

MONICA NICOLESCU

Professor

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EDUCATION

Ph.D. in Computer Science, 2003

University of Southern California

Thesis: “An Action-Embedded Framework for Robot Learning from Demonstration”

Dissertation Advisor: Prof. Maja J Matarić

M.S. in Computer Science, 1999

University of Southern California

M.S. in Computer Science, 1996

Polytechnic University Bucharest (Romania)

Thesis : “Fuzzy Control”

Advisor: Prof. Dumitru Popescu

B.S. in Computer Science, 1995

Polytechnic University Bucharest (Romania)

Thesis: “Modeling Identification and Compensation for Friction in Mechanical Drives”, at the National Polytechnic Institute of Grenoble (INPG), FRANCE

Advisor: Prof. Dorin Carstoiu

PROFESSIONAL

July 2015 - Present: University of Nevada, Reno

Professor: Performing teaching and research activities in the areas of autonomous mobile robotics, artificial intelligence, machine learning and human-robot interaction.

July 2009 – June 2015: University of Nevada, Reno

Associate Professor: Performing teaching and research activities in the areas of autonomous mobile robotics, artificial intelligence, machine learning and human-robot interaction.

July 2003 – June 2009: University of Nevada, Reno

Assistant Professor: Performing teaching and research activities in the areas of autonomous mobile robotics, artificial intelligence, machine learning and human-robot interaction.

June 1998 - May 2003: University of Southern California, Robotics Laboratory

Research Assistant: Performed research in autonomous mobile robotics, artificial intelligence, machine learning and human-robot interaction.

February 1996 - May 1998: Omnis Group Ltd. (Bucharest, Romania)

Software Engineer: Development of intelligent software systems for business management.

October 1995 - February 1996: Research Institute for Informatics, (Bucharest, Romania)

Research Assistant: Performed research on expert systems for medical applications.

TEACHING

Fall 2003 – Present: University of Nevada, Reno

- CS 135 – Introduction to Computer Science
- CPE 201 - Introduction to Computer Engineering
- CS 477/677 (formerly CS 465/665) - Analysis of Algorithms
- CS 491(X)/691(X) - Topics: Introduction to Robotics
- CS 493(X)/790(X) - Advanced Topics in Robotics
- CPE 470/670 Autonomous Mobile Robots (previously CS 491(X)/691(X))

Spring 1994 Polytechnic University Bucharest (Romania)

- Enrolled in a pedagogy class, performed teaching training, and received a Diploma in Pedagogy.

ACADEMIC ADVISING

Research Assistant Professor

- Richard Kelley, *Intent Recognition in Human-Robot Interaction* (2013-2014), co-advised with Mircea Nicolescu.

PhD Dissertation Committee Chair (students who graduated)

- Seyed Pourya Hoseini Alinodehi, *A Single-Shot Next Best View Approach Accompanied by a Dual-View Active Vision for Object Recognition Tasks*, (co-advised with Mircea Nicolescu), defended 08/2020.
- Banafsheh Rekabdar, *Classification and Early Recognition of Spatio-Temporal Patterns using Spike-Timing Neural Networks*, defended 05/03/2017.
- Richard Kelley, *Models of Intention for Human-Robot Interaction*, defended 05/14/2013.
- Bradford Towle, *Using an Auction Behavior-Based Robotic Architecture in Order to Fulfill Necessary Functionality for Service Robotics*, defended 05/09/2013.
- Christopher King, *Efficient Object Detection and Tracking Using a Novel MSER-Based Approach*, defended 11/21/2013, co-advised with Mircea Nicolescu.

Master of Science Thesis Committee Chair (students who graduated)

- Andrew Palmer, *Person Profiles and Sensor Calibration for Intent Recognition in Socially Aware Navigation*, defended April 2020.
- Tawfiq Chowdhury, *Computation of Suitable Grasp Pose for Usage of Objects Based on Predefined Training and Real Time Pose Estimation*, defended April 2020.
- Timothy Sweet, *Alignment of LiDAR and Long-Wave Infrared Sensors to a GPS/INS by Non-Experts*, graduated December 2018.
- Luke Fraser, *A Hierarchical Control Architecture for Robust and Adaptive Robot Control*, graduated May 2016.
- Adeline Duong, *A New Way to Interact with Robots*, graduated May 2016.
- Banafsheh Rekabdar, *An Unsupervised Spike Timing Method for Learning Spatio-temporal Patterns*, co-advised with Mircea Nicolescu, graduated May 2015.
- Liesl Wigand, *Deep Convolutional Neural Networks for Multilabel Prediction Using RGBD Data*, graduated 05/06/2014.
- Katie Browne, *Learning to Generalize from Demonstration*, graduated 05/05/2013.
- Daniel Bigelow, *Intent Recognition in Multi-Agent Domains*, graduated 05/04/2013.
- Marek Hajek, *System Architecture for Weather, Road Condition, and Vehicle Data Telemetry via Low Bandwidth Radio Network*, graduated 4/24/2012.
- Richard Kelley, *Mind Reading for Social Robots: Stochastic Models of Intent Recognition*, graduated 04/23/2009.
- Jayashree Konda, *Identification of Protein Coding Regions in Microbial Genomes Using Unsupervised Clustering*, graduated 10/28/2009.
- Austin Stanhope, *A Control Architecture for Dynamic Execution of Robot Tasks Trained in Real-Time Using Particle Filters*, graduated 11/30/2009.
- Asya Nikitina, *Design and Implementation of Pattern Recognition Algorithms for the Detection of Chemicals with a Microcantilever Sensor Array*, graduated 11/07/2007.
- Adam Olenderski, *Aspects of Behavior Design for Learning by Demonstration*, graduated 08/08/2007.
- Xavier Palathingal, *A Framework for Long-Term Human-Robot Interaction*, graduated 04/18/2007.
- Pablo Rivera, *Development of an Autonomous Rover for the Nevada Student Satellite Program*, graduated 08/08/2007.
- Bradford Towle, *Combining Role Playing Game Constructs Toward Real Time Strategy Games*, graduated 11/28/2007.
- Christopher King, *Vision and Laser-Based Perception for Real-Time Autonomous Robotic Applications*, graduated 12/03/2007 (co-chair with Mircea Nicolescu).
- Christian Rayburn, *Field Demonstrated Autonomous Robot Control for CanSat Rocket Payload Retrieval*, graduated Fall 2005.

Master of Science Committee Chair – Non Thesis (students who graduated)

- Huayu Zhou, graduated May 2016.

PhD Dissertation Committee Member (students who graduated)

- Frank Mascariich, defended July 1, 2021, advisor Kostas Bekris.
- Rahul Dubey, *Evolutionary Distributed Control Of Heterogeneous Agents In Dynamic Environments*, defended June 22, 2021, advisor Sushil Louis.
- Janelle Blankenburg, *Generalized Task Structure Learning for Collaborative Multi-Robot/Human-Robot Task Allocation*, defended April 2020, advisor David Feil-Seifer.
- Amir Ghasemkhani, *Stochastic Learning and Optimization with Imperfect Data in Cyber-Physical Systems*, advisor Lei Yang, defended November 25, 2019.
- Muhammed Abdul Canbaz, *Internet Topology Mining: From Big Data to Network Science*, advisor Mehmet Gunes, defended April 19, 2018.
- Saul Reed, *Recursive Hyperspheric Classification and its Applications*, advisor Sergiu Dascalu, defended April 25, 2018.
- Mohammad Jafari, *Distributed Control of Multi-Agent Systems Using Biologically-Inspired Reinforcement Learning*, advisor Hao Xu, defended May 2018.
- Esra Erdin, *A Decentralized Online Social Network*, defended May 8 2017, advisor Mehmet Gunes.
- Siming Liu, *Evolving Effective Micro Behaviors for RTS Games*, defended May 2015, advisor Sushil Louis.
- Christopher Ballinger, *Co-evolutionary Approaches to Generating Robust Build-Orders for Real-Time Strategy Games*, defended 12/2/2014, advisor Sushil Louis.
- Roger Hoang, *An Extensible Component-based Approach to Simulation Systems on Heterogeneous Clusters*, defended 05/13/2014, advisor Fred Harris.
- Amol Ambardekar, *Vehicle Classification Framework: Online Classification with Tracking*, defended 4/20/12, advisor Mircea Nicolescu.
- Mehmet Burak Akgun, *Dual Layer Scale-Free Network Topology Synthesis*, defended 06/10/2014, advisor Mehmet Gunesh.
- Hasan Karaoglu, *Contract Routing Architecture*, defended 08/3/2012, advisor Murat Yuksel.
- Suat Mercan, *Virtual Directional Multicast for Overlay Networks*, defended 07/07/2011, advisor Murat Yuksel
- Adrienne Breland, *Fast-Graph Approach to Modelling Similarity of Whole Genomes*, defended 03/16/2011, advisors Fred Harris and Karen A. Schlauch.
- Mehmet Bilgi, defended 11/17/2010, advisor Murat Yuksel.
- Suat Mercan, *Virtual Directional Multicast for Overlay Networks*, passed his qualification exam 12/01/2010, advisor Murat Yuksel.
- Alireza Tavakkoli, *A Non-Parametric Framework for Object Tracking in Videos with Quasi-Stationary Backgrounds*, defended 04/22/2009, advisor Mircea Nicolescu.

- Bei Yuan, *Towards Generalized Accessibility of Video Games for the Visually Impaired*, defended 04/29/2009, advisor Fred Harris.
- Leandro Loss, *Iterative Tensor Voting for Perceptual Grouping of Natural Shapes in Cluttered Backgrounds*, defended 04/10/2009, advisor George Bebis.
- Gholamreza Amayeh, *A Component-Based Approach to Hand-Based Verification and Identification System*, defended 11/20/2009, advisor George Bebis.
- Anil Shankar, *SYCOPHANT, A Context Based Generalized User Modeling Framework for Desktop Applications*, graduated 05/13/2008, advisor Sushil Louis.
- Sara Nasser, *Fuzzy Sequence Classification and Assembly of Environmental Genomes*, graduated 03/17/2008. advisor Fred Harris.
- Chris Miles, *Co-Evolving Real Time Strategy Game Players*, graduated 08/08/2007, advisor Sushil Louis.
- Ekkasit Tiamkaew, *Techniques for Improving Efficiency and Accuracy of Contemporary Dynamic Branch Predictors*, graduated Spring 2005, advisor Angkul Kongmunvattana.

Master of Science Thesis Committee Member (students who graduated)

- David Kweku, *A Combined Functional Data & Mixture Models Approach for Modeling and Classification of Nanomotion*, advisor Ania Panorska, defended November 22, 2021.
- Alina Giri, *Exploring the COVID-19 Cases Around the World*, advisor Ania Panorska, defended July 23, 2021.
- Athanasia Katsila, *Active Peer Pressure in Human-Robot Interaction*, advisor David Feil-Seifer, defended December 4, 2018.
- Blanca Miller, *K-12 Curriculum and Robotics to Address the Workforce Shortage and Advancement of Computing*, advisor David Feil-Seifer, defended May 10, 2018.
- Frank Mascarich, *Radiation Field Characterization using Autonomous Robots*, advisor Konstantinos Alexis, defended May 10, 2018.
- Janelle Blankeburg, *A Distributed Control Architecture for Collaborative Multi-Robot Task Allocation*, advisor David Feil-Seifer, defended December 1, 2017.
- Shehryar Khattak, *Multi-Modal Landmark Detection and Tracking for Odometry Estimation in Degraded Visual Environments*, advisor Konstantinos Alexis, defended December 6, 2017.
- Meera Sebastian, *Socially-Aware Navigation Planner Using Models of Human-Human Interaction*, advisor David Feil-Seifer, defended September 6, 2017.
- Pourya Hoseini, *Active Vision for Object Recognition by Dynamically Fusing Eye-in-Hand Data*, advisor Mircea Nicolescu, defended December 1, 2017.
- Devin Connell, *Dynamic Path Planning and Replanning for Mobile Robot Team Using RRT**, advisor Jim La, defended May 5, 2017.
- Dillon Aberasturi, *Self-Similarity of Random Aggregation Trees in Hyperbolic Spaces*, advisor Ilia Zaliapin, graduated May 25 2017.
- Alexander Gamino, *HMM-Based Techniques for Intent Recognition in a Simulated Realistic Naval Environment*, advisor Mircea Nicolescu, graduated May 2016.

