Honors Undergraduate Research Award (HURA). Jan. 1 - May 31 2010. **$2,000.**

[38]# *PC-sponsored Senior Project in Computer Science.* **PI**. PC Doctor, Inc., Reno, NV. Period Dec. 1, 2008 – September 15, 2009. **$10,380**.

[37]**#** *Student's Aid: A Touchscreen Design.* **Mentor** for student Ben Seelbinder. UNR Honors Undergraduate Research Award (HURA). Period Dec. 1, 2008 – May 15, 2009. **$2,000**.

[36]**#** *Wolfpack Works' Biologue.* **Advisor** with co-advisors Leah Skladany and Gary Valiere for students Nhan Diep, Del Jackson, Scotty Jones, and Tyler Kayser. Nevada Governor's Business Cup – Second Prize. April 2008. **$10,000**.

[35]**#** *Biologue: Your Life's Voice.* **Advisor** for students Nhan Diep, Del Jackson, Scotty Jones, and Tyler Kayser. Co-Advisors: Leah Skladany and Gary Valiere. NSF EPSCoR Cognitive Information Processing – Student Entrepreneurship competition. Period: Feb. 1 – July 31, 2008. **$5,000**.

[34]**#** *STRAFE: Strategic Turn-based Realistic Action in a First-person Environment.* **Advisor** for students Joseph Mahsman, Matt Sgambati, Roy Hemenway, and Joey Bennett. Co-advisor: Fred Harris. NSF EPSCoR CIP – Student Entrepreneurship competition. Period: February 1, 2008 – July 31, 2008. **$5,000**.

[33] *Assisting Disadvantaged Web Users with Real-Time Solutions.* **PI.** International Activities Grant (IAG), UNR. Period April 1, 2008 – June 30, 2009. **$1,500.**

[32]* *PC-Doctor Sponsored Student Projects in Computer Science and Engineering.* **PI.** Period October 22, 2007 – January 31, 2008. Pc-Doctor, Reno, NV. **$9,590.**

[31]**#** *TouchTabs:A New Solution for Guitar Music Composition Using Touch Screens.* **Mentor** for student Matt Whipple. Nevada EPSCoR Undergraduate Research Award. Period: Nov. 15, 2007 – May 15, 2008. **$4,310**.

[30]***** *Smartphone-based Researcher's Companion Software (RCS).* **Mentor** for student Brian Tackitt. Nevada EPSCoR Undergraduate Research Award. Period Nov. '07 – May '08. **$4,310**.

[29] *Exploring Planetary Surfaces: Earth, Moon and Mars.* **Co-PI**, with Chris Fritsen (PI), Wendy Calvin (UNR PI) and 8 other Co-PIs. NASA EPSCoR. Period: September 1, 2007- July 31, 2010. **$1,500,000** (includes NSHE match $750,000).

[28] *Exploration of Research Directions in Software and Systems Quality Assurance.* **PI**, with co-PIs Dr. E. Folmer, Dr. D. Egbert and Dr. B. D. Bryant. Bally Technologies, Reno, NV, USA. Period: June 1, 2007- March 15, 2008. **$112,890** (includes NSHE ARI match $50,000).

[27]***** *Advanced Computer Technology for Senior Projects in Computer Science and Engineering.* **PI**. Student Technology Fee (STF) UNR. Period: May 1, 2007 – June 30, 2007. **$15,780**.

[26]***** *An Advanced Hands-On Learning Experience in Computer Science and Engineering.* **Co-PI**, with Monica Nicolescu (PI) and Mircea Nicolescu. Student Technology Fee (STF) UNR. Period: May 1, 2007 – June 30, 2007. **$11,580**.

[25] *Earned Schedule Outcome Estimation Tool.* **PI**. Quadrant One, Inc., Arlington. VA. Period: November 1, 2006 – December 15, 2007. **$14,840**.

[24]***** *Touchscreens and Handheld Devices for CSE Senior Projects and Human Computer Interaction Courses.* **PI**. Instructional Enhancement Grant (IEG) UNR. July 2007– May 2008. **$2,630**.

[23]**#** *Orchestra Collaboration Software.* **Mentor** for student Raymond Lee. General Undergraduate Research Award (GURA) UNR. Period: June 1, 2007 – May 31, 2008. **$1,500**.

[22]**#** *Samsara Inc.'s SMORTS: Space-based Massively Online Real-Time Strategy Game.* **Co-advisor** with Dr. Sushil Louis (main advisor) and Dr. Rahul Bhargava for students David Carr, Mark Harmer, Ben Menesini, Austin Stanhope. Nevada Governor's Business Cup – Second Prize. April 2007. **$10,000**.

[21]**#** *Role Coll: A Collaborative Software System for Music Annotations.* **Advisor** for students Erik Hanchett, Harold De Armas, Zack Norcross, Raymond Lee. NSF EPSCoR Cognitive Information Processing–Student Entrepreneurship competition. Period: Jan–July 2007. **$5,000**.

[20]**#** *SMORTS: Space-based Massively Online Real-Time Strategy Game.* **Co-advisor** with S. Louis and R. Bhargava for students David Carr, Mark Harmer, Ben Menesini, Austin Stanhope. NSF EPSCoR CIP – Student Entrepreneurship competition. Period: Jan. 1– July 31, 2007. **$5,000**.

[19]**#** *MIDAS: My Interactive Desk Assistant.* **Advisor** for students Christian Fey, Cirel Menor, and Ayako Okamoto. NSF EPSCoR Cognitive Information Processing – Student Entrepreneurship Competition. Period: January 1, 2007 – July 31, 2007. **$5,000**.

