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| **Amol Ambardekar** |  | PhD CandidateDepartment of Computer Science and EngineeringUniversity of Nevada, Reno, MS 171 Reno, NV 89557-0171 |
| email:URL:Cell: | [ambardek@cse.unr.edu](file:///D%3A%5CFall%202011%5CTeaching%20Application%5Cambardek%40cse.unr.edu)<http://www.cse.unr.edu/~ambardek>(775) 313–1894 |
| **EDUCATION** |
|  |  |  |
| **Ph.D. in Computer Science** | **University of Nevada, Reno, USA** | **MAY 2012** |
|  | Thesis | Vehicle Classification Framework: Online Classification with Tracking | **(Expected)** |
|  | Advisor | Dr. Mircea Nicolescu |
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| **M.S. in Computer Science** | **University of Nevada, Reno, USA** | **DEC 2007** |
|  | Thesis | Efficient Vehicle Tracking and Classification for an Automated Traffic Surveillance System |
|  | Advisor | Dr. Mircea Nicolescu |
|  |  |  |
| **M.S. in Applied Physics** | **East Carolina University, Greenville, USA** | **AUG 2005** |
|  | Thesis | Optical Levitation and Manipulation of Stuck Particles with Pulsed Optical Tweezers |
|  | Advisor | Dr. Yong-qing Li |
|  |  |  |
| **B.E. in Electronics Engineering** | **Mumbai University, India** | **NOV 2002** |
|  | Thesis | Signature Recognition Using Image Processing & Artificial Intelligence |
|  | Advisor | Prof. V. B. Kulkarni |
|  |  |  |
| **APPOINTMENTS**  |
|  |  |  |
|  | **Research Assistant** | **University of Nevada, Reno** | **FALL 2008 – Present** |
| ● | Vehicle Classification Framework |  |  |
| ● | Point Clouds and Range Images for Intent Recognition and Human-Robot Interaction |  |  |
| ● | A Developmental Framework for Visual Learning in Robotics |  |  |
| ● | Integrating Context into Intent Recognition Systems |  |  |
| ● | Object Tracking Using Piecewise Feature Clustering |  |  |
| ● | Ground Truth Verification Tool (GTVT) for Video Surveillance Systems |  |  |
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| **HONORS** |
|  |  |  |
| ● | Outstanding International Graduate Student Award | University of Nevada, Reno  | **2011** |
| ● | Outstanding International Graduate Student Award | University of Nevada, Reno  | **2010** |
| ● | Teaching Recognition Award | University of Nevada, Reno | **2008** |
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| **RESEARCH INTERESTS** |
|  |  |  |
| ● | Computer Vision and Pattern Recognition |
| ● | Activity and Intent Recognition in Visual Domain |
| ● | Visual Capabilities in Robotics Applications |
| ● | Human-Robot Interaction |
| ● | Evolutionary Computing |
| ● | Machine Intelligence |
| ● | Computer Graphics |
| ● | Biometric-Based Identification Systems |
| ● | General and Special Purpose Microprocessor Design and Architecture |
| ● | Parallel Processing and Distributed Systems |
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| **TEACHING EXPERIENCE** |
|  |  |  |
|  | **Teaching Assistant** | **University of Nevada, Reno, USA** |  |
|  | ● | Introduction to Computer Engineering (CPE 201) | **FALL 2006 – SPRING 2008** |
|  |  | Prepared and delivered laboratory lectures, graded assignments and reports, and held office hours.**Awarded Teaching Recognition Award in 2008** |  |
|  | ● | Programming Languages, Concepts and Implementation (CS 326) | **FALL 2005 – SPRING 2006** |
|  |  | Graded assignments, and held office hours. |  |
|  | ● | Mathematics of Computer Science (CS 365) | **FALL 2005 – SPRING 2006** |
|  |  | Graded assignments, and held office hours. |  |
|  | ● | Analysis of Algorithms (CS 477/677) | **FALL 2005** |
|  |  | Graded assignments, and held office hours. |  |
|  |  |  |  |
|  | **Teaching Assistant** | **East Carolina University, USA**  |  |
|  | ● | Laboratory course in Introductory Physics – II (PHYS 1261) | **SUMMER 2005** |
|  |  | Prepared and delivered laboratory lectures, graded lab reports, and held office hours. |  |
|  | ● | Laboratory course in Introductory Physics – I (PHYS 1251) | **SPRING 2005** |
|  |  | Prepared and delivered laboratory lectures, graded lab reports, and held office hours. |  |
|  | ● | Laboratory course in Advanced Physics (PHYS 3701) | **FALL 2004** |