- David Frank, *Deep Learning Based Robust Human Body Segmentation for Pose Estimation from RGB-D Sensors*, advisor David Feil-Seifer, graduated May 2016.
- Mohamad Jafari, *On The Cooperative Control And Obstacle Avoidance Of Multi-Vehicle Systems*, defended December 2015, advisor Shamik Sengupta.
- Mohammad Taghi Saffar, *Intent Recognition Using an Activation Spreading Architecture*, advisor Mircea Nicolescu, graduated April 2015.
- Khoa Tran, graduated 5/7/2014, *Motion Segmentation in a Dynamic Scene based on Parametric Motion Modeling using Generalized Principal Component Analysis*, advisor Mircea Nicolescu.
- Jin Jiang, *Robust Event Detection and Retrieval in Surveillance Video*, graduated 5/6/2014, advisor Mircea Nicolescu.
- Abbas Ardakany, *An Extended Local Binary Pattern for Gender Classification*, graduated 12/16/2013, advisor Mircea Nicolescu.
- Alexander Redei, *A Software Method for Automating Chemical Cell Lysis of Mammalian Cells for the Forensic Sciences*, graduated 12/5/2013, advisor Sergiu Dascalu.
- Andrew Dobson, *Provably Asymptotically Near-Optimal Motion Planning with Sparse Data Structures*, graduated 5/29/2012, advisor Kostas Bekris.
- Ryan Luna, *Efficient Multi-Robot Path Planning in Discrete Spaces*, graduated 04/18/2011, advisor Kostas Bekris.
- Jigarkumar Patel, defended 04/14/2010, advisor Sergiu Dascalu.
- Sridhar Annumandla, defended 11/30/2010, advisor Fred Harris.
- Yanbo Li, defended 12/08/2010, advisor Kostas Bekris.
- Julide Koracin, graduated 05/04/2009, advisor George Bebis.
- Benjamin Haas, graduated 04/23/2009, advisor Sami Fadali.
- Pradeep Katta, *Integrating Depth and Intensity Information for Vision-Based Head Tracking*, graduated 08/06/2008, advisor Mircea Nicolescu.
- Adrienne Breland, *A Supervised Strain Classifier*, graduated 03/14/2008, advisor Fred Harris.
- Mehmet Bilgi, *Capacity Scaling in Free-Space-Optical Mobile Ad-Hoc Networks*, graduated 04/16/2008, advisor Murat Yuksel.
- Burcu Bolukbasi, *PocketBaby: PDA Software for Monitoring Pregnancy Evolution*, graduated 06/08/2007, advisor Sergiu Dascalu.
- Amol Ambardekar, *Efficient Vehicle Tracking and Classification for an Automated Traffic Surveillance System*, graduated 12/03/2007, advisor Mircea Nicolescu.
- Chang Jia, *Object Tracking Using an Enhanced Adaptive Background CAMSHIFT Algorithm*, graduated 11/30/2007, advisor Mircea Nicolescu.
- Tony Morelli, *Game Teleporter: A Development Tool for Everyone*, graduated 04/13/2007, advisor Dwight Egbert.
- Chris Miles, *Case-Injected Genetic Algorithms in Computer Strategy Games*, graduated 4/14/06, advisor Sushil Louis.

- Qunming Peng, *Brainstem: A NeoCortical Simulator Interface for Robotic Studies*, graduated 10/30/06, advisor Fred Harris.
- Anil Shankar, *Simple User-Context for Better Application Personalization*, graduated Fall 2005, advisor Sushil Louis.
- Kai Xu, *A Scalable Parallel Genetic Algorithm for X-ray Spectroscopic Analysis*, graduated Spring 2005, advisor Sushil Louis.
- Andrew Klempau, graduated Spring 2005, advisor Angkul Kongmunvattana.
- Shyamala Palanisamy, *Multi Level Edges and Segments*, Professional Paper, graduated Fall 2004, advisor Carl Loney.
- Juan Carlos Macera, *Design and Implementation of a Hierarchical Robotic System: A Platform for Artificial Intelligence Investigation*, graduated Fall 2003, advisor Fred Harris.
- Jeremy Buchmann, *Selective Naive Bayes Classification*, graduated Fall 2003, advisor Sushil Louis.

PhD Committee Chair (current students)

- Mayamin Hamid Raha (started 2021)
- Md. Abu Sayed (started 2021)
- Andrew Palmer (started 2017, on leave)

Master of Science Thesis Committee Chair (current students)

- Song Jiang (stated 2020)

PhD Committee Member (current students)

- Tung Dang, *Exploring the Unknown: Resilient Large-scale Informative Path Planning for Autonomous Robotic Exploration*, advisor Alexis Kostas, passed comprehensive examination (December 16, 2019).
- Santosh Balajee Banisetty, advisor David Feil-Seifer.
- Ahmed Alhussen, advisor Engin Arslan.
- Raj Shukla, advisor Shamik Sengupta.
- Amar Patra, *Self-Reconfigurable Unmanned Aerial Vehicle Networks for Wireless Communication Provisioning*, advisor Shamik Sengupta, passed comprehensive examination (April 10, 2019).
- Nithya Mohan, *Monitoring Embolized Brain Aneurysms with an Implanted, Self-Powered, and Direct-Digitized Micro Pressure Sensing System*, advisor Yantao Shen.

Master of Science Committee Member (current students)

- Meera Sebastian, advisor David Feil-Seifer

Undergraduate Students:

- Azael Hernandez Quintero (Undergraduate Research, started Spring 2022)
- Tyler Becker (Undergraduate Research, started Spring 2021)
- Dalton Navalta (Undergraduate Research, Fall 2016 – 2018)
- Logan Carlson (Undergraduate Research, Spring 2017 – 2019)
- Luke Fraser (Undergraduate Research, Spring 2014)
- Jared Rhizor (Undergraduate Research, started 2012)
- Alexander McArther (Undergraduate Research, started 2012)
- Cynthia Sherman (Undergraduate Research, 2009-2012)
- Qandeel Sajid (Undergraduate Research, 2012-2103)
- Liesl Wigand (Undergraduate Research, Spring 2011)
- Katie Browne (Undergraduate Research, Fall 2010)
- Sebastian Smith (Undergraduate Research, 2005-2006)

Intern Students Involved in Research:

- Julianna Schneider (Davidson Academy, 2020-present)
- Yatin Chandar (Davidson Academy, 2014-2015)
- Miranda Cross (Davidson Academy, Fall 2015)
- Tristan Brodeur (2015)
- Alexandre Trinitade (exchange student, Brasil, Summer 2015)
- Henrique Azevedo (exchange student, Brasil, Summer 2015)
- Connor Richard Novak (Davidson's Academy, Summer 2015)

AWARDS AND HONORS

- Nominated for Regents' Researcher of the Year Award (2016)
- Nominated for Nevada Women's Fund (NWF) Women of Achievement Award (2016)
- Nominated for Women of Achievement Award from University of Nevada, Reno (2013)
- Early Career Development (CAREER) Award, National Science Foundation (2006)
- Best Paper Award, Hawaii International Conference on System Sciences, HICSS-36 (2003)
- USC Women in Science and Engineering (WISE) award (2002)
- Upsilon Pi Epsilon International Honor Society for the Computing Sciences (2002)
- DARPA/NSF Study on Human-Robot Interaction (invitation-only workshop) travel award (2001)

- USC Women in Science and Engineering (WISE) award (2001)
- Autonomous Agents Conference travel award (2000)
- USC Academic Achievements Award, (2000 and 2003)
- Eighth Annual AAAI Mobile Robot Competition, Third Place on “Hors d’oeuvres anyone?” and Special Award for innovative Robot-Human Interface in the “Challenge” event (as member of the USC Robotics Lab team) (1999)
- Scholarship, the First European Agent Systems Summer School, Utrecht, The Netherlands (1999)
- Seventh Annual AAAI Mobile Robot Competition, Second Place on “Find Life on Mars” Single Agent Non-Manipulator category (as member of the USC Robotics Lab team) (1998)
- TEMPUS Scholarship at the National Polytechnic Institute of Grenoble, FRANCE (Feb 1995 – Aug 1996)
- Romanian Governmental Merit-Based Fellowship (1990-1995, 1995-1996)

STUDENT AWARDS

- Azael Hernandez Quintero, *Pack Research Experience Program* (2022)
- Tyler Becker, *National Science Foundation EPSCoR Undergraduate Research Opportunity Program (NSF EPSCoR UROP)* (2021)
- Logan Carlson, *Nevada NASA Space Grant Consortium (NVS GC)* (2018)
- Logan Carlson, *Nevada Undergraduate Research Award* (2018)
- Jared Rhizor, *Undergraduate Research Award* (2013)
- Alexander McArther, *Undergraduate Research Award* (2013)
- Richard Kelley, *UNR Regents Graduate Scholar Award* (2013)
- Richard Kelley, *CSE Outstanding Graduate Student of the Year Award* (2013)

FUNDING

- *Intent Recognition for On-Water Adversarial Agents*, **Office of Naval Research**, PI (Co-PI: Mircea Nicolescu), **Amount: \$900,000**, March 2022 - February 2025.
- *A Personalized, Multi-Modal Interactive Robot Assistant for People with Limited Mobility*, **University of Nevada Reno, Research Enhancement Grant**, PI, **Amount: \$20,000**, July 1, 2021 – June 30, 2022.
- *A Robot Control Architecture for Tightly-Coupled and Temporally Constrained Tasks*, **National Science Foundation EPSCoR Undergraduate Research Opportunity Program (NSF EPSCoR UROP)**, Advisor (Student: Tyler Becker), **Amount: \$4,000**, 2020-2021.
- *Intent Recognition for Adversarial Groups using Dynamic, Predictive Threat Heatmaps*, **Office of Naval Research**, PI (Co-PI: Mircea Nicolescu), **Amount: \$585,834**, 04/01/2021 - 03/31/2024.