[18]**#** *Therapeutic Software: Human-Computer Interaction Challenges and Solutions.* **Mentor** for student Cory Fleming. Nevada EPSCoR GURA. Period: Nov. 1, 2006 – May 31, 2007. **$4,790**.

[17]**#** *goSmart: A Home Automation System.* **Mentor** for student James Motta. General Under-graduate Research Award (GURA) UNR. Period: May 1, 2006 – April 30, 2007. **$1,200**.

[16]**#** *Opposition: A Video Game, a Contest between Technology and Numbers.* **Advisor** for students Andy Costello and Ian Lermusiaux. Award for qualification to the final phase of Nevada's Governor's Cup Competition. Nevada Center for Entrepreneurship. April 2006. **$1,000.**

[15]***** *UNR Software Acquisition Grant: Mac OS Analysis & Design Software.* **PI.** 2005/09. UNR CSAF. Period: September 1, 2005 – August 31, 2006. **$2,000.**

[14] *Project IRIS: Project Maps Decomposition Colorizer.* **PI.** Quadrant One, Inc., Arlington, VA. Period: July 15, 2005 – October 30, 2005. **$6,000.**

[13] *Combining Learning and Human Modeling for Virtual at Sea Training*. **Co-PI**, with Sushil Louis (PI) and Monica Nicolescu (Co-PI). DEPSCoR – Office of Naval Research. Period: June 1, 2005 – May 31, 2008. Funded $416,600 by NSF with Nevada-UNR match $210,000. Total **$626,600.**

[12] *Project CROWN VISION for NISTP at USF (Managing Large-Scale Software Systems).* **PI.** USF (University of South Florida)/SPAWAR. Period: Oct. 1, 2005 – September 30, 2006. **$50,000**.

[11]**#** *Software Project Progress Assessment and Prediction via Metrics Analysis and Visualization.* **Mentor** for undergraduate student Namit Chawla. UNR, Undergraduate Research Award. Period: May 1, 2005 – April 30, 2006. **$1,000**.

[10]***** *Software Engineering Lab Development.* **PI**. Student Technology Fee Distribution Grant, UNR. Period: May 1, 2004 - December 31, 2004. $7,200. Additional funds received from the Office of the Provost, UNR: $14,000. Total: **$21,200**.

[9]**#** *Virtual University of Nevada, Reno Campus/Virtual City of Reno.* **Mentor** for undergraduate student Robert Larmore. UNR, GURA. Period: May 1, 2004 – April 30, 2005. **$1,000**.

[8]**#** *Virtual Environment to Support Collaborative Software Design*. **Mentor** for undergraduate student Brent Devaney. UNR, GURA. Period: May 1, 2004 – April 30, 2005. **$1,000**.

[7]**#** *Automated Futures Trading Systems*. **Mentor** for undergraduate student Robert Sandstrom. UNR, Undergraduate Research Award. Period: May 1, 2004 – April 31, 2005. **$1,000**.

[6] *Software Solutions for Assisting the Learning of Students with Disabilities.* **PI.** International Activities Grant (IAG), UNR. Period: May 1, 2004 - March 15, 2005. **$3,000.**

[5]***** *Microsoft Software and Documentation Grant*. **PI.** About 40 books and software kits received from Microsoft Corporation, March 2004, total value about **$3,200.**

[4]***** *Software Acquisition Funding*. **PI.** UNR, January 2004, funding for Director MX toolset, **$500**.

[3]**#** *Design of a Virtual Environment for the Exploration of Cognitive Aspects of Learning*. **Mentor** for undergraduate student Adam Olenderski. UNR, Undergraduate Research Award. Period: December 1, 2003 – June 1, 2004. **$1,000**.

[2] *Harmony: An Environment for Multi-Notational Software Specification.* **PI**. Junior Faculty Research Grant, UNR. Period: July 1, 2003 – June 30, 2005. **$15,000**.

[1]***** *Verity: A Learning Companion and Self-Assessment Tool.* **PI.** Instructional Enhancement Grant, UNR. Period: January 1, 2003 – June 30, 2003. **$2,300.**

PENDING GRANT APPLICATIONS

[I] *Collaborative Research: III: Medium: A Novel Low-Time Complexity Data Imputation Framework for Spatial-Temporal Data with Large Missing Data Gaps*. Total **$758.5K**, UNR part **$400K**. NSF (June 1, 2025 - May 31, 2029), submitted for review, Fall 2024. Project **PI Sergiu Dascalu** (UNR) with organization **PI Rui Wu** (East Carolina University), and **UNR Co-PI Frederick C. Harris, Jr.** Pending.

[II]* *Collaborative Research: AI-Driven Personalized Pedagogy for Enhancing Learning in Large Undergraduate Computer Science Classes*. Total **$900K**, UNR part **$500K**. NSF (July 1, 2025 - June 30, 2028), submitted for review, Fall 2024**. Project PI Dave Feil-Seifer** (UNR) with organization PI Rui (Wu - East Carolina University), **UNR Co-PI Ankita Shukla**, **UNR Co-PI Sergiu Dascalu**. Pending.

[III] *Reimagining the Disk-Jet Connection in Hard State Black Holes*. Total **$501.5K (**all UNR). NSF (August 1, 2025 - July 31, 2028), submitted for review, Fall 2024, **PI Richard Plotkin** with **Co-PI Sergiu Dascalu** (both UNR).

PUBLICATIONS

[in reverse temporal order, most recent first]

Book Chapters/Books

[BC05] Dittrich, A., Gunes, M. H., and Dascalu, S. (2013). *Network analysis of software repositories: Identifying subject matter experts.* Chapter in Menezes, R., Evsukoff, A., Gonzáles, M.C. (eds.), *Complex Networks*, Studies in Computational Intelligence, 424: 187-198, Springer-Verlag.

