

Mina Khoshdeli

Electrical and Biomedical Engineering Department
University of Nevada, Reno, NV, 89557
Phone: (775)357-4993, E-mail: mkhoshdeli@nevada.unr.edu
Visa Status: Permanent Resident

Summary	<ul style="list-style-type: none">A seasoned professional with expertise in machine learning, data analysis, and computer vision.
Professional Experience	<p><u>Graduate Research Assistant in the Electrical Engineering Department at University of Nevada, Reno (UNR)</u></p> <ul style="list-style-type: none">Developed a new technique for color decomposition of H&E stained histology sections based on non-negative matrix factorizationDeveloped a deep learning model (DLM) to identify multiple nuclear phenotypes from whole slide imagesDeveloped a DLM for profiling 3D multi-cellular system for high content screeningDeveloped a deep learning framework for nuclear segmentation of H&E stained histology sections and spheroid models of human mammary epithelial cell linesDeveloped a new technique for electromagnetic transient events (EMTE) classification in transmission gridsAnalyzed and enriched genome-wide molecular data for cultured multi-cellular systems under stress of the microenvironment
Education	<ul style="list-style-type: none">Ph.D. in Electrical Engineering, University of Nevada, Reno (UNR), 2015-Present (Expected May. 2019), GPA: 4.00 out of 4.00. Dissertation: Computational methods for characterizing microanatomy and tumor histopathology, Advisor: Prof. Bahram ParvinMaster of Science (M.Sc.) in Electrical Engineering, Shiraz University, Shiraz, Iran, 2012-2014, GPA: 18.48 out of 20. Thesis: Reconstruction of Hyperspectral Images from Compressed Measurements, Advisor: Prof. Mehran Yazdi.Bachelor of Science (B.Sc.) in Electrical Engineering, Shiraz University, Shiraz, Iran, 2008-2012, GPA: 18.12 out of 20.
Computer Skills	<ul style="list-style-type: none">Machine Learning and computer vision Libraries: Torch, OpenCV, PyTorch, PandasLanguage Programming: Python, lua, REngineering Software: MATLAB, PSpice, AutoCAD, LaTeX, SASOther Software: ICDL (Microsoft Office: Word, Excel, Power point, Access), Adobe Photoshop
Research Interests	<ul style="list-style-type: none">Deep LearningSignal ProcessingImage ProcessingComputer VisionBig Data Analytic
Honors And Awards	<ul style="list-style-type: none">Awarding the 2018 GSA Travel Award, University of Nevada Reno (UNR)Awarding the 2017-2018 Graduate Dean's Merit Scholarship, University of Nevada Reno (UNR)Awarding the 2016-2017 International Student Scholarship, University of Nevada Reno (UNR)Awarding the 2016 GSA Travel Award, University of Nevada Reno (UNR)Having Brilliant Talent Privilege, Ministry of Science Research and Technology, Iran.Ranked 1st in Master's degree program (entry year: 2012) & awarded as the <u>Top Student</u> in telecommunication electrical engineering program at Shiraz University.Ranked 2nd in Bachelor's degree program (entry year: 2008) & awarded as the <u>Top Student</u> in telecommunication electrical engineering program at Shiraz University.
Professional Affiliations	<ul style="list-style-type: none">Member of the Institute of Electrical and Electronics Engineers (IEEE)

Journal Publications	<p>[1] Q. Cheng, M. Khoshdeli, C. Zang, and B. Parvin, "Integrative data analysis predicts YY1 as a cis-regulator in 3D cell culture models of MCF10A at the stiffness level of high mammographic density," PLOS ONE, under minor revision.</p> <p>[2] M. Khoshdeli, and B. Parvin, "Feature-based Representation Improves Color Decomposition and Nuclear Detection Using a Convolutional Neural Network," IEEE Transactions on Biomedical Engineering. Vol.65, Issue 3, pp. 625-634, Mar. 2018.</p> <p>[3] M. Khoshdeli, G. Winkelmaier, and B. Parvin, "Fusion of Encoder-Decoder Models Improves Delineation of Multiple Nuclear Phenotypes," BMC Bioinformatics, August 2018.</p>
Conference Publications	<p>[1] M. Khoshdeli, A. Borowsky, and B. Parvin, "Deep Learning Models Differentiates Tumor Grades from H&E Stained Histology Sections," In 2018 IEEE International Conference on Engineering in Medicine and Biology Society (EMBC), July 2018.</p> <p>[2] M. Khoshdeli, G. Winkelmaier, and B. Parvin, "Multilayer Encoder-Decoder Network for 3D Nuclear Segmentation in Spheroid Models of Human Mammary Epithelial Cell Lines," In Computer Vision for Microscopy Image Analysis (CVMI) at 2018 IEEE International Conference on Computer Vision and Pattern Recognition (CVPR), June 2018.</p> <p>[3] G. Winkelmaier, M. Khoshdeli, Q. Cheng, A. Borowsky, and B. Parvin, "Quantum Cascade Laser Infrared Microscopy Differentiates Malignant Phenotypes in Breast Histology Sections," In 2018 IEEE 15th International Symposium on Biomedical Imaging (ISBI2018), 4-7 April 2018.</p> <p>[4] M. Khoshdeli, I. Niazazari, R. Jalilzadeh, H. Livani, and B. Parvin, "Electromagnetic Transient Events (EMTE) Classification in Transmission Grids," In 2017 Power and Energy Society General Meeting (PESGM).</p> <p>[5] M. Khoshdeli, R. Cong, and B. Parvin, "Detection of Nuclei in H&E Stained Sections Using Convolutional Neural Networks," In 2017 IEEE EMBS International Conference on Biomedical & Health Informatics (BHI), 105-108 February 2017.</p>
Journal Peer-Review Activities	<ul style="list-style-type: none"> • IEEE Transaction on Medical Imaging, Reviewer
Teaching Experience	<p><u>Graduate Teacher Assistant in the electrical engineering department at University of Nevada, Reno (UNR)</u></p> <ul style="list-style-type: none"> • Image Analysis and Computer Vision (2016), University of Nevada Reno (UNR), Reno, USA. • Circuits Laboratory (2015-2018), University of Nevada Reno (UNR), Reno, USA. • Digital Signal Processing (2016-2017), University of Nevada Reno (UNR), Reno, USA. <p><u>Graduate Teacher Assistant in the electrical engineering department at Shiraz University, Shiraz</u></p> <ul style="list-style-type: none"> • Digital Circuit Laboratory (2011-2014), Shiraz University, Shiraz, Iran. • Computer Architecture (2011), Shiraz University, Shiraz, Iran. • Microwaves (2013), Shiraz University, Shiraz, Iran. • Electronic Laboratory (2014), Shiraz University, Shiraz, Iran. • Signals and Systems (2013-2014), Electronic Training School, Shiraz, Iran.
References	<p>Bahram Parvin, Professor, Electrical and Biomedical Engineering Department, University of Nevada, Reno Phone: (775)682-6863 E-mail: bparvin@unr.edu</p> <p>Mohammad Sami Fadali, Professor, Electrical and Biomedical Engineering Department, University of Nevada, Reno Phone: (775)784-6627 E-mail: fadali@unr.edu</p>