- *From Heterogeneous Individual Capabilities to Emerging Teamwork: An Architecture for Effective Human-Agent Teams*, **DOD Army Research Lab**, PI (Co-PI: Mircea Nicolescu, David Feil-Seifer), **Amount: \$99,943**, 05/01/2020 to 04/30/2021.
- *A Model of Trust for Human-Robot Interactions*, **National Science Foundation EPSCoR Undergraduate Research Opportunity Program (NSF EPSCoR UROP)**, Advisor (Student: Eric Duong), **Amount: \$4,000**, 2019-2020.
- *An Assistance, Collaboration, and Service Research Platform For Human-Robot Interaction In the Wild*, **Quori**, Co-PI, (PI: David Feil-Seifer), March 1, 2019.
- *RET Site: Cross-disciplinary Research Experiences on Smart Cities for Nevada Teachers: Integrating Big Data into Robotics*, **National Science Foundation**, Senior Personnel, (PI: Alexis Kostas), **Amount: \$581,073**, September 1, 2018 - August 31, 2021.
- *Expanding Robotics Teaching and Experimenting*, **COEN Differential Fees, University of Nevada, Reno**, Co-PI (PI: Hung La, Co-PI: David Feil-Seifer, Sushil Louis, Wanliang Shan), **Amount: \$35,000**, 2018.
- *Nevada Undergraduate Research Award*, **UNR Undergraduate Research, University of Nevada, Reno**, Advisor (Student: Logan Carlson), **Amount: \$1,800**, 2018.
- *Latent Variable Models for Intrusion Detection and Intent Classification in Autonomous Vehicles*, **Nevada NASA Space Grant Consortium**, Advisor (Student: Logan Carlson), **Amount: \$4,000**, 2018.
- *CHS: Small: Socially-Aware Navigation*, **National Science Foundation**, Co-PI (PI: David Feil-Seifer), **Amount: \$500,000**, September 1, 2017 – August 31, 2020.
- *REU Site: Collaborative Human-Robot Interaction*, **National Science Foundation**, Senior Personnel (PI: David Feil-Seifer), **Amount: \$360,000**, 2017-2020.
- *Undergraduate and Graduate Robotics Curriculum for UNR College of Engineering*, **Nevada NASA Space Grant Consortium higher Education – Curriculum Development**, Co-PI (PI: David Feil-Seifer), **Amount: \$44,999**, September 1, 2016 – August 31, 2017.
- *Long-Range Laser Sensors to Modernize Equipment*, **University of Nevada, Reno**, Co-PI (PI: David Feil-Seifer, Co-PI: Hung La), **Amount: \$7,425**, 2017.
- *Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams*, **Office of Naval Research**, PI (Co-PI: Mircea Nicolescu, David Feil-Seifer), **Amount: \$656,511**, April 1, 2016 – March 31, 2019.
- *Intent Recognition for On-Water Dynamic Maritime Domains*, **Office of Naval Research**, PI (Co-PI: Mircea Nicolescu, Terry Huntsberger – JPL), **Amount: \$685,355**, March 2016 - February 2018.
- *Humanoid Platforms for Human-Robot Collaboration*, **Office of Naval Research**, PI (Co-PIs: Mircea Nicolescu, David Feil-Seifer), **Amount: \$312,500**, June 15, 2014 - June 14, 2015.
- *Cluster of Excellence in Advanced Manufacturing at the University of Nevada, Reno*, **University of Nevada, Reno**, Co-PI (PI: Kam Leang, Co-PIs: George Bebis Alan Fuchs, Miles Greiner, Yanyao Jiang, Ghassan Jabbour), 3 Faculty positions for Mechanical Engineering, Computer Science and Engineering and Chemical and Materials Engineering, 2013.
- *Distributed Visualization of Spiking Networks*, **University of Nevada, Reno, Undergraduate Research Award** (Student: Alexander McArther), **Amount: \$1,500**, May 2013 – April 2014.

- *Vision-based robot localization for SPHERES*, **University of Nevada, Reno, Undergraduate Research Award** (Student: Jared Rhizor), **Amount: \$1,500**, May 2013 – April 2014.
- *Understanding Intent Using an Activation Spreading Architecture*, **Office of Naval Research**, PI (Co-PI: Mircea Nicolescu, Sushil Louis), **Amount: \$590,992**, July 1, 2012 – June 30, 2015.
- *Advanced Computer Vision, Robotics, and Visualization Algorithms For Improving Planetary Exploration and Understanding*, **NASA**, Co-PI, (PI: George Bebis, Co-PI: Thomas Jackman), **Amount: 629,872**, September 1, 2011 – August 31, 2015.
- *High Throughput Tissue Microarray (TMA) Construction and Interpretation to Facilitate Biomarker Discovery – phase 2*, **University of Nevada, Reno**, Co-PI, (PI: Sanford Barsky, Co-PI: Emil Geiger), **Amount: \$20,000**, 2012.
- *High Throughput Tissue Microarray (TMA) Construction and Interpretation to Facilitate Biomarker Discovery – phase 1*, **University of Nevada, Reno**, Co-PI, (PI: Sanford Barsky, Co-PI: Emil Geiger), **Amount: \$3,000**, 2012.
- *Differential Fees Application - Robotics*, **University of Nevada, Reno**, PI, **Amount: \$4151.68**, 2012.
- *Research Experience for Undergraduates*, **National Science Foundation**, PI, **Amount: \$8,000**, January 1, 2007 – December 31, 2011.
- *Context-Based Intent Understanding for Autonomous Systems in Naval and Collaborative Robotics Applications*, **Office of Naval Research**, PI (Co-PI: Mircea Nicolescu, Sushil Louis), **Amount \$543,280**, August 1, 2009 – July 31, 2012.
- *Cyberinfrastructure – part of Nevada EPSCoR “Climate Change” proposal*, **National Science Foundation – EPSCoR**, Senior Personnel (PI: Sergiu Dascalu, **2,293,893**), 2008 – 2013.
- *Autonomous Intelligent Rover Design*, **National Science Foundation**, PI, (Co-PI: Eric Wang, Jeffrey Lacombe), **Amount: \$29,080**, August 1, 2007 – July 31, 2008.
- *An Enhanced Hands-On Learning Experience in Computer Science and Engineering*, **UNR Student Technology Fee Distribution, University of Nevada, Reno**, PI (Co-PI: Mircea Nicolescu, Sergiu Dascalu), **Amount: \$11,580**, June 1 2007 – October 31, 2007.
- *Research Experience for Undergraduates*, **National Science Foundation**, PI, **Amount: \$12,000**, January 15, 2007 - December 31, 2010.
- *Special Projects - NevadaSat: University Rover Challenge*, **Nevada System of Higher Education (NSHE)**, Co-PI (PI: Eric Wang, Co-PI: Jeffrey Lacombe), **Amount: \$28,501**, January 1 2007 – June 30, 2009.
- *Special Projects – NevadaSat: Workforce Development*, **Nevada System of Higher Education (NSHE)**, Co-PI (PI: Eric Wang, Co-PI: Jeffrey Lacombe), **Amount: \$62,500**, January 1, 2007 – December 31, 2008.
- *Large-Scale, Synaptically Realistic Models of Cortical Microcircuit Dynamics*, **Office of Naval Research**, Co-PI (PI: Phillip Goodman, Co-PI: Fred Harris, Rene Doursat, Henry Markram), **Amount \$877,000**, October 1, 2006 – September 31, 2009.
- *NevadaSat: Workforce Development*, **University of Nevada, Reno**, Co-PI (PI: Eric Wang, Co-PI: Jeffrey Lacombe), **Amount: \$62,500**, October 1, 2006 – June 31, 2007.

- *A Computational Model for Intent Understanding*, **National Science Foundation**, Co-PI (PI: Mircea Nicolescu, Co-PI: Sami Fadali, Linda Hayes, Alireza Tavakkoli), **Amount: \$75,600**, July 1, 2006 - June 30, 2008.
- *Integrating Computer Vision and Robotics Teaching Programs*, **UNR Instructional Enhancement Grant, University of Nevada, Reno**, Co-PI (PI: Mircea Nicolescu, Co-PI: George Bebis), **Amount: \$1,400**, July 1, 2006 – June 30, 2007.
- *Understanding Intent Using a Novel Hidden-Markov Representation*, **Office of Naval Research (ONR)**, PI, (Co-PI: Mircea Nicolescu), **Amount: \$619,584**, June 1, 2006 - May 31, 2009.
- *An Integrated Teaching Infrastructure for Computer Vision and Robotics*, Student Technology Fee Distribution, **University of Nevada, Reno**, Co-PI (PI: Mircea Nicolescu, Co-PI: Yaakov Varol), **Amount: \$23,200**, June 1, 2006 – October 1, 2006.
- *Video Games and Robots: A Level Playing Field*, **Instructional Enhancement Grant, University of Nevada, Reno**, Co-PI (PI: Dwight Egbert), **Amount: \$3,000**, June 2006 - May 2007.
- *Research Experience for Undergraduates*, **National Science Foundation**, PI, **Amount: \$12,000**, January 15, 2006 - December 31, 2010.
- *NevadaSat: Nevada Student Satellite Program I*, **NASA**, Co-PI (PI: Jeffrey C. LaCombe, Co-PI: Eric L. Wang) **Amount: \$15,000**, February 1, 2006 – June 30, 2007.
- *NevadaSat: Nevada Student Satellite Program II*, **NASA**, Co-PI, (PI: Eric L. Wang, Co-PI: Jeffrey C. LaCombe), **Amount: \$15,000**, February 1, 2006 – June 30, 2007.
- *Bacterial sample preparation and pattern recognition development, Phase I*, **Nevada Nanotech Inc.**, Co-PI (PI: Eric Marchand), **Amount: \$10,000**, February 1, 2006 – October 31, 2006.
- *Design and Evaluation of Methods for Robot Learning by Demonstration*, **National Science Foundation, Early Career Development Award (CAREER)**, PI, **Amount: \$410,000**, January 15, 2006 - January 14, 2011.
- *Enhanced Pattern Recognition of Target Chemicals and Bacteria Species with a Compact Chemical Vapor Detection System*, **National Science Foundation**, PI (Co-PI: Joseph Cline), **Amount: \$76,322**, January 1, 2006 - December 31, 2007.
- *Utilizing Fuzzy Logic for Gene Sequence Construction from Sub Sequences and Characteristic Genome Derivation and Assembly*, **National Science Foundation**, Co-PI (PI: Gregory Vert, Co-PI: Alison Murray), **Amount: \$76,322**, January 1, 2006 - December 31, 2007.
- *Autonomous Intelligent Rover Design*, **National Science Foundation**, PI (Co-PI: Eric Wang, Jeffrey Lacombe), **Amount \$76,322**, January 1, 2006 - December 31, 2007.
- *Virtual At Sea Training*, **Office of Naval Research**, Co-PI: Monica Nicolescu (PI: Sushil Louis, Co-PI: Sergiu Dascalu), **Amount: \$416,584**, October 1, 2005 - September 30, 2008.
- *Infrastructure Initiative for Cognitive Information Processing*, **National Science Foundation**, Senior Personnel (PIs: George Bebis, Kwang Kim, Darko Koracin, Sushil Louis, Roberto Mancini, S. Sing, Yaakov Varol, Melanie Wetzels, W. Yim), **Amount \$200,000** (budget to Monica Nicolescu for robotic equipment out of total of **\$2,602,350**), October 2005 – September 2008.
- *Enhanced Pattern Recognition of Target Chemicals and Detection and Selection of Bacteria Species with a Compact Chemical Vapor Detection System Utilizing Multifunctional Sensor Arrays and Selective Materials*, **NA-22**, PI (Co-PI: Eric Marchand, Joseph Cline), **Amount: \$100,000**, October 1, 2005 - December 31, 2007.

- *Desorption Mercury Vapor Detection, Nevada Nanotech Systems Inc & UNR*, Co-PI (PI: Joseph Cline), **Amount: \$20,000**, August 1, 2005 - May 31, 2006.
- *Robotic Platform for Security and Service Applications, Office of Naval Research, DURIP*, Co-PI (PI: Philip Goodman), **Amount: \$210,593**, May 1, 2005 - April 30, 2006.
- *Open Robotics Reference Platform, University of Nevada, Reno, Undergraduate Research*, PI, **Amount: \$1,000**, May 1, 2005 - April 30, 2006.
- *Detecting the Chemical Signatures of Nuclear Proliferation with Coated, Self-Sensing Microcantilever Arrays, NA-22*, Senior Personnel (PI: Jesse Adams), **Amount: \$450,000**, October 1, 2004 - May 31, 2005.
- *Adaptive Intelligent Swarms for VAST-COVE: Virtual Training of Conning Officers in Ship Self Defense Against Small Boats, Office of Naval Research*, Co-PI (PI: Sushil Louis), **Amount: \$220,241**, July 1, 2004 - June 30, 2006.
- *Natural Interaction and Learning for Service Robotics, Junior Faculty Research Award, University of Nevada, Reno*, PI, **Amount: \$15,000**, June 1, 2004 - May 31, 2006.
- *Enhanced Robotics Curriculum for the Department of Computer Science and Engineering, Student Technology Fee Distribution, University of Nevada, Reno*, PI (Co-PI: Yaakov Varol), **Amount: \$12,000**, January 1, 2004 - December 31, 2004.
- *A Hands-on Introduction to Robotics Using LEGO Robot Kits, Instructional Enhancement Grant, University of Nevada, Reno*, PI, **Amount: \$3,000**, January 1, 2004 - June 1, 2004.