[BC04] Elpern, J. and Dascalu, S. (2008). *A Framework for Understanding the open-source revolution*, Chapter XIV in P. Tiako (ed.), *Designing Software-Intensive Systems*, IGI Global, pp. 439-454.

[B_03] Munteanu, F., Ionescu, T., Tataru, D., Musca, G., and Dascalu, S. (1995). *Computer Programming* (in Romanian), Editura Didactica, Romania, 1st edition 1993, 2nd edition 1995.

[B_02] Ionescu, T., Nastea, D., and Dascalu, S. (1992). *Pascal, A High-Level Programming Language*, course notes (in Romanian), Litografia UPB, University Politehnica of Bucharest.

[B_01] Mihu, I., Iliescu, S., Catana, I., Gaburici, V., Munteanu, F., Dumitriu, S., Barbulea, S., Carstoiu, D., Simion, G., Dascalu, S., and Marcu, A. (1986). *Industrial Electronics and Automation* – Laboratory Guide (in Romanian), Litografia UPB, University Politehnica of Bucharest.

Associate Editor for 15 International Conference Proceedings

Details of the conferences are available in section Service Activities and Professional Affiliations, External Service**,** page 41.

Journal Articles

[J_59] Lynam, H., Dascalu, S., and Folmer, E. (2024). Augmented Reality Navigation: A Survey. *International Journal of Human-Computer Interaction*, Taylor & Francis, November 2024, pp. 1-17, doi: 10.1080/10447318.2024.2431757

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[C_37] Yi, B., Harris, F.C., Jr., and Dascalu, S. (2005). From Creating Virtual Gestures to 'Writing' in Sign Languages, *Proceedings of ACM CHI-2005, Conference on Human Factors in Computing*, Portland, OR, April 2005, pp. 1885-1888.

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[C_10] Ionescu, T., and Dascalu, S. (1993). Algorithm and System for Automatic Camshaft Testing, in P. Kopacek (editor), *A Cost Effective Use of Computer Aided Technologies and Integration Methods in Small and Medium Sized Companies: IFAC Workshop, Vienna, Austria, September 1992*, Pergamon Press, Oxford, New York, 1993, pp. 131-136.

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[C_05] Ionescu, T., Soare, C., and Dascalu, S. (1992). Software Package for Control Simulation of Steam and Hot Water Boilers (in Romanian), *Procs. of the 7th Symposium on Systems Modelling, Simulation, Identification (SIMSIS-7)*, Galati, Romania, October 1992, pp. 41-46.

[C_04] Dascalu, *S.* (1992). Software Tools for Integrating Help Information in Application Programs (in Romanian), *Procs. of the 7th Symposium on Systems Modelling, Simulation, and Identification (SIMSIS-7)*, Galati, Romania, October 1992, pp. 217-222.

[C_03] Dascalu, S. (1989). Architectural and Functional Features of the Computing, Measuring, and Control Subsystem of the EMSC-04 Automatic Camshaft Testing Machine (in Romanian), *Procs. of the 2nd Symposium on Structures, Algorithms, and Equipment for Process Control*, Iasi, Romania, October 1989, pp. 545-550.

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[C_01] Carstoiu, D., Dascalu, S., and Moldovan, L. (1985). An Application of Computer-Aided Testing in Automotive Industry, *Proceedings of the 6th International Conference on Control Systems and Computer Science (CSCS-6)*, Bucharest, Romania, May 1985, pp. 225-231.

Posters

[P_07] Dascalu, S.-M., Strachan, S., Savran, W., Heggli, A., & Harris, F. C., Jr. (2024). Research and Development for the NevWx Edge-to-Edge Climate Services System. Poster at the 2024 NSF CSSI PI Meeting in Charlotte, NC, August 2024. Presented by Dr. Scotty Strachan, NSHE. https://doi.org/10.6084/m9.figshare.26809138.v1. In *NSF CSSI PIs Conference*. NSF.

[P_06] Dascalu, S.-M., Strachan, S., McAfee, S., & Harris, F. C. (2023). CSSI: Innovating for Edge-to-Edge Climate Services. Poster presentation at the 2023 NSF CSSI PI Meeting in Houston, Texas, September 26, 2023. Presented together with Dr. Fred Harris, UNR. Published Nov. 2023, DOI: 10.6084/m9.figshare.24223714. In *NSF CSSI PIs Conference*. NSF.

[P_05] Tudor, A. R., Dascalu, S.-M., Plotkin, R., Shaw, A. W., & Covington, A. (2021). User-Guided Development of a Photometric Pipeline for the Great Basin Observatory Robotic Telescope. *237th Meeting of the American Astronautical Society (AAS-2021)*, Jan 11-15, 2021, 8 pages.

[P_04] Patel, J., Dascalu, S., Harris, F., Benedict, K., Gollberg, G. and Sheneman, L. (2011). A Visual Mapper for Data and Model Interoperability. *American Geophysical Union Conference (AGU-2011)*. San Francisco, CA, December 2011.

[P_03] Okamoto, S., St. Jeor, S. and Dascalu S. (2009). Development of New Tools to Assess Energy Balance in Practice, *Experimental Biology (EB-2009)*, New Orleans, LA, April 2009.

[P_02] St. Jeor, S., Okamoto, S., Gerweck, C., Kleyman, K., Luerken, E., Dahir, V., Dascalu, S., Krenkel, J., Wirshing, J., Frattinger, S., Een, M., Molini, M., Scott, B., Sanders, M., and Plodkowski, R. (2007). Applying Energy Balance in Practice. *Food Nutrition Conference and Expo (FNCE-2007),* Philadelphia, PA, September 2007.