|  |  | Prepared and delivered laboratory lectures, graded lab reports, and held office hours. |  |
|  | ● | Laboratory course in Introductory Physics – II (PHYS 1261) | **FALL 2003 –** **SUMMER 2004** |
|  |  | Prepared and delivered laboratory lectures, graded lab reports, and held office hours. |
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| **PUBLICATIONS** |
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|  | **Journals** |  |
|  |  |  |
| **1.** | **Amol Ambardekar**, Mircea Nicolescu, George Bebis, and Monica Nicolescu, “Vehicle Classification Framework: A Comparative Study,” (under Review). |
| **2.** | H. Kekre, Vinayak Bharadi, **Amol Ambardekar**, “Signature Recognition by Pixel Variance Analysis Using Multiple Morphological Dilations,” *in International Journal of Information Retrieval*, 1(1), pp. 5-9, 2008. |
| **3.** | **Amol Ambardekar** and Yong-qing Li, “Optical levitation and manipulation of stuck particles with pulsed optical tweezers,” *in Optics Letters*, 30(14), pp. 1797-1799, 2005. |
|  |  |  |  |
|  | **Conferences** |  |
|  |  |  |
| **1.** | H. B. Kekre, V. A. Bharadi, V. I. Singh, and **A. A. Ambardekar**, "Palmprint Recognition using Kekre's Wavelet's Energy Entropy Based Feature Vector", *Proceedings of the ACM International Conference & Workshop on Emerging Trends in Technology*, pp. 220-223, February 2011. |
| **2.** | H. B. Kekre, V. A. Bharadi, P. Shaktia, V. Shah, and **A. A. Ambardekar**, "Keystroke Dynamic Analysis Using Relative Entropy & Timing Sequence Euclidian Distance", *Proceedings of the ACM International Conference & Workshop on Emerging Trends in Technology*, pp. 39-45, February 2011. |
| **3.** | Richard Kelley, Alireza Tavakkoli, Chris King, **Amol Ambardekar**, Mircea Nicolescu, and Monica Nicolescu, "Integrating Context into Intent Recognition Systems," *in the Proceedings of 7th International Conference on Informatics in Control, Automation and Robotics*, Madeira, Portugal, pp. 315-320, June 2010. |
| **4.** | **Amol Ambardekar**, Alireza Tavakkoli, Mircea Nicolescu, Monica Nicolescu, "A Developmental Framework for Visual Learning in Robotics," *Proceedings of the International Conference on Image Processing,* *Computer Vision and Pattern Recognition*, Las Vegas, Nevada, pp. 382-387, July 2010. |
| **5.** | H. B. Kekre, V. A. Bharadi, S. Gupta, **A. A. Ambardekar**, and V. B. Kulkarni, "Off-line Signature Recognition Using Morphological Pixel Variance Analysis", *Proceedings of the ACM International Conference and Workshop on Emerging Trends in Technology*, pp. 3-10, February 2010. |
| **6.** | **Amol Ambardekar**, Mircea Nicolescu, and Monica Nicolescu, “Object Tracking Using Piecewise Feature Clustering,” *in the Proceedings of Visualization, Imaging and Image Processing*, Cambridge, UK, July 2009. |
| **7.** | **Amol Ambardekar**, Mircea Nicolescu, and Sergiu Dascalu, “Ground Truth Verification Tool (GTVT) for Video Surveillance Systems,” *in the Proceedings of Advances in Computer Human Interactions*, Cancun, Mexico, pp. 354-359, February 2009. |
| **8.** | **Amol Ambardekar**, Mircea Nicolescu, and George Bebis, “Efficient Vehicle Tracking and Classification for an Automated Traffic Surveillance System,” *in the Proceedings of Signal and Image Processing*, Kailua-Kona, Hawaii, pp. 1-6, August 2008. |
| **9.** | Alireza Tavakkoli, **Amol Ambardekar**, Mircea Nicolescu, Sushil Louis, "A Genetic Approach to Training Support Vector Data Descriptors for Background Modeling in Video Data", *in the Proceedings of the 3rd International Symposium on Visual Computing*, Lake Tahoe, Nevada, pp. 318-327, November 2007. |
| **10.** | H. Kekre, Vinayak Bharadi, and **Amol Ambardekar**, "Novel and Simple Contour Technique for Signature Recognition," *in National Conference of Communication and Signal Processing*, Mumbai, India, 2007. |
| **11.** | **Amol Ambardekar** and Yong-qing Li, “Pulsed optical tweezers for levitation and manipulation of stuck biological particles,” *in the Proceedings of Conference on Lasers and Electro-Optics*, Baltimore, Maryland, USA, pp. 2302-2304, May 2005. |