PUBLICATIONS

BOOK CHAPTERS

- Francois Michaud, Monica Nicolescu, “Behavior-Based Robotics”, In Bruno Siciliano, Oussama Khatib (Ed.), chapter in *Springer Handbook of Robotics*, 2016.
- Richard Kelley, Alireza Tavakkoli, Chris King, Amol Ambardekar, Liesl Wigand, Monica Nicolescu, Mircea Nicolescu, “Intent Recognition for Human-Robot Interaction”, in *Plan, Activity, and Intent Recognition*, Gita Sukthankar, Christopher Geib, Hung Hai Bui, David Pynadath and Robert Goldman Editors, Elsevier, pp. 343-365, 2013.
- Richard Kelley, Alireza Tavakkoli, Christopher King, Monica Nicolescu, Mircea Nicolescu, "Understanding Activities and Intentions for Human-Robot Interaction", in *Advances in Human-Robot Interaction*, Daisuke Chugo (editor), In-Tech, pages 288-305, February 2010.
- Sara Nasser, Adrienne Breland, Frederick C. Harris Jr., Monica Nicolescu, and Gregory L. Vert, “Fuzzy Genome Sequence Assembly for Single and Environmental Genomes”, in *Fuzzy Systems in Bioinformatics, Bioengineering and Computational Biology*, Springer Book Series on Studies in Computational Intelligence, 2009.
- Monica Nicolescu, Maja Matarić, “Task learning through imitation and human-robot interaction”, in *Models and Mechanisms of Imitation and Social Learning: Behavioural, Social and Communicative Dimensions*, Editors: Kerstin Dautenhahn and Chrystopher L. Nehaniv, Cambridge University Press, pages 407-424, 2006.

REFEREED JOURNAL ARTICLES

- Pourya Hoseini, Shuvo Kumar Paul, Mircea Nicolescu, Monica Nicolescu, “A One-Shot Next Best View System for Active Object Recognition”, to appear in *Applied Intelligence*, Springer, 2022.
- Logan Carlson, Dalton Navalta, Monica Nicolescu, Mircea Nicolescu, Gail Woodward, “Early Classification of Intent for Maritime Domains using Multinomial Hidden Markov Models”, *Frontiers in Artificial Intelligence – Special Issue on Advances in Goal, Plan and Activity Recognition*, vol. 4, pages 1-11, October 2021.
- Shuvo Kumar Paul, Pourya Hoseini, Mircea Nicolescu, Monica Nicolescu, "Performance Analysis of Keypoint Detectors and Binary Descriptors under Varying Degrees of Photometric and Geometric Transformations", *Journal of Image and Graphics*, vol. 9, no. 1, pages 1-8, March 2021.
- Santosh Balajee Banisetty, Scott Forer, Logan Yliniemi, Monica Nicolescu, and David Feil-Seifer, “Socially Aware Navigation: A Non-linear Multi-objective Optimization Approach,” *ACM Transactions on Interactive Intelligent Systems*, vol. 11, no. 2, Article 15 (July 2021).
- Touqeer Ahmad, George Bebis, Monica Nicolescu, Ara Nefian, Terry Fong, “Horizon line detection using supervised learning and edge cues,” in *Computer Vision and Image Understanding*, Volume 191, February 2020.
- Seyed Pourya Hoseini Alinodehi, Janelle Blankenburg, Mircea Nicolescu, Monica Nicolescu, David Feil-Seifer, “Active Eye-in-Hand Data Management to Improve the Robotic Object Detection Performance”, in *Computers - Special Issue on Vision, Image and Signal Processing*, **featured on the journal issue cover**, vol.8, no. 4, pages 1-17, September 2019.
- Banafsheh Rekabdar, Luke Fraser, Monica Nicolescu, Mircea Nicolescu, “A Real-Time Spike-Timing Classifier of Spatio-Temporal Patterns,” *Neurocomputing*, vol. 311, pages 183-196, October 2018.
- Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, and Sushil Louis, “Using patterns of firing neurons in spiking neural networks for learning and early recognition of spatio-temporal patterns,” in *Neural Computing and Applications Journal – Special Issue on Computational Intelligence for Vision and Robotics*, 28(5), 881-897, 2017.
- Mohammad Saffar, Mircea Nicolescu, Monica Nicolescu, Banafsheh Rekabdar, “Intent Understanding Using an Activation Spreading Architecture,” *Robotics – Special Issue on Representations and Reasoning for Robotics*, vol. 4, no. 3, pages 284-315, July 2015.
- Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, Mohammad Taghi Saffar, Richard Kelley, “A Scale and Translation Invariant Approach for Early Classification of Spatio-Temporal Patterns using Spiking Neural Networks,” *Neural Processing Letters*, 43, pages 327-343, 2015.
- Banafsheh Rekabdar, Monica Nicolescu, Richard Kelley, Mircea Nicolescu, “An Unsupervised Approach to Learning and Early Detection of Spatio-Temporal Patterns Using Spiking Neural Networks,” *Journal of Intelligent and Robotic Systems*, pages 1-15, January 2015.
- Abbas Roayaei Ardakany, Mircea Nicolescu, Monica Nicolescu, “Improving Gender Classification Using an Extended Set of Local Binary Pattern”, in *International Journal of Multimedia Data Engineering and Management*, 2014.
- Monica Nicolescu, “Improving the modeling of dog-owner interactions for the design of social robots”, in *Interactive Studies Journal*, 2014.
- Amol Ambardekar, Mircea Nicolescu, George Bebis and Monica Nicolescu, “Vehicle Classification Framework: A Comparative Study”, in *Journal on Image and Video Processing*, 2014.

- Bradford Towle Jr, and Monica Nicolescu, “An Auction Behavior-Based Robotic Architecture for Service Robotics,” in *Intelligent Service Robotics*, 1-18, 2014.
- Amol Ambardekar, Mircea Nicolescu, George Bebis, Monica Nicolescu, "Visual Traffic Surveillance Framework: Classification to Event Detection", *Journal of Electronic Imaging - Special Issue on Video Surveillance and Transportation Imaging Applications*, vol. 22, no. 4, pages 1-17, October-December 2013.
- Richard Kelley, Alireza Tavakkoli, Chris King, Amol Ambardekar, Monica Nicolescu, Mircea Nicolescu, “Context-Based Bayesian Intent Recognition”, in *IEEE Transactions on Autonomous Mental Development*, 4(3), 215-225, 2012.
- Richard Kelley, Enrique Schaerer, Micaela Gomez, and Monica Nicolescu, “Liability in Robotics: An International Perspective on Robots as Animals”, in *Advanced Robotics*, Vol. 24, No. 13, pp. 1861-1871, 2010.
- Christopher King, Xavier Palathingal, Monica Nicolescu, Mircea Nicolescu, “A Flexible Control Architecture for Extended Autonomy of Robotic Assistants”, in *Journal of Physical Agents – Special Issue on Human Interaction with Domestic Robots*, Vol. 3, No. 2, pages 59-69, 2009.
- Alireza Tavakkoli, Mircea Nicolescu, George Bebis, Monica Nicolescu, “Non-Parametric Statistical Background Modeling for Efficient Foreground Region Detection”, *Machine Vision and Applications*, Vol. 20, No. 6, pages 395-409, 2009.
- Junxian Wang, George Bebis, Mircea Nicolescu, Monica Nicolescu, Ronald Miller, “Improving Target Detection by Coupling It with Tracking”, *Machine Vision and Applications*, Vol. 20, No. 4, pages 205-223, April 2009.
- Alireza Tavakkoli, Mircea Nicolescu, George Bebis, Monica Nicolescu, “A Support Vector Data Description Approach for Background Modeling in Videos with Quasi-Stationary Backgrounds”, *International Journal on Artificial Intelligence Tools*, vol. 17, no. 4, pages 635-658, August 2008.
- Monica Nicolescu, Odest Chadwicke Jenkins, Adam Olenderski, Eric Fritzing, "Learning Behavior Fusion from Observation", *Interactive Studies Journal, Special Issue on Robot and Human Interactive Communication*, vol. 9, no. 2, pages 319-352, 2008.
- Monica Nicolescu, Ryan Leigh, Adam Olenderski, Sushil Louis, Sergiu Dascalu, Chris Miles, Juan Quiroz, Ryan Aleson, “A Training Simulation System with Realistic Autonomous Ship Control”, *Computational Intelligence – Special Issue on Artificial Intelligence Methods for Ambient Intelligence*, vol. 23, no. 4, pages 497-516, November 2007.
- Jorge Usabiaga, George Bebis, Ali Erol, Mircea Nicolescu, Monica Nicolescu, “Recognizing Simple Human Actions Using 3D Head Movement”, *Computational Intelligence – Special Issue on Artificial Intelligence Methods for Ambient Intelligence*, vol. 23, no. 4, pages 484-496, November 2007.
- Sara Nasser, Gregory Vert, Monica Nicolescu, Alison Murray "Multi Sequence Assembly for Prokaryotes and Eukaryotes Using Fuzzy Logic", *IEEE International Journal of Information Technology and Intelligent Computing*, vol. 2, no. 4, 2007.
- Monica N. Nicolescu, Maja J Matarić, “Learning and Interacting in Human-Robot Domains”, *Special Issue of IEEE Transactions on Systems, Man, and Cybernetics, Part A: Systems and Humans*, Vol. 31, No. 5, pages 419-430, Chelsea C. White and Kerstin Dautenhahn eds., September, 2001.

MAGAZINE PUBLICATIONS

- Pericle Salvini, **Monica Nicolescu**, Hiroshi Ishiguro, “Benefits of Human-Robot Interaction”, in *IEEE Robotics and Automation Magazine*, December 2011.