[P_01] Shankar, A., Louis, S., Dascalu, S., Houmanfar, R., and Hayes. L. (2007). XCS for Adaptive User Interfaces, *Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2007)*, London, England, July 2007, pp. 1876.

Invited Talks [40] (in addition to regular presentations at conferences, workshops, symposia)

- ***Upcoming***: Dascalu S.-M (2025), Support for Citizen Science through a Nevada Edge-to-Edge Climate Services Platform Dubai, Keynote speech, The 5th International Conference on Applied Science, Engineering, and Technology (ISTDASET-2025), Dubai, UAE, August 21-22, 2025.
- Dascalu, S.-M. (2024). *The NevWx edge-to-edge climate services platform*. Invited talk in Professor Takaaki Goto's undergraduate course on Internet of Things, Toyo University, Kawagoe, Saitama Prefecture, Japan, April 10, 2024.
- Dascalu, S.-M. (2024). *An overview of current projects in the Software Systems Lab at UNR*. Invited talk in Professor Takaaki Goto's Research Lab seminar, Toyo University, Kawagoe, Saitama Prefecture, Japan, April 8, 2024.
- Dascalu, S.-M. (2024). *Brain-computer interfaces: progress & challenges*. Invited talk in Professor Alan Hevner's graduate course ISM 6930 AI for Business, Muma College of Business, University of South Florida, February 19, 2024.
- Dascalu, S.-M. (2023*). Enabling citizen science through the Nevada Weather (NevWx) edge-to-edge climate services platform*. Invited lecture in the course module Professional Issues: Computing and Society, School of Computing and Information Science, Anglia Ruskin University (ARU), Cambridge, UK, November 10, 2023.
- Dascalu, S.-M. (2023). *Brief review of ongoing projects in the Software Systems Lab at UNR*. Invited talk, Research and Collaboration Seminar, School of Computing and Information Science, Anglia Ruskin University (ARU), Cambridge, UK, November 6, 2023.
- Dascalu, S.-M., & Harris, F. C., Jr. (2023). *Software Systems Lab at UNR: An overview of ongoing Projects*. Invited research talk, University of North Texas: Discovery Series, Co-Speaker: Dr. Frederick C. Harris, Jr. Denton, TX, September 29, 2023. UNT. https://ci.unt.edu/discovery-series-software-systems-lab-unr
- Dascalu, S.-M. (2023). *Brain-computer interfaces: progress, promises & challenges*. Keynote talk, The 24th International Conference on Control Systems and Computer Science (CSCS), Bucharest, Romania, May 25, 2023. https://cscs24.hpc.pub.ro/
- Dascalu, S.-M., (2023). VR simulation for mining engineering education. Invited talk, Engineering Responsible Smart Systems (EN-RSS) Workshop at Smart Diaspora Conference 2023Timisoara, Romania, April 2023. Co-authors: Chu, P., Scully, L., Moreland, C., Bertram, N., and Hurtz, D. https://www.diaspora-stiintifica.ro/workshopuri/engineering-responsible-smart-systems-en-rss.
- Dascalu, S.-M. (2017), *Computer Science and Engineering advances for data-intensive research projects in Nevada,* National University of Costa Rica, Heredia campus, November 15, 2017.
- Dascalu, S.-M. (2017), *Human-Computer Interaction: The rearview mirror and the road ahead,* National University of Costa Rica, San Isidro campus, November 14, 2017.
- Dascalu, S.-M. (2017), *Cyberinfrastructure advances for data-intensive research projects in Nevada,* Research Lecture Series, Centre of Excellence for Research in Adaptive Systems (CERAS), University of York, Toronto, Canada, April 20, 2017.
- Dascalu, S.-M. (2017), *Cyberinfrastructure advances for data-intensive research projects in Nevada,* Research Seminar Series, Adaptive eScience Institute, University of Washington, Seattle, USA, April 4, 2017.
- Dascalu, S.-M. (2017), *Cyberinfrastructure advances for data-intensive projects in Nevada,* Research Lecture Series, University of Technology Sydney, Australia, February 21, 2017.
- Dascalu, S.-M. (2017), *A Journey through HCI: achievements and trends*, Research Seminar Series,

Bowie State University, USA, February 2, 2017.