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|  | **Technical Reports** |  |
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| **1.** | **Amol Ambardekar**,“Efficient Vehicle Tracking and Classification for an Automated Traffic Surveillance System,” *M.S. Thesis,* Department of Computer Science and Engineering, University of Nevada, Reno, USA, December 2007. |
| **2.** | **Amol Ambardekar**,“Optical Levitation and manipulation of stuck particles with pulsed optical tweezers”, *M.S. Thesis,* Department of Physics, East Carolina University, Greenville, NC, USA, August 2005. |
| **3.** | **Amol Ambardekar** *et al.***,** “Signature Recognition Using Image Processing & Artificial Intelligence”, *Project Report*, Mumbai University, India. |
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|  | **Invited Presentations and Posters** |  |
|  |  |  |
| **1.** | Richard Kelley, **Amol Ambardekar**, Liesl Wigand, Monica Nicolescu, and Mircea Nicolescu, "Point Clouds and Range Images for Intent Recognition and Human-Robot Interaction," *in 2nd Workshop on RGB-D: Advanced Reasoning with Depth Cameras*, June 2011. |
| **2.** | **Amol Ambardekar**, Mircea Nicolescu, and George Bebis, “Automated Traffic Surveillance System,” *in the SIAM International Conference on Data Mining*, Sparks, USA, May 2009. |
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| **SYNERGISTIC ACTIVITIES** |
|  |  |  |
|  | **Professional and Academic Development** |  |  |
|  |  |  |
|  | ● | Volunteered for Engineer’s day event, University of Nevada, Reno, April 2011 |  |
|  | ● | Participated in organizing the 6th Intl. Symposium on Visual Computing, November 2010 |  |
|  | ● | Volunteered as a computer instructor at Children’s Cabinet, Reno, November, 2009. |  |
|  | ● | Participated in organizing the 5th Intl. Symposium on Visual Computing, November 2009 |  |
|  | ● | Participated in organizing the 4th Intl. Symposium on Visual Computing, December 2008 |  |
|  | ● | Volunteered for Engineer’s day event, University of Nevada, Reno, February 2008 |  |  |
|  | ● | Participated in organizing the 3rd Intl. Symposium on Visual Computing, November 2007 |  |
|  | ● | Participated in organizing the 2nd Intl. Symposium on Visual Computing, November 2006 |  |
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|  | **Journal and Conference Reviewer** |  |  |
|  |  |  |
|  | ● | International Conference on Advanced Video and Signal-Based Surveillance 2011 |  |
|  | ● | Journal of Zhejiang University Science C (Computers & Electronics) 2011 |  |
|  | ● | International Conference and Workshop on Emerging Trends in Technology, 2010 |  |
|  | ● | IEEE Workshop on Online Learning for Classification 2008 (in conj. w/ CVPR) |  |
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| **MEMBERSHIPS** |
|  |  |  |
|  | ● | Institute of Electrical and Electronics Engineers (IEEE) |  |
|   | ● | Phi Kappa Phi Honor Society |  |
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| **REFERENCES** |
|  |  |  |
|  | **Dr. Mircea Nicolescu** | **Ph.D. Advisor** |  |
|  |  |  |
|  | Phone | +1 (775) 784 – 4356 | Associate Professor |
|  | Fax  | +1 (775) 784 – 1877 | Department of Computer Science and EngineeringUniversity of Nevada, Reno, Mail Stop 171Reno, Nevada, USA 89557-0171 |
|  | Email | mircea@cse.unr.edu |
|  | URL | <http://www.cse.unr.edu/~mircea> |
|  |  |  |
|  | **Dr. George Bebis** | **Computer Vision Lab Director** |  |
|  |  |  |
|  | Phone | +1 (775) 784 – 6463 | Professor |
|  | Fax  | +1 (775) 784 – 1877 | Department of Computer Science and EngineeringUniversity of Nevada, Reno, Mail Stop 171Reno, Nevada, USA 89557-0171 |
|  | Email | bebis@cse.unr.edu |
|  | URL | <http://www.cse.unr.edu/~bebis> |
|  |  |  |
|  | **Dr. Monica Nicolescu** | **Robotics Research Lab Director** |  |
|  |  |  |
|  | Phone | +1 (775) 784 – 1687 | Associate Professor |
|  | Fax  | +1 (775) 784 – 1877 | Department of Computer Science and EngineeringUniversity of Nevada, Reno, Mail Stop 171Reno, Nevada, USA 89557-0171 |
|  | Email | monica@cse.unr.edu |
|  | URL | <http://www.cse.unr.edu/~monica> |
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