REFEREED CONFERENCE PROCEEDINGS

- Pourya Hoseini, Shuvo Kumar Paul, Mircea Nicolescu, Monica Nicolescu, "A Surface and Appearance-Based Next Best View System for Active Object Recognition", in the *Proceedings of the International Conference on Computer Vision Theory and Applications*, vol. 5, pages 841-851, **best paper award finalist**, February 2021.
- Shuvo Kumar Paul, Mircea Nicolescu, Monica Nicolescu, "A Comparative Evaluation of Keypoint Detectors and Binary Descriptors", to appear in the *Proceedings of the International Conference on Robotics and Machine Vision*, pages 1-10, Seoul, Korea, February 2021.
- Janelle Blankenburg, Mariya Zagainova, Stephen M. Simmons, Gabrielle Talavera, Monica Nicolescu, and David Feil-Seifer. "Human-Robot Collaboration and Dialogue for Fault Recovery on Hierarchical Tasks." In *International Conference on Social Robotics (ICSR)*, CO, Oct 2020.
- Andrew Palmer, Christopher Peterson, Janelle Blankenburg, Monica Nicolescu, and David Feil-Seifer. "Simple Camera-to-2D-LiDAR Calibration Method for General Use." In *International Conference on Visual Computing (ISVC)*, Virtual, Sep 2020.
- Muhammed Tawfiq Chowdhury, Shuvo Kumar Paul, Monica Nicolescu, Mircea Nicolescu, David Feil-Seifer, Sergiu Dascalu, “Computation of Suitable Grasp Pose for Usage of Objects Based on Predefined Training and Real Time Pose Estimation”, *Proceedings of the International Conference on Autonomic and Autonomous Systems – Special Track on Vision and Learning for Robotic Applications*, pages 91-96, Lisbon, Portugal, September-October 2020.
- Shuvo Kumar Paul, Muhammed Tawfiq Chowdhury, Mircea Nicolescu, Monica Nicolescu, David Feil-Seifer, “Object Detection and Pose Estimation from RGB and Depth Data for Real-time, Adaptive Robotic Grasping”, *Proceedings of the International Conference on Image Processing, Computer Vision and Pattern Recognition*, pages 1-10, Las Vegas, Nevada, July 2020.
- Bashira Akter Anima, Mariya Zagainova, S. Pourya Hoseini Alinodehi, Muhammed Tawfiq Chowdhury, Janelle Blankenburg, Monica Nicolescu, David Feil-Seifer, Mircea Nicolescu, “Collaborative Human-Robot Hierarchical Task Execution with an Activation Spreading Architecture”, in *Proceedings of the International Conference on Social Robotics*, **best paper award finalist**, pages 301-310, Madrid, Spain, November 2019.
- Monica Nicolescu, Natalie Arnold, Janelle Blankenburg, David Feil-Seifer, Santosh Balajee Banisetty, Mircea Nicolescu, Andrew Palmer, Thor Monteverde, “Learning of Complex-Structured Tasks from Verbal Instruction”, in *Proceedings of IEEE-RAS International Conference on Humanoid Robots*, pages 1-8, Toronto, Canada, October 2019.
- Seyed Pourya Hoseini Alinodehi, Janelle Blankenburg, Mircea Nicolescu, Monica Nicolescu, David Feil-Seifer, “An Active Robotic Vision System with a Pair of Moving and Stationary Cameras”, *Proceedings of the International Symposium on Visual Computing*, pages 184-195, Lake Tahoe, Nevada, October 2019.

- Logan Carlson, Dalton Navalta, Monica Nicolescu, Gail Woodward, Mircea Nicolescu, “Multinomial HMMs for Intent Recognition in Maritime Domains”, *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems*, Montreal, Canada, May 2019.
- Logan Carlson, Dalton Navalta, Monica Nicolescu, Mircea Nicolescu, Gail Woodward, “Intent Classification in Maritime Domains with Multinomial HMMs”, *Proceedings of the International Workshop on EXplainable TRansparent Autonomous Agents and Multi-Agent Systems*, pages 1-15, Montreal, Canada, May 2019.
- Scott Forer, Santosh Balajee Banisetty, Logan Yliniemi, Monica Nicolescu, and David Feil-Seifer, “Socially-Aware Navigation Using Non-Linear Multi-Objective Optimization,” In *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, Madrid, Spain, Oct 2018.
- Pourya Alinodehi, Mircea Nicolescu, Monica Nicolescu, “Active Object Detection Through Dynamic Incorporation of Dempster-Shafer Fusion for Robotic Applications”, in *Proceedings of the International Conference on Vision, Image and Signal Processing*, Las Vegas, Nevada, August 2018.
- Pourya Alinodehi, Mircea Nicolescu, Monica Nicolescu, “Handling Ambiguous Object Recognition Situations in a Robotic Environment via Dynamic Information Fusion”, in *Proceedings of the IEEE International Conference on Cognitive and Computational Aspects of Situation Management*, Boston, Massachusetts, June 2018.
- Janelle Blankenburg, Santosh Banisetty, Pourya Alinodehi, Luke Fraser, David Feil-Seifer, Monica Nicolescu, Mircea Nicolescu, “A Distributed Control Architecture for Collaborative Multi-Robot Task Allocation”, *Proceedings of the IEEE-RAS International Conference on Humanoid Robots*, Birmingham, 2017.
- Luke Fraser, Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, David Feil-Seifer, and George Bebis, “A Compact Representation for Hierarchical Robot Control”, *IEEE-RAS International Conference on Humanoid Robotics*, Cancun, Mexico, 2016.
- Banafsheh Rekabdar, Luke Fraser, Monica Nicolescu, Mircea Nicolescu, “Spiking neural network for human hand gesture recognition: A real-time approach”, *RSS Workshop on Model Learning for Human-Robot Communication*, Michigan, June 18, 2016.
- Luke Fraser, Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, and David Feil-Seifer, “A Hierarchical Control Architecture for Robust and Adaptive Collaborative Robot Task Execution”, *RSS Workshop on Planning for Human-Robot Interaction: Shared Autonomy and Collaborative Robotics*, Michigan, June 18, 2016.
- Touqeer Ahmad, George Bebis, Monica Nicolescu, Ara Nefian, Terry Fong, “An Edge-less approach to horizon line detection”, *IEEE International Conference on Machine Learning and Applications*, 2015.
- Touqeer Ahmad, George Bebis, Monica Nicolescu, Ara Nefian, Terry Fong, “Fusion of Edge-less and Edge-based Approaches for Horizon Line Detection”, *6th International Conference on Information, Intelligence, Systems and Applications*, 2015.
- Mohammad Saffar, Mircea Nicolescu, Monica Nicolescu, Banafsheh Rekabdar, “Context-Based Intent Understanding Using an Activation Spreading Architecture”, *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, pages 1-8, Hamburg, Germany, September 2015.
- Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, Richard Kelley, “A Biologically Inspired Approach to Learning Spatio-Temporal Patterns”, *Proceedings of the International Conference on*

Development and Learning and on Epigenetic Robotics, pages 291-297, Providence, Rhode Island, August 2015.

- Mohammad Saffar, Mircea Nicolescu, Monica Nicolescu, Daniel Bigelow, Christopher Ballinger, Sushil Louis, “Intent Recognition in a Simulated Maritime Multi-Agent Domain”, *Proceedings of the International Workshop on Machine Learning, Optimization and Big Data*, pages 1-12, Taormina, Italy, July 2015.
- Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, Richard Kelley, “Scale and Translation Invariant Learning of Spatio-Temporal Patterns using Longest Common Subsequences and Spiking Neural Networks”, *Proceedings of the International Joint Conference on Neural Networks*, pages 3659-3666, Killarney, Ireland, July 2015.
- Banafsheh Rekabdar, Monica Nicolescu, Mircea Nicolescu, “An Unsupervised Learning Approach for Classifying Sequence Data for Human Robotic Interaction Using Spiking Neural Networks”, *Proceedings of the HRI Pioneers Workshop (in conjunction with the ACM/IEEE International Conference on Human-Robot Interaction)*, pages 213-214, Portland, Oregon, March 2015.
- Banafsheh Rekabdar, Monica Nicolescu, Richard Kelley, Mircea Nicolescu, “Unsupervised Learning of Spatio-Temporal Patterns Using Spike Timing Dependent Plasticity”, in the *Proceedings of the Seventh Annual Conference on Artificial General Intelligence*, Quebec City, Canada, August 2014.
- Siming Liu, Sushil J. Louis, and Monica Nicolescu, “Comparing Heuristic Search Methods for Finding Effective Group Behaviors in RTS Game”, in *2013 IEEE Congress on Evolutionary Computation (CEC)*, pages 1371-1378, 2013.
- Siming Liu, Sushil J. Louis, and Monica Nicolescu, “Using Cigar for Finding Effective Group Behaviors in RTS Game”, in *2013 IEEE Conference on Computational Intelligence in Games (CIG)*, pages 1-8. IEEE, 2013.
- Bradford Towle, Monica N. Nicolescu, “Incorporating a Reusable Human Robot Interface with an Auction Behavior-Based Robotic Architecture”, in *IEEE, ACM 4th International Workshop on Collaborative Robots and Human Robot Interaction*, pp. 203 – 209, 2013.
- Abbas Roayaei Ardakany, Mircea Nicolescu, Monica Nicolescu, "An Extended Local Binary Pattern for Gender Classification", *Proceedings of the IEEE International Symposium on Multimedia*, pages 1-6, Anaheim, California, December 2013.
- Liesl Wigand, Monica Nicolescu, Mircea Nicolescu, "A Developmental Approach to Concept Learning", *Proceedings of the International Conference on Informatics in Control, Automation and Robotics*, pages 337-344, Reykjavik, Iceland, July 2013.
- Mike Oberberger, Sushil Louis, Monica Nicolescu, “Evolving Team Tactics using Potential Fields,” in *Computational Intelligence for Security and Defense Applications*, pp 1-9, 2013.
- Bradford Towle, Monica Nicolescu, “Real-World Implementation of an Auction Behavior-Based Robotic Architecture (ABBRA)”, in *Proceedings of the IEEE International Conference on Technologies for Practical Robot Applications (TePRA)*, 2012.
- Katie Browne, Monica Nicolescu, “Learning to Generalize from Demonstrations”, in *Proceedings of AIMSA 2012 Workshop on Advances in Robot Learning and Human-Robot Interaction*, 2012.
- Richard Kelley, Liesl Wigand, Brian Hamilton, Katie Browne, Monica Nicolescu, Mircea Nicolescu, “Deep Networks for Predicting Human Intent with Respect to Objects”, in *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction*, Boston, MA, 2012.

- Richard Kelley, Amol Ambardekar, Liesl Wigand, Monica Nicolescu, Mircea Nicolescu, “Point Clouds and Range Images for Intent Recognition and Human-Robot Interaction”, in *Proceedings of the Advanced Reasoning with Depth Cameras Workshop* (in conjunction with the *Robotics: Science and Systems Conference*), Los Angeles, California, June 2011.
- Bradford A. Towle Jr. and Monica Nicolescu, “Applying Dynamic Conditions to the Auction Behavior-Based Robotic Architecture”, in *Proceedings of International Conference on Artificial Intelligence*, Las Vegas, NV, July 18-21, 2011.
- Richard Kelley, Christopher King, Amol Ambardekar, Monica Nicolescu, Mircea Nicolescu and Alireza Tavakkoli, “Integrating Context into Intent Recognition Systems”, in the “7th International Conference on Informatics in Control, Automation and Robotics”, pages 315-320, Funchal, Madeira, Portugal, June, 2010.
- Amol Ambardekar, Alireza Tavakkoli, Mircea Nicolescu, and Monica Nicolescu, “A Developmental Framework for Visual Learning in Robotics”, in *the 2010 International Conference on Image Processing, Computer Vision, & Pattern Recognition*, July 12-15, Las Vegas, USA, 2010.
- Bradford A. Towle Jr., Monica Nicolescu, “Fusing Multiple Sensors through Behaviors with the Distributed Architecture,” in the “*IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems*”, pages 115-120, September 5-7, 2010.
- Brad Towle, Monica Nicolescu, and Sergiu Dascalu, “Towards Integrating Role Playing Game Constructs in Real-Time Strategy Games”, in “*19th International Conference on Software Engineering and Data Engineering*”, San Francisco, USA, June 16-18, 2010.
- Saul Byberg Reed, Tyson Richard Curtis Reed, Sergiu Dascalu, Monica Nicolescu, “Recursive, Hyperspherical Behavioral Learning for Robotic Control”, in “*World Automation Congress*”, Kobe, Japan, September 19-22, 2010.
- Adrienne Breland, Karen Schlauch, Monica Nicolescu, and Frederick Harris, “An Annotated k-deep Prefix Tree for (1-k)-mer Based Sequence Comparisons”, in the “ACM International Conference on Bioinformatics and Computational Biology”, August 2-4, New York, USA, 2010.
- Mukesh Motwani, Nishith Tirpankar, Rakhi Motwani, Monica Nicolescu, Frederick C. Harris, Jr., “Towards Benchmarking Of Video Motion Tracking Algorithms”, in *Proceedings of IEEE International Conference on Signal Acquisition and Processing (ICSAP 2010)*, February 9-10, 2010, Bangalore, India.
- Richard Kelley, Monica Nicolescu, “Stochastic Models of Intent Recognition”, *the 9th SIAM International Conference on Data Mining*, Reno, NV, April 30 - May 2, 2009.
- Alireza Tavakkoli, Mircea Nicolescu, Monica Nicolescu, George Bebis, "Efficient Background Modeling through Incremental Support Vector Data Description", *SIAM International Conference on Data Mining*, Sparks, Nevada, April 2009.
- Richard Kelley, Monica Nicolescu, Mircea Nicolescu, Sushil Louis, “An Evolutionary Approach to Maximum Likelihood Estimation for Generative Stochastic Models”, the *40th International Symposium on Robotics*, Barcelona, Spain, March 10-13, 2009.
- Amol Ambardekar, Mircea Nicolescu, Monica Nicolescu, “Object Tracking Using Piecewise Feature Clustering”, *Proceedings of the International Conference on Visualization, Imaging and Image Processing*, Cambridge, UK, July 2009.