- Dascalu, S.-M. (2016), *The Solar Energy-Water-Environment Nexus Project in Nevada - An Example of Sociotechnical System,* Software Engineering class, Anglia Ruskin University, Cambridge, UK, November 10, 2016.
- Dascalu, S.-M. (2016), *Human-Computer Interaction: The rearview mirror and the road ahead*, Research Lecture Series, Anglia Ruskin University, Cambridge, UK, November 2, 2016.
- Dascalu, S.-M. (2016), *Human-Computer Interaction: A journey through a fast changing landscape*, NSF-EPSCoR Nexus Project, "CI Day at UNR," Reno, Nevada, May 2, 2016.
- Dascalu, S.-M. (2015)., *Innovation in HCI: Milestones passed and the road ahead,* keynote talk, World Usability Day at Pontificia Universidad Catolica de Valparaiso, Chile, November 13, 2015.
- Dascalu, S.-M. (2015). *Innovation and usability in HCI*, keynote talk, Jornadas Chilenas de Computation 2015 (JCC-2015) [Chilean Days of Computation 2015], Universidad Mayor, Santiago de Chile, November 12, 2015.
- Dascalu, S.-M. (2015). *Harnessing the power of computer science to support data-intensive research projects in Nevada*, keynote talk, International Conference on Information Technology: New Generations (ITNG-2015), Las Vegas, NV, April 14, 2015.
- Dascalu, S.-M. (2014). *The western consortium watershed analysis, visualization, and exploration (WC-WAVE) project*. Invited talk, the IEEE International Conference on Collaborative Technologies and Systems (CTS-2014), Minneapolis, MN, May 24, 2014.
- Dascalu, S.-M. (2013). *How can we help? Harnessing the power of computer science and engineering to facilitate environmental science research*. Research seminar, Laboratoire Informatique de Grenoble (LIG), University of Grenoble Alpes, France, June 19, 2013.
- Dascalu, S.-M. (2012). *A cyberinfrastructure project: Building the Nevada Climate Change Portal and its SENSOR system*. Keynote talk, joint International Conferences SEDE-2012 and ACC-2012, Los Angeles, CA, June 27, 2012.
- Dascalu, S. M. & M. McMahon (2012). *Nevada cyberinfrastructure for climate change research*. Talk at the UNR College of Engineering's Advisory Board Meeting, Reno, NV, March 30, 2012.
- Dascalu, S.-M. (2012). *Cyberinfrastructure developments for climate change science and education in Nevada*. Research Seminar, University of Milano-Bicocca, Italy, January 11, 2012.
- Dascalu S.-M. (2011). *Imagine a million file cabinets of climate data: The Nevada Climate Change Data Portal*. Nevada Climate Change Seminar Series, University of Nevada, Las Vegas, September 7, 2011.
- Dascalu S.-M. (2011). *A summary of my research and teaching at UNR*. Talk at the University Politehnica of Bucharest, Romania. Meeting organized as part of the Empowering Romanian Research & Intelligent Information Technology (ERRIC) European project activities. May 30, 2011.
- Dascalu S.-M. (2010). *CAVEMANDER: A software platform for building command-and-control applications in CAVE*. Research lecture series, University of Applied Sciences, Geneva, Switzerland, May 6, 2010.
- Dascalu S.-M. (2010). *Cyberstructure developments for climate change research, education and outreach in Nevada*. Research talk at Glyndwr University, Wrexham, Wales, UK, April 27, 2010.
- Dascalu S.-M. (2010). *Experience report on teaching Senior Projects on Computer Science and Engineering*. Talk at Langston University, Langston, OK, April 9, 2010.
- Dascalu S.-M. (2010). *Cyberinfrastructure developments for Nevada climate change research and education*. Talk at IEEE Oklahoma City section, Oklahoma City, OK, April 8, 2010.
- Dascalu S.-M. (2010). *CAVEMANDER: A software platform for building command-and-control applications in CAVE*. Talk at University of Alabama at Birmingham, March 3, 2010.
- Dascalu S.-M. (2010). *Cyberinfrastructure developments for Nevada climate change research, education and outreach*. Talk at University of Alabama at Tuscaloosa, March 2, 2010.
- Dascalu, S.-M. (2008). *A look at HCI topics as shown at youtube*, invited talk at the 1st Intl. Conf. on Advances in Human-Computer Interaction (ACHI-2008), St. Luce, Martinique, Feb. 12, 2008.

- Dascalu, S.-M., and Pasculescu, A. (2005). *Stratified Programming: Developing programs using strata*. Talk at the IEEE 2005 Oklahoma Symposium on Information Technology and Entrepreneurship (ITE-2005), Langston University, Oklahoma City, OK, April 20, 2005.
- Dascalu, S.-M. (2004). *Computer Science projects: From concept to prototype*, College of Engineering's Industry Day, University of Nevada, Reno, October 8, 2004.
- Dascalu, S.-M., (2004). *Strata-based software construction*, seminar talk part of the IEEE/CSE Colloquia Series, UNR, March 2004.
- Dascalu, S.-M., (2002). Harmony: *Approach and tool for combining semi-formal and formal notations in software specification*, Department of Computer Science, UNR, USA, March 26, 2002. Also presented on April 5, 2002 in the Dept. of Computer Science, University of Manitoba, Winnipeg, Canada, and on April 11, 2002 in the Dept. of Computing and Information Science, University of Guelph, ON, Canada.
- Dascalu, S.-M. (2002). *Combining graphical and formal notations in software specification: An approach and its supporting tool*, Department of Electrical and Computer Engineering, University of Western Ontario, London, Ontario, Canada, March 4, 2002.

AWARDS AND RECOGNITIONS

- UNR Computer Science and Engineering (CSE) Department Best Faculty Teaching Award, 2023.
- Distinguished Alumnus Diploma, Faculty of Automatic Control and Computers, University Politehnica Bucharest, Romania, 2023.
- Faculty Mentor of UNR College of Engineering's Senior Scholar (Gavin Claire), Spring 2022.
- Best Student Paper Award (advisor and co-author) – student Vinh Le. Paper "Microservice-Based System for Environmental Science Software Applications" by Le, V., Scully-Allison, C., Martinez, M., Dascalu, S., Harris, F.C., Jr., Strachan, S., and Fritzinger, E. International Conference in Information Technology: New Generations (ITNG), 2022.
- Best Student Paper Award (advisor and co-author) – student Adam Cassell. Paper "CARS: A Containerized Amazon Recommender System" by Cassell, A., Munoz, A., Blain-Castelli, B., Irwin, N., Yan, F., Dascalu, S.-M., & Harris, F. C. International Conference in Information Technology: New Generations (ITNG), 2021.
- GSA UNR Vada Trimble Outstanding Graduate Mentor Award, 2019.
- Best Student Paper Award (advisor and co-author) – student Angela Chan. Paper "Integration of Assistive Technologies into 3D Simulations: An Exploratory Study" by Angela Chan, Alex Gamino, Sergiu Dascalu, and Frederick C. Harris, Jr., International Conference in Information Technology: New Generations (ITNG), 2016.
- Faculty Excellence Award, College of Engineering, UNR, 2014.
- Mentor of UNR Herz Gold Medalist – student James Bridegum, 2014.
- UNR Donald Tibbitts Distinguished Teacher Award 2011.
- UNR Outstanding Undergraduate Research Faculty Mentor Award 2011.
- Mentor of UNR College of Engineering's Senior Scholar (Steve Komarov), Spring 2011.
- Runner-up (2nd place), UNR Donald Tibbitts Distinguished Teacher Award 2010.
- Faculty Advisor Award 2009, NV Center for Entrepreneurship & Technology (NCET), April 2009.
- Lemelson Award for Innovation in Teaching & Research, College of Eng., UNR, April 2005.
- UNLV College of Education Collaboration Group Award, as part of a collaborative UNLV-UNR project team led by Dr. Michael Nussbaum, UNLV, 2010.
- Best Paper Award, the 21st Intl. Conf. on Computers and Their Applications in Industry and Engineering (CAINE-2008) Honolulu, HI, 2008. Paper "A Recursive Hyperspheric Classification Algorithm" by Saul Reed, Carl Looney, and Sergiu Dascalu.

- Best Paper Award, the 21st Intl. Conf. on Computers and Their Applications (CATA-2006) Seattle, 2006. Paper "vHand: A Human Hand Simulation System" by Beifang Yi, F. Harris, and S. Dascalu.
- Best Paper Award at the 11th Workshop for Information Technologies and Systems (WITS 2001), New Orleans, Louisiana, December 2001. Paper: "Harmony: An Environment for the Combined Use of UML and Z++ in Software Specification" by Sergiu Dascalu and Peter Hitchcock.
- Certificate of Appreciation for Service and Contributions to Organizing the 3rd Intl. Workshop on Collaboration and Virtual Environments (CoVE-2015) at CTS-2015, Atlanta, GA, June 2015.
- Certificate of Appreciation for Distinguished Service to CTS-2012 (International Conference on Collaborative Technologies and Systems) Denver, CO, May 2012.
- Certificate of Recognition and Appreciation for services and contributions to the organization of the 5th IEEE Intl. Conference on Information Technology: New Generations (ITNG-2008), Las Vegas, Nevada, Apr. 2008.
- Certificate of Recognition and Appreciation for services and contributions to the organization of the 4th IEEE Intl. Conference on Information Technology: New Generations (ITNG-2007), Las Vegas, Nevada, Apr. 2007.
- Recognition and Appreciation Award for contribution to the conference's organization, 18th Intl. Conf. on Computers Applications in Industry and Engineering (CAINE-2005), Honolulu, HI, November, 2005.
- Certificate of contribution to ITE-2005 Symposium (Information Technology and Entrepreneurship), Langston University, Oklahoma City, OK, April 2005.
- Scholarship for PhD studies, School of Computer Science, Technical University of Nova Scotia, Halifax, Canada, 1993/1994 to 1996/1997.
- Bruce & Dorothy Rosetti Award, Technical University of Nova Scotia, Canada, 1994/1995 and 1995/1996.
- Honorary mention for original solution to one of the problems of the final phase of the national contest for high school students Olympiad of Mathematics, Brasov, Romania, 1976.

SERVICE ACTIVITIES & PROFESSIONAL AFFILIATIONS

External Service

- **Program Chair/Co-Chair** (13 conferences): SEDE-2019 San Diego, CA; SEDE-2018 New Orleans, LA; SEDE-2017 San Diego, CA; SEDE-2016 Denver, CO; HCI-2010, Maui, HI; SEDE-2009, Las Vegas, NV; ACHI-2008, St. Luce, Martinique; ICSEA-2007, Nice, France; ICSEA-2006, Tahiti; ICIW-2006/ENSYS-2006, Guadeloupe; CAINE-2005, Honolulu, HI; IASSE-2003, San Francisco, CA, 2003.
- **Associate Editor (**15 conference proceedings): ITNG-2024, ITNG-2022, SEDE-2019, SEDE-2018, SEDE-2017, SEDE-2016, SEDE-2009, ACHI-2008, ITNG-2008, ITNG-2007, ICSEA-2007, CAINE-2005, SERP-2004, SERP-2003, IASSE-2003.
- **Workshop co-organizer**: Engineering Responsible Smart Systems (EN-RSS) Workshop at Smart Diaspora Conference 2023, Timisoara, Romania, April 2023.
- **Session Chair/Co-Chair** at over 30 international conferences:

  - ITNG-2024, Las Vegas, April 2024 (HCI track co-organizer and co-chair)
  - ITNG-2022, Las Vegas (virtual), April 2022 (HCI track co-organizer and co-chair)
  - AHIT-2021, Oklahoma City (virtual), May 2021 (chair of the keynote talk session)
  - SEDE-2019, San Diego, CA, September 2019 (chair of the keynote talk session)
  - SEDE-2018, New Orleans, LA, October 2018 (chair of the keynote talk session)
  - SEDE-2017, San Diego, CA, October 2017 (chair of the keynote talk session)
  - OPTIM-2017, Brasov, Romania, May 2017 (session co-organizer and chair)
  - CTS-2015, Atlanta, GA, June 2015 (tutorial chair, 1 session)