- Enrique Schaerer, Richard Kelley, Monica Nicolescu, “Robots as Animals: A Framework for Liability and Responsibility in Human-Robot Interactions”, the *18th IEEE Symposium on Robot and Human Interactive Communication*, Toyama, Japan, Sep-Oct 2009.
- Richard Kelley, Monica Nicolescu, Mircea Nicolescu, "Grammar-Based Robot Control", *Proceedings of the International Conference on Autonomous Agents and Multiagent Systems*, Budapest, Hungary, May 2009.
- Richard Kelley, Alireza Tavakkoli, Christopher King, Monica Nicolescu, Mircea Nicolescu, George Bebis “A Visual Tracking Framework for Intent Recognition in Videos”, in *Proceedings of the International Symposium on Visual Computing*, pages 450-459, Las Vegas, NV, December 2008.
- Sara Nasser, Adrienne Breland, Frederick Harris Jr, Monica Nicolescu, “A Fuzzy Classifier to Taxonomically Group DNA Fragments within a Metagenome”, in *Proceedings of the North American Fuzzy Information Processing Society Conference*, pages 1-6, New York, NY, May, 2008.
- Alireza Tavakkoli, Mircea Nicolescu, Monica Nicolescu, George Bebis, “Efficient Background Modeling through Incremental Support Vector Data Description”, in the *Proceedings of the International Conference on Pattern Recognition*, Tampa, Florida, December 2008.
- Alireza Tavakkoli, Mircea Nicolescu, Monica Nicolescu, George Bebis, “Incremental SVDD Training: Improving Efficiency of Background Modeling in Videos”, *Proceedings of the International Conference on Signal and Image Processing*, pages 1-6, Kailua-Kona, Hawaii, August 2008.
- Richard Kelley, Alireza Tavakkoli, Christopher King, Monica Nicolescu, Mircea Nicolescu, George Bebis, “Understanding Human Intentions via Hidden Markov Models in Autonomous Mobile Robots”, *Proceedings of the ACM/IEEE International Conference on Human-Robot Interaction*, pages 367-374, Amsterdam, Netherlands, March 2008.
- Monica Nicolescu, Odest Chadwicke Jenkins, Austin Stanhope, "Fusing Robot Behaviors for Human-Level Tasks", *Proceedings of the IEEE International Conference on Development and Learning (ICDL 07)*, pages 76-81, London, UK, July 11-13, 2007.
- Christopher King, Xavier Palathingal, Monica Nicolescu, Mircea Nicolescu, “A Control Architecture for Long-Term Autonomy of Robotic Assistants”, *Proceedings of the International Symposium on Visual Computing*, pages 375-384, Lake Tahoe, Nevada, November 2007.
- Christopher King, Xavier Palathingal, Monica Nicolescu, Mircea Nicolescu, “A Vision-Based Architecture for Long-Term Human-Robot Interaction”, *Proceedings of the International Conference on Human-Computer Interaction*, pages 1-6, Chamonix, France, March 2007.
- Alireza Tavakkoli, Richard Kelley, Christopher King, Mircea Nicolescu, Monica Nicolescu, George Bebis, “A Vision-Based Architecture for Intent Recognition”, *Proceedings of the International Symposium on Visual Computing*, pages 173-182, Lake Tahoe, Nevada, November 2007.
- Sara Nasser, Gregory Vert and Monica Nicolescu, “Multiple Sequence Alignment using Fuzzy Logic”, *Proceedings of the 2007 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology*, pages Hawaii, USA, pages 304-311, April 1-5, 2007.
- Anil Shankar, Juan Quiroz, Sergiu Dascalu, Sushil Louis, Monica Nicolescu, “Sycophant: An API for Research in Context-Aware User Interfaces”, *Proceedings of the International Conference on Software Engineering Advances*, pages 83-89, Cap Esterel, France, August 25-31, 2007.
- Jeff C. LaCombe, Eric L. Wang, Monica Nicolescu, Pablo Rivera, B. Poe, “Design Experiences with a Student Satellite Program”, *Proceedings of the American Society for Engineering Education, Pacific Southwest Section Conference*, Reno, NV, USA, April 12-13, 2007.

- Sara Nasser, Gregory Vert, Monica Nicolescu, “Fuzzy Classification of Genome Sequences Prior to Assembly Based on Similarity Measures”, *Proceedings of the North American Fuzzy Information Processing Society Conference*, pages 354-359, San Diego, CA, June 24-27, 2007.
- Monica Nicolescu, Odest Chadwicke Jenkins, Adam Olenderski, “Learning Behavior Fusion Estimation from Demonstration”, in *Proceedings, IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN 06)*, pages 340-345, Hatfield, UK, September 6-8, 2006.
- Monica Nicolescu, Odest Chadwicke Jenkins, Adam Olenderski, “Behavior Fusion Estimation for Robot Learning from Demonstration”, *Proceedings, IEEE 2006 Workshop on Distributed Intelligent Systems (DIS06)*, pages 31-36, Prague, Czech Republic, June 15-16, 2006.
- Adam Olenderski, Monica Nicolescu, Sushil Louis, “A Behavior-Based Architecture for Realistic Autonomous Ship Control”, *Proceedings, IEEE Symposium on Computational Intelligence and Games (CIG06)*, pages 148-155, Reno, NV, USA, May 22-24, 2006.
- Michael Capps, Joseph Liu, Edward Resnik, Monica Nicolescu, “Specification and Design of a High Risk Surveillance Vehicle”, *Proceedings, International Conference on Software Engineering Research and Practice (SERP 2005)*, pages 864-869, Las Vegas, NV, USA, June 27-30, 2005.
- Ryan Leigh, Tony Morelli, Sushil Louis, Monica Nicolescu, Chris Miles, “Finding Attack Strategies for Predator Swarms Using Genetic Algorithms”, *Proceedings, IEEE Congress on Evolutionary Computation*, pages 2422-2428, Edinburgh, SCOTLAND, September 2-5, 2005.
- Adam Olenderski, Monica Nicolescu, Sushil Louis, “Robot Learning by Demonstration Using Forward Models of Schema-Based Behaviors”, *Proceedings, International Conference on Informatics in Control, Automation and Robotics*, pages 263-269, Barcelona, SPAIN, September 14-17, 2005.
- Monica N. Nicolescu, Maja J Matarić, “Natural Methods for Learning and Generalization in Human-Robot Domains”, *Proceedings, Second International Joint Conference on Autonomous Agents and Multi-Agent Systems*, pages 241-248, Melbourne, AUSTRALIA, July 14-18, 2003 (best student paper nomination).
- Monica N. Nicolescu, Maja J Matarić, “Linking Perception and Action in a Control Architecture for Human-Robot Domains”, *Proceedings, Thirty-Sixth Hawaii International Conference on System Sciences*, Hawaii, USA, page 126-136, January 6-9, 2003 (best paper award).
- Monica N. Nicolescu, Maja J Matarić, “A hierarchical architecture for behavior-based robots”, *Proceedings, First International Joint Conference on Autonomous Agents and Multi-Agent Systems*, pages 227-233, Bologna, ITALY, July 15-19, 2002.
- Monica N. Nicolescu, Maja J Matarić, “Experience-based representation construction: learning from human and robot teachers”, *Proceedings, IEEE/RSJ International Conference on Intelligent Robots and Systems*, pages 740-745, Maui, Hawaii, USA, October 29 - November 3, 2001.
- Monica N. Nicolescu, Maja J Matarić, “Experience-based learning of task representations from human-robot interaction”, *Proceedings, IEEE International Symposium on Computational Intelligence in Robotics and Automation*, pages 463-468, Banff, Alberta, CANADA, July 29 - August 1, 2001.
- Monica N. Nicolescu, Maja J Matarić, “Learning Cooperation From Human-Robot Interaction”, *Proceedings, 5th International Symposium on Distributed Autonomous Robotic Systems (DARS)*, pages 477-478, Knoxville, TN, USA, October 4-6, 2000.
- Monica N. Nicolescu, Maja J Matarić, “Deriving and Using Abstract Representation in Behavior-Based Systems”, *Proceedings, Seventeenth National Conference on Artificial Intelligence (AAAI)*, page 1087, Austin, Texas, USA, July 30-August 3, 2000.

- Odest C. Jenkins, Monica Nicolescu, Maja J Matarić, “Autonomy and Supervision for Robot Skills and Tasks Learned from Demonstration”, *Proceedings, American Association for Artificial Intelligence, Workshop on Supervisory Control of Learning and Adaptive Systems*, pages 27-29, San Jose, CA, July 25, 2004.
- Monica N. Nicolescu, Maja J Matarić, “Natural Methods for Learning and Generalization in Human-Robot Domains”, *Proceedings, AAAI Spring Symposium on Human Interaction with Autonomous Systems in Complex Environments*, pages 154-159, Palo Alto, CA, March 24-26, 2003.
- Monica N. Nicolescu, Maja J Matarić, “Learning task representations from experienced demonstrations”, *Proceedings, AAAI Fall Symposium on Anchoring Symbols to Sensor Data in Single and Multiple Robot Systems*, pages 1-6, North Falmouth, MA, Nov 2-4, 2001.

INVITED CONFERENCE PAPERS

- Monica N. Nicolescu, Maja J Matarić, “Extending Behavior-Based Systems Capabilities Using An Abstract Behavior Representation”, *Working Notes of the AAAI Fall Symposium on Parallel Cognition*, pages 27-34, North Falmouth, MA, USA, November 3-5, 2000.

TECHNICAL REPORTS

- Monica Nicolescu, Maja J Matarić, “Natural Methods for Learning and Generalization in Human-Robot Domains”, *USC Center for Robotics and Embedded Systems Technical Report CRES-02-006*, December 2002.
- Monica Nicolescu, Maja J Matarić, “Learning and Interacting in Human-Robot Domains”, *USC Institute for Robotics and Intelligent Systems Technical Report IRIS-01-395*, January 2001.
- Monica Nicolescu, Maja J Matarić, “Extending Behavior-Based Systems Capabilities Using An Abstract Behavior Representation”, *USC Institute for Robotics and Intelligent Systems Technical Report IRIS-00-389*, July 2000.

PhD THESIS

- Monica Nicolescu, “A Framework for learning from Demonstration, Generalization and Practice in Human-Robot Domains”, USC Center for Robotics and Embedded Systems, May 2003.