- CTS-2014, Minneapolis, MN, May 2014 (session chair, 1 session)
- ICSOFT-2013, Reykjavik, Iceland, July 2013 (session chair, 1 session)
- CTS-2012, Denver, CO, May 2012 (session chair, 2 sessions)
- ICSOFT-2011, Sevilla, Spain, July 2011 (session chair, 1 session)
- VLC-2010, Session on Visual Languages and Environments for Software Engineering, co-Chair with Dr. Kendra Cooper (University of Texas at Dallas), Oak Brook, IL, October 2010
- Session on Cyberinfrastructure, Nevada Climate Change Conf., Las Vegas, NV, Feb. 2010.
- VLC-2009, Session on Visual Languages and Environments for Software Engineering, co-Chair with Dr. Kendra Cooper (University of Texas at Dallas), San Francisco, CA, Sept. 2009
- ITNG-2009, Las Vegas, NV, April 2009 (session chair, 1 session)
- ITNG-2008, Las Vegas, NV, April 2008 (session/track co-chair)
- ACHI-2008, St. Luce, Martinique, French Caribbean, February 2008 (session chair)
- ICSOFT-2007, Barcelona, Spain, July 2007 (session chair, 2 sessions)
- SEDE-2007, Las Vegas, NV, July 2007 (session chair, 1 session)
- IEEE ITNG-2007, Las Vegas, NV, April 2007 (session co-chair)
- ICSEA-2006, Papeete, Tahiti, French Polynesia, October 2006 (session chair, 2 sessions)
- VLC-2005, Banff, Alberta, Canada, September 2005 (session chair, 1 session)
- SERP-2005, Las Vegas, NV, June 2005 (session co-organizer & chair)
- CTS-2005, St. Louis, MO, May 2005 (session chair, 1 session)
- IEEE ITE-2005, Oklahoma City, OK, April 2005 (session chair, 1 session)
- CSITeA-2004, Cairo, Egypt, December 2004 (session co-organizer & chair)
- SERP-2004, Las Vegas, NV, June 2004 (session co-organizer & chair)
- CATA-2004, Seattle, WA, March 2004 (chair, 2 sessions)
- SERP-2003, Las Vegas, NV, June 2003 (session organizer & chair)
- SCI-2003, Orlando, FL, July 2004 (session chair, 2 sessions)
- CATA-2003, Honululu, HI, March 2004 (session chair, 2 sessions)

- **Program Committee member** for over 150 international conference events. Participations since 2015:

  - BIS-2025, Poznan, Poland, June 2025
  - ICSOFT-2025, Bilbao, Spain, June 2025
  - CSCS-2025, Bucharest, Romania, May 2025
  - CSEDU-2025, Porto, Portugal, April 2025
  - OkIP CAIF-2025, Oklahoma City, OK, April 2025
  - IISA-2024, Grand Arsenali, Chania, Crete, Greece, July 2024
  - ICSOFT-2024 Dijon, France, July 2024
  - ICSED-2024 Hong Kong, China, May 2024
  - CSEDU-2024, Angers, France, May 2024
  - OKIP CAIF-2024, Oklahoma City, April 2024
  - ESSE-2023, Napoli, Italy, December 2023
  - OKIP CAIS-2023, Oklahoma City, October 2023
  - ICSOFT-2023 Rome, Italy, July 2023
  - CSEDU-2023, Prague, Czech Republic, April 2023
  - SERD-2022, Oklahoma City, OK, October 2022
  - ESSE-2022, Rome, Italy, October 2022
  - SEDE-2022, October 2022 (online)
  - ICSOFT-2022, Lisbon, Portugal, July 2022
  - CSEDU-2022, April 2022 (online)
  - CATA-2022, March 2022 (online)

- ESSE-2021, Larissa, Greece, November 2021 (online)
- AHIT-2021, Oklahoma City, OK & online, November 2021
- BIS-2021, Hannover, Germany, June 2021 (online)
- SEDE-2021, online, September 2021
- ICSOFT-2021, July 2021 (online)
- CSEDU-2021, April 2021 (online)
- CATA-2021, March 2021 (online)
- HPCSS-2020, held in March 2021 (online)
- ICSOFT-2020, July 2020 (online)
- CSEDU-2020, May 2020 (online)
- BIS-2020, Colorado Springs, CO, June 2020 (online)
- ITNG-2020, Las Vegas, NV, April 2020 (online)
- IEEE GREENTECH-2020, Oklahoma City, OK, April 2020
- CAINE-2019, San Diego, CA, September 2019
- ICSOFT-2019, Prague, Czech Republic, July 2019
- CSEDU-2019, Heraklion, Crete, Greece, May 2019
- HPCS-2019, Dublin, Ireland, July 2019
- HPCS-2018, Orleans, France, July 2018
- ICSOFT-2018, Porto, Portugal, July 2018
- CSEDU-2018, Funchal, Portugal, March 2018
- INTERACCION-2017 (HCI), Cancun, Mexico, September 2017
- ITA-2017, Wrexham, Wales, UK, September 2017
- HPCS-2017, Genoa, Italy, July 2017
- DIS-2017, Edinburgh, Scotland, UK, June 2017
- OPTIM-2017, Brasov, Romania, May 2017
- CSEDU-2017, Porto, Portugal, April 2017
- ICSOFT-2017, Madrid, Spain, July 2017
- CTS-2016, Orlando, FL, November 2016
- ICSAI-2016, Shanghai, China, November 2016
- HPCS-2016, Innsbruck, Austria, July 2016
- ICSOFT-2016, Lisbon, Portugal, July 2016
- CSEDU-2016, Rome, Italy, April 2016
- CATA-2016, Las Vegas, NV, March 2016
- SEDE-2015, San Diego, CA, October 2015
- CAINE-2015, San Diego, CA, October 2015
- SEA-2015, Marina del Rey, CA, October 2015
- ITA-2015, Wrexham, Wales, UK, September 2015
- HPCS-2015, Amsterdam, The Netherlands, July 2015
- ICSOFT-2015, Colmar, France, July 2015
- CTS-2015, Atlanta, GA, June 2015
- ICCIT-2015, Abu Dhabi, UAE, May 2015
- CSEDU-2015, Lisbon, Portugal, May 2015
- CATA-2015, Honolulu, HI, March 2015

- Reviewer for the books:

  - Alejandro Pena-Ayala (editor), *Intelligent and Adaptive Educational-Learning Systems*, Springer, 2012 (reviewed 1 chapter)
  - Benjamin Wah (editor), *Encyclopedia of Computer Science and Engineering*, Wiley & Sons, 2008 (reviewed 1 chapter)

- Pierre Tiako (ed.), *Designing Software-Intensive Systems*, IGI Global, 2007 (reviewed 2 chapters).
- Encyclopedia of Medical Devices and Instrumentation, 2006 (reviewed 1 chapter)
- Roger Pressman, *Software Engineering: A Practitioner's Approach*, 6th Edition, McGraw-Hill, 2004 (reviewed the entire book).

- Reviewer for the **journals**:

  - International Journal of Human-Computer Interaction
  - Springer Nature in Computer Science
  - Journal of Software: Evolution and Process
  - ACM Data Base for Advances in Information Systems
  - Multimedia Tools and Applications
  - Information Systems Frontiers (co-editor of a 2017 special issue on "Disaster Management and Information Systems")
  - Computer Standards and Interfaces
  - Computer Languages, Systems, and Structures
  - Automated Software Engineering Journal
  - IEEE Transactions on Engineering Education
  - Journal of Science of Computer Programming
  - Journal of Systems and Software
  - Computer Security Journal
  - Journal of the Information Technology Research
  - Future Generation Computer Systems
  - Journal of Supercomputing
  - Transactions of the South African Institute of Electrical Engineers (SAIEE)
  - MDPI Future Internet

- Member of NSF review panel for the CSSI program solicitation 2023.
- Member of the NSF GRFP review panel, 2021-2022.
- Member of NSF review panels for program solicitations Science of Design and Software Engineering and Programming Languages, 2007-2008.
- Reviewer for other program solicitations/grant applications, including for ARO/DoD US (2017) and Global Challenges Research Fund (GCRF) UK (2020).
- Attended the MGE@MSA Doctoral Mentorship Institute (mentoring of graduate students from under-represented groups) in 2006, 2007, and 2009.
- Primary delegate of the Northern Nevada Section to the IEEE World Congress, 2005.
- **External referee for promotion and tenure applications** of faculty members from:

  - Stevens Institute of Technology, USA, 2021
  - Rochester Institute of Technology, USA, 2020
  - Yarmouk University, Jordan, 2020
  - Glyndwr University, Wrexham, Wales, UK, 2020
  - Yarmouk University, Jordan, 2017
  - Glyndwr University, Wrexham, Wales, UK, 2015
  - International Islamic University of Malaysia (IIUM), 2014
  - Seattle University, WA, USA, 2012
  - University of Texas at Tyler, TX, USA, 2010
  - Glyndwr University, Wrexham, Wales, UK, 2008

Internal Service

- Chair of UNR Donald Tibbitts Distinguished Teacher of the Year review panel (2019/2020)
- Member of UNR Senate (2020–2023)
- Member of UNR University Research Council (2020–2023)
- Member of UNR Board of Regents Awards committee (2022–2023)
- Member of UNR Travel Grants committee (2022)
- Member of UNR Donald Tibbitts Distinguished Teacher of the Year review panel (2018/2019)
- Member of UNR Outstanding Undergraduate Research Faculty Mentor Award committee (2012–2016, 2019).
- Member of UNR Undergraduate Research Awards review panels (2004 and 2005) and of the UNR Network for Undergraduate Research (since 2004).
- Chair of UNR College of Engineering Personnel and Evaluation committee (2019-2022)
- Member of UNR College of Engineering Awards committee (2024-present)
- Member of UNR College of Engineering Personnel and Evaluation committee (2018-2019)
- Member of UNR College of Engineering's Faculty Excellence Awards committee (2017–2018).
- Member of UNR College of Engineering's Curriculum committee (2015–2016).
- Member of UNR the College of Engineering's Scholarships committee (2006–2009).
- Co-organizer (with Dr. Yantao Shen, EBME) of the College of Engineering's Senior Capstone Innovation Day, an event attended on average by over 600 participants (2014, 2016, 2018, 2019).
- Chair of the Faculty Evaluation committee, CSE Department (for years 2010, 2011, 2013, 2014, 2022).
- Chair of the Assessment committee, CSE Department (2011–2012).
- Chair of the CSE/EBME/IEEE Colloquia committee (2004–2009).
- Chair of two Hiring committees for administrative faculty, CSE Department (2009).
- Chair of the Search committee for three big data positions, CSE Department (2014–2016).
- Chair of the CSE Undergraduate committee (2015–2016).
- Member of the CSE Department's Faculty Retention committee (2025-present)
- Member of the CSE Department's Bylaws committee (2025- present).
- Member of the Faculty Evaluation committee, CSE Department (for years 2018 and 2019).
- Member of several Search committees of the CSE Department (2003, 2006, 2008, 2012, 2018, 2025).
- Member of the Assessment committee, CSE Department (2010–2011, 2025-present).
- Member of the Graduate committee, CSE Department (2004–2007 and 2010–2015).
- Member of the Facilities committee, CSE Department (2020-2024)
- Member of the Undergraduate Committee, CSE Department (2002–2004, 2007–2009, 2017-2020).
- Involved in several Nevada Bound events (orientation of high school students at UNR) and College of Engineering Days at UNR (since the events started to present).

Professional Affiliations

- Association of Computer Machinery (ACM), senior member since 2020; member since 2004.
- Institute of Electrical and Electronics Engineers (IEEE), member since 2004.
- IEEE Computer Society, member since 2004.
- IEEE, vice-chair (elected) of the Northern Nevada Section 2005-2010.