INVITED TALKS/PRESENTATIONS (excluding conference paper talks)

- “Intent Recognition for Adversarial Groups using Dynamic, Predictive Threat Heatmaps”, *Office of Naval Research PI Meeting, Cooperative Autonomous Swarm Technology (CAST) Program Review*, May 2021.
- “Intent Recognition for Adversarial Groups using Dynamic, Predictive Threat Heatmaps”, *Office of Naval Research PI Meeting Kick-off*, May 2021.
- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Science of Autonomy PI Meeting (program review)*, Washington, DC, August 10, 2019.

- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Computational Cognitive Science and Human-Robot Interaction PI Meeting* (program review), Washington, DC, May 29, 2019.
- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Science of Autonomy PI Meeting* (program review), Washington, DC, August 7, 2018.
- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Computational Cognitive Science and Human-Robot Interaction PI Meeting* (program review), Washington, DC, June 5, 2018.
- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Science of Autonomy PI Meeting* (program review), Washington, DC, August 1, 2017.
- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Computational Cognitive Science and Human-Robot Interaction PI Meeting* (program review), Washington, DC, June 21, 2017 (contributed work as PI).
- “Human-Robot Interaction Research at UNR”, invited talk at NAASIC, November 1, 2016.
- “Intent Recognition for On-Water Dynamic Maritime Domains and Intent Recognition for On-Water Dynamic Maritime Domains”, *Office of Naval Research Science of Autonomy PI Meeting* (program review), Washington, DC, August 17, 2016.
- “Designing Collaborator Robots for Highly-Dynamic Multi-Human, Multi-Robot Teams”, *Office of Naval Research Computational Cognitive Science and Human-Robot Interaction PI Meeting* (program review), Washington, DC, August 10, 2016.
- “Intent Recognition for On-Water Dynamic Maritime Domains”, *Office of Naval Research PI Meeting* (program review), Reno, NV, December 15, 2015.
- “Intent Recognition for On-Water Dynamic Maritime Domains”, *Office of Naval Research PI Meeting* (program review), Washington, DC, August 11, 2015.
- “Understanding Intent Using an Activation-Spreading Architecture”, *Office of Naval Research PI Meeting* (program review), Washington, DC, August 7, 2015.
- “UNR CAREER Workshop”, University of Nevada, Reno, February 2014.
- “Understanding Intent Using an Activation-Spreading Architecture”, *Office of Naval Research Computational Cognitive Science and Human-Robot Interaction PI Meeting* (program review), Washington, DC, August 12, 2014.
- “Understanding Intent Using an Activation-Spreading Architecture”, *Office of Naval Research Science of Autonomy PI Meeting* (program review), Washington, DC, August 19, 2014.
- “Social Robotics Research at UNR”, invited talk at the Junior Science and Humanities Symposium, Reno, NV, March 8, 2014.
- “Intent Recognition in Naval and Robotic Application Domains”, invited talk at the *Karles Invitational Conference*, Naval Research Laboratory, Washington DC, January 13-14, 2014.
- “Understanding Intent Using an Activation Spreading Architecture”, *Office of Naval Research PI Meeting* (program review), June 2013.
- “Understanding Intent Using an Activation Spreading Architecture”, *Office of Naval Research Science of Autonomy PI Meeting* (program review), April 2013.

CURRICULUM VITAE – MONICA NICOLESCU

- “Social Robotics Research”, invited talk at the College of Engineering Advisory Board meeting, April 2013.
- "Context-Based Intent Understanding for Autonomous Systems in Naval and Collaborative Robotics Applications", *Office of Naval Research PI Meeting* (program review), Washington, DC, June 12, 2012.
- “Context-Based Intent Understanding for Autonomous Systems in Naval and Collaborative Robotics Applications”, *Office of Naval Research, PI Meeting* (program review), Washington, DC, December 2011.
- “Intent Understanding in Naval and Robotic Domains”, invited talk at the *Naval Postgraduate School*, Monterey, CA, December 2011.
- “Robotics Lecture Series”, invited lecture at *Osher Lifelong Learning Institute*, September 2011.
- “Context-Based Intent Understanding for Autonomous Systems in Naval and Collaborative Robotics Applications”, *Office of Naval Research, PI Meeting* (program review), Washington, DC, June 2011.
- “Context-Based Intent Understanding for Autonomous Systems in Naval and Collaborative Robotics Applications”, *Office of Naval Research, Science of Autonomy PI Meeting* (program review), Washington, DC, April 2011.
- “Context-Based Intent Understanding for Autonomous Systems in Naval and Collaborative Robotics Applications”, *Office of Naval Research PI Meeting*, Washington DC, June 2010.
- “Understanding Intent Using a Novel Hidden Markov Formulation”, *Office of Naval Research PI meeting*, Arlington, Virginia, June 2009.
- Presentation for 8-grade students for the Career Exploration Day of the *Education Collaborative of Washoe County*, April 5, 2007.
- “Understanding Intent Using a Novel Hidden Markov Formulation”, *Office of Naval Research PI meeting*, Arlington, Virginia, May 3, 2007.
- “Robotic Platform for Security and Service Applications”, *Office of Naval Research PI meeting*, Arlington, Virginia, May 3, 2007.
- “Survey Results”, *NSF Workshop on Human-Robot Interaction*, National Science Foundation, Los Angeles, CA, 2006.
- “High-school seminar for KEEP (Nevada K-16 Education and Engineering Program)”, *UNR Raggio Center*, University of Nevada, Reno, 2006.
- “Engineer’s Day Presentation”, *College of Engineering*, University of Nevada, Reno, 2005, 2006 and 2007.
- Presentation to high-school and elementary school students, *Nevada K-16 Education and Engineering Program (KEEP)*, March 14, 2006.
- Lab robot demonstration for middle school students from the Washoe County School district, April 5, 2006.
- Lab robot demonstration, 4-H Discover Your Future conference, organized by the *Nevada 4-H Office*, for the University of Nevada Cooperative Extension, June 19, 2006.
- Presentation, Nevada 4-H Program, organized by the *Cooperative Extension of UNR*, 2006.
- Robot demonstration, *IGT/Computer game engineering event*, October 9, 2006.

- Robot demonstration for “Tech Thursday” event, Northern Nevada's premier technology and entrepreneurial networking event, November 16, 2006.
- Nevada EPSCoR State Conference on Cognitive Information Processing, May, 2006.
- Presentation at the MESA (Math Engineering and Science Achievement) seminar for high-school and middle-school students, Spring 2005.
- Lab demonstration for Mendive Middle School Visit, March 2005.
- “Technology Exposition Presentation”, *UNR*, University of Nevada, Reno, 2005.
- “High-school seminar on STEM (science, technology, engineering & mathematics)”, *UNR Raggio Center*, University of Nevada, Reno, 2004.
- “Field-trip for students from the Sparks High School and Clayton Middle School”, *UNR MESA (Math Engineering and Science Achievement) Academic Enrichment Program*, University of Nevada, Reno, 2004.
- “Presentation of activities performed with IEG support”, *UNR, Instructional Enhancement Grant*, University of Nevada, Reno, 2004.
- “Corporate Partners Presentation”, *College of Engineering, University of Nevada, Reno*, October 3, 2003.
- “Industry Advisory Board Presentation”, *Department of Computer Science, University of Nevada, Reno*, October 3, 2003.
- “Robot task learning from instructive demonstrations, generalization and practice”, *California Institute of Technology*, Pasadena, CA, USA, February 2003.
- “Learning and interacting in human-robot domains”, *Computer Science Colloquium Series, Harvey Mudd College*, Claremont, CA, USA, November 2002.
- “An action-embedded framework for learning from demonstration in human-robot domains”, *HRL Laboratories*, Malibu, CA, USA, August 2002.
- “Learning through human-robot interaction”, for the *DARPA Information Processing Technology Office, DARPA Tech Symposium*, Anaheim, CA, USA, July 2002.
- “An action-embedded framework for learning from demonstration in human-robot domains”, *USC Learning and Imitation Seminars*, Los Angeles, CA, USA, December 2001.
- “An abstract representation for behavior-based robots”, *Philips Research*, Briarcliff Manor, NY, USA, August 2000.

SERVICE

CONFERENCE ORGANIZATION

Program Chair/Co-Chair:

- Conference Track Organizer, Autonomous Agents and Multi-Agent Systems - Robotics Track, May 6-10, 2013.

- Workshop organizer, Pericle Salvini, Monica Nicolescu, Hiroshi Ishiguro, “The Future of HRI – Paving the Way to Next Generation of HRI”, full-day workshop proposal at the *IEEE International Conference on Robotics and Automation*, 2012.
- Chair, Workshop and Tutorial Program, IEEE International Conference on Robotics and Automation, Pasadena, California, May 19-23, 2008.
- Organizer, NSF Workshop on Human-Robot Interaction, Los Angeles, CA, September 2006.
- Workshop Co-Chair (with Chad Jenkins), Workshop on Modular Foundations for Control and Perception, in conjunction with the Robotics: Science and Systems Conference, Cambridge, Massachusetts, USA, June 11, 2005.
- Conference Session Co-Chair (with Simon X. Yang), Learning Session, IEEE International Symposium on Computational Intelligence in Robotics and Automation (IEEE CIRA 2001), Banff, Alberta, CANADA, July 29 - August 1, 2001.

Program Committee Member:

- ACM/IEEE International on Human Robot Interaction.
- IEEE International Conference on Robotics and Automation.
- IEEE International Workshop on Advanced Robotics and its Social Impacts.
- IEEE/RSJ International Conference on Intelligent Robots and Systems.
- IEEE International Conference on Robotics and Automation.
- Robotics Science and Systems, Workshop Proposals.
- IEEE International Conference on Development and Learning and on Epigenetic Robotics (July 2014).
- The 23rd IEEE International Symposium on Robot and Human Interactive Communication (March 2014 - April 2014).
- IEEE International Conference on Robotics and Automation, Karlsruhe, Germany, May 6-10, 2013.
- IEEE/RSJ International Conference on Intelligent Robots and Systems, Tokyo, Japan, November 3-8, 2013.
- IEEE-RAS International Conference on Humanoid Robots, Osaka, Japan, Nov 19 – Dec. 1, 2012.
- HRI Pioneers Workshop, Lausanne, Switzerland, March 6, 2011.
- International Conference on Robotics and Automation, Saint Paul, MN, May 14-18, 2012.
- International Conference on Robotics and Automation, Shanghai, China, May 9-13, 2011.
- New Frontiers in Human-Robot Interaction, Leicester, United Kingdom, 30 March - 1 April, 2010.
- International Conference on Informatics in Control, Automation and Robotics, Madeira, Portugal, June 15-18, 2010.
- IEEE International Symposium in Robot and Human Interactive Communication, Viareggio, Italy, Sep. 12 - 15th, 2010.
- Robotics Science and Systems, Seattle, WA, USA, June 28 – July 1, 2009.
- New Frontiers in Human-Robot Interaction Symposium, Edinburgh, Scotland, April 8-9 April 2009.

- 4th ACM/IEEE International Conference on Human-Robot Interaction, San Diego, CA, March 11-13, 2009.
- International Conference on Robotics and Automation, Kobe, Japan, May 12-17, 2009.
- International Conference on Intelligent Robots and Systems (IROS), St. Louis, MO, USA, Oct 11-15, 2009.
- 7th IEEE International Conference on Development and Learning, Monterey, California, August 9th-12th, 2008.
- IEEE/RSJ International Conference on Intelligent Robots and Systems, Nice, France, September 22-26, 2008.
- ACM/IEEE Conference on Human-Robot Interaction (HRI), Amsterdam, March 12-15, 2008.
- IEEE International Conference on Robotics and Automation, Pasadena, California, May 19-23, 2008.
- International Symposium on Imitation in Animals and Artifacts, Newcastle upon Tyne, UK, April 2-5, 2007.
- International Joint Conference on Neural Networks (IJCNN), Orlando, Florida, August 12-17, 2007.
- International Conference on Artificial Intelligence (AAAI), Vancouver, Canada, from July 22-26, 2007.
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), San Diego, CA, October 29- November 2, 2007.
- 6th IEEE International Conference on Development and Learning, London, UK, July 11-13, 2007.
- IEEE Symposium on Computational Intelligence and Games (CIG), Honolulu, HI, April 1-5 2007.
- IEEE Symposium on Computational Intelligence and Games (CIG), Reno, NV, May 22-24, 2006.
- International Joint Conference on Neural Networks (IJCNN), Vancouver, BC, Canada, July 16-21, 2006.
- IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), Hatfield, UK, September 6-8, 2006.
- 23rd International Conference on Machine Learning (ICML), Pittsburgh, Pennsylvania, USA, June 25-29, 2006.
- Human-Robot Interaction Conference (HRI), Salt Lake City, Utah, USA, March 2-4, 2006.
- Autonomous Agents and Multi Agent Systems Conference (AAMAS), Hakodate, JAPAN, May 8-12, 2006.
- International Conference on Robotics and Automation (ICRA), Orlando, USA, May 15-19, 2006.
- International Conference on Robotics and Automation (ICRA), Barcelona, SPAIN, April 18-22, 2005.
- Autonomous Agents and Multi Agent Systems Conference (AAMAS), Utrecht, The Netherlands, Utrecht, The Netherlands, 2005.
- American Association for Artificial Intelligence (AAAI), Pittsburgh, Pennsylvania, USA, July 9-13, 2005.
- International Conference on Advanced Robotics (ICAR 2005), Seattle, Washington, USA, July 18-20, 2005.

- Autonomous Agents and Multi Agent Systems Conference (AAMAS), New York, NY, USA, 19-23 August 2004.

REVIEW WORK

Associate Editor:

- International Journal of Social Robotics
- Journal of Intelligent Service Robotics

Journals:

- Interactive Studies
- Adaptive Behavior
- Autonomous Robots
- IEEE Transactions on Systems, Man and Cybernetics (Special Issue on Human-Robot Interaction)
- Journal of Interaction Studies: Social Behaviour and Communication in Biological and Artificial Systems
- IEEE Transactions on Robotics
- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Neural Networks and Learning Systems
- Imitation and Social Learning in Robots, Humans and Animals: Behavioural, Social and Communicative Dimensions, (chapter review), Cambridge University Press.
- Journal of Intelligent Material Systems and Structures
- International Journal of Robotics and Automation
- Computational Intelligence Journal (Special issue on Artificial Intelligence Methods for Ambient Intelligence)
- Intelligent Service Robotics
- Robotics and Autonomous Systems
- Journal of Cognitive Systems Research

Conferences:

- American Association for Artificial Intelligence National Conference (AAAI)
- International Joint Conference on Artificial Intelligence (IJCAI)
- American Association for Artificial Intelligence Fall Symposium
- International Conference on Autonomous Agents
- Autonomous Agents and Multiagent Systems (AAMAS)
- International Conference on Robotics and Automation (ICRA)

- International Conference on Advanced Robotics (ICAR)
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- IEEE International Symposium on Computational Intelligence in Robotics and Automation (CIRA)
- IEEE/RAS International Conference on Humanoid Robots
- International Conference on Simulation of Adaptive Behavior (SAB)
- International Conference on Intelligent Autonomous Systems (IAS)
- Human-Robot Interaction Conference (HRI)
- IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)
- IEEE Symposium on Computational Intelligence and Games (CIG)
- International Joint Conference on Neural Networks (IJCNN)
- International Multi-Conference on Computing in the Global Information Technology
- International Symposium on Imitation in Animals and Artifacts
- New Frontiers in Human-Robot Interaction Symposium

Panels:

- National Science Foundation, NSF Robotics Review Panel
- National Science Foundation, Collaborative Research Panel
- National Science Foundation, Robust Intelligence
- National Science Foundation, Panel on Integrative Graduate Education and Research Traineeship
- NASA, NSTRF Panel

JUDGING

- Friendly Robotics competition at the Boys and Girls Club of Hollywood, June 9, 2000.

SCIENTIFIC COMMITTEES

- Co-chair, the IEEE RAS on Human-Robot Interaction.

UNIVERSITY COMMITTEES

University

- Member, University Courses and Curriculum Committee, Fall 2009 – Spring 2011

College

- Member, COEN Undergraduate Curriculum Committee, Fall 2008 – Spring 2009, 2017 – present

- Chair, COEN Undergraduate Curriculum Committee, Fall 2009 – 2011
- Member, College Personnel Committee, 2012 – 2014.
- Member, Curriculum Review and Globally Competitive Engineering Education, 2012 – 2013.
- Member of the College of Engineering Curriculum Committee, 2004 – 2011
- Member, COEN Undergraduate Curriculum Committee

Department

- Member, Ad-hoc Space Committee, 2015 – 2017
- Chair, Ad-hoc Strategic Plan Committee, 2015 – 2017
- Member, Administrative Search Committee, 2015 – 2017
- Chair, Faculty Evaluation Committee, 2015 – 2017
- Member, Undergraduate Curriculum Committee, 2015 – 2017
- Chair, Faculty Search Committee, 2014 – 2015
- Chair, CSE Faculty Search Committee, 2013 – 2014, 2019 – 2021
- Chair, CSE Colloquium Committee, 2012 – 2013
- Member, CSE Lecturer Search Committee, 2012 – 2013
- Chair, CSE Undergraduate Curriculum Committee, 2008 – 2011, 2017 – present
- Representative of the CSE Department for the Common Course Numbering Committee
- Member, CSE Student Affairs Committee, 2008 – 2009
- Member, CSE Faculty Evaluation Committee, 2007 – 2009, 2012-2014
- Member, CSE Undergraduate Curriculum Committee 2003 – 2008
- Member, CSE Equipment and Facilities Committee, 2004 – 2005
- Member, CSE Faculty Search Committee, 2006
- Member, CSE Administrative Search Committee, 2012

OTHER ACTIVITIES

- NAASIC Media Showcase. (2014).
- Nevada Manufacturing Day. (2014).
- Advisor, Advised CSE student for Mobile Engineering Lab presentations. (2013 - Present).
- Representative for the Department of Computer Science and Engineering, tours and lab demonstrations, Nevada Bound. (2013 - Present).
- Live demonstrations and interviews for media event, KTVN Channel 2 and KOLO TV Channel 8. (2015).
- Representative for CSE, tours and lab demonstrations for Nevada Bound. (2015).

- Robot vision demonstrations for Engineer's Day, organized by the UNR College of Engineering for high school students. (2015).
- Lab presentation, Engineer's Day, Apr 2012
- Representative for the Department of Computer Science and Engineering, tours and lab demonstrations, Nevada Bound, Fall 2012
- Lab demonstration for the Engineer's Day event, April 2011
- Representative for CSE, tours and lab demonstrations for Nevada Bound, February 2011
- Lab demonstration for the Engineer's Day event, Apr 6, 2010
- Lab demonstration for the Coral Academy of Science Field Trip, Sep 27, 2010
- Lab presentation for the Best and Brightest Event, Jan 23, 2009
- Lab visit by prospective students and parents, Feb 18, 2009
- Lab demonstration for the Engineer's Day event, Apr 2, 2009
- Robot demonstration for the Engineer's Day presentations, organized by the UNR College of Engineering for high school students, Feb 14, 2008
- Lab visit by the Nevada Bound program, Oct 14, 2008
- Prospective students visit, Oct 24, 2008
- Field trip robot demonstration for Reno middle school and high-school students, Nov 21, 2008
- Lab visit by the Nevada Bound program – student presentation, Dec 5, 2008
- Robot demonstration for the Engineer's Day presentations, organized by the UNR College of Engineering for high school students, February 26, 2007.
- Presentation for 8-grade students for the Career Exploration Day of the Education Collaborative of Washoe County, April 5, 2007.
- Attended the PaymentNet Training Workshop, February 2007.
- Prepared accreditation materials for CPE 201 (Introduction to Computer Engineering) and CPE 470/670 (Autonomous Mobile Robots), Spring 2007.
- Prepared purchasing and configuration of robotic equipment for the UNR Student Technology Fee Distribution instructional grant, Summer 2007.
- Reviewed more than 50 new faculty applications, January – April 2006.
- Lab robot demonstration for high school students, Engineer's Day event (UNR College of Engineering), February 28, 2006.
- Presentation to high-school and elementary school students, Nevada K-16 Education and Engineering Program (KEEP), March 14, 2006.
- Lab robot demonstration for middle school students from the Washoe County School district, April 5, 2006.
- Lab robot demonstration, 4-H Discover Your Future conference, organized by the Nevada 4-H Office, for the University of Nevada Cooperative Extension, June 19, 2006.
- Presentation, Nevada 4-H Program, organized by the Cooperative Extension of UNR, 2006.

CURRICULUM VITAE – MONICA NICOLESCU

- Robot demonstration, IGT/Computer game engineering event, October 9, 2006.
- Robot demonstration for “Tech Thursday” event, Northern Nevada's premier technology and entrepreneurial networking event, November 16, 2006.
- Prepared 1 presentation for Nevada EPSCoR State Conference on Cognitive Information Processing, May, 2006.
- Presentation at the MESA (Math Engineering and Science Achievement) seminar for high-school and middle-school students, Spring 2005.
- Lab demonstration for Mendive Middle School Visit, March 2005.
- Presentation at the Nevada K-16 Education and Engineering Program (KEEP), March 14, 2006.
- Lab demonstration for the Engineers’ Day presentations, 2005 and 2006.
- Department Technical Report System (with Sushil Louis, Mircea Nicolescu and Brian Westphal)
- Common course numbering system between UNR and UNLV (with Nancy LaTourrette and Fred Harris)
- Presentation at the STEM (science, technology, engineering and mathematics) seminar, March 2004.

PROFESSIONAL AFFILIATIONS

- IEEE (Institute of Electrical and Electronics Engineers)

MEDIA COVERAGE

- ABC Evening News (on Channel ABC 7), by Miriam Hernandez, featured videos of robot teaching by demonstration experiments, aired June 27, 2001.
- USC Engineer Magazine, “The Robot Revolution” article, Vol.1, Issue 2, 2002.
- The New York Times, “Making Robots More Like Us”, by Yudhijit Bhattacharjee, March 6, 2003.
- USC Trojan Family Magazine, “Robotica”, by Mark Ewing, Eric Mankin, Bob Calverley, Vol. 35, Number 2, Summer 2003.
- Nevada News, “Robotics professor wins Early Career Development Award from NSF”, by Adam Carter, February 24, 2006.
- NPR Morning Edition, KUNR, Radio Interview with Daniel Erwine, March 28, 2006.
- UNR students help military with high-tech war games, Channel 4 KRNK, Reno, NV, May 26, 2006.
- Navy Game, by James Steiner, Channel 8 KOLO, Reno, NV, May 26, 2006.
- UNR Grad Students Make Navy Training Program, Channel 2, KTVN, Reno, NV, May 26, 2006.
- UNR team assists Navy in developing war simulators, Las Vegas Sun, May 26, 2006.
- UNR students creating high-tech war games, by Don Cox, Reno Gazette Journal, May 26, 2006.

CURRICULUM VITAE – MONICA NICOLESCU

- Live demonstrations and interviews for media event, KTVN Channel 2 and KOLO TV Channel 8., 2015.