

Ahmed Ashraf, Ph.D.

Phone: 647 760 1680

Email: aashraf@alumni.cmu.edu

EDUCATION

- 2006 – 2010 **Ph.D., Electrical and Computer Engineering**
CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA, USA
- 2004 – 2006 **M.S., Electrical and Computer Engineering**
CARNEGIE MELLON UNIVERSITY, Pittsburgh, PA, USA
- 1996 – 2000 **B.Sc., Electrical Engineering**
UNIVERSITY OF ENGINEERING AND TECHNOLOGY (UET), Lahore, Pakistan
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EXPERIENCE

- 2018 – Present **Assistant Professor**
Department of Electrical and Computer Engineering
University of Manitoba, Winnipeg MB, Canada
- 2013 – 2018 **Post doctoral fellow**
Toronto Rehab Institute
University of Toronto, Toronto ON, Canada
- 2010 – 2013 **Post doctoral researcher**
Department of Radiology, Perelman School of Medicine
UNIVERSITY OF PENNSYLVANIA, Philadelphia, PA, USA
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FELLOWSHIPS/AWARDS

- 2015 – 2018 AGE-WELL Canadian Networks of Centres of Excellence (NCE) Fellowship
- 2004 – 2010 Fulbright Fellowship during Graduate program at Carnegie Mellon
- 1996 – 2000 National Talent Scholarship during undergraduate program.
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OTHER DISTINCTIONS

- Canadian Pain Society Award (2016)
- Innovators of Tomorrow, a 12-Month Training Program administered by AGE-WELL (July 2016 – June 2017)
- My article in the journal *Radiology* was picked up among top three papers *defining emerging directions in radiological imaging science*, and Radiological Society of North America (RSNA) invited me for an interview to disseminate the findings of my study (<https://www.youtube.com/watch?v=v0saQxG8kds>)
- **VECTOR INSTITUTE** Award for the Affiliate Program (2018)

PUBLICATIONS

Peer reviewed Journal papers

1. **Ahmed Bilal Ashraf** and B. Taati. "Automated video analysis of handwashing behavior as a potential marker of cognitive health in older adults". *IEEE Journal of Biomedical and Health Informatics (J-BHI)*, 20(20) 682-90, 2016
2. **Ahmed Bilal Ashraf**, B. Gaonkar, C. Mies, A. DeMichele, M. Rosen, C. Davatzikos, D. Kontos "Breast DCE-MRI Kinetic Heterogeneity Tumor Markers: Preliminary Associations With Neoadjuvant Chemotherapy Response". *Translational Oncology*, 2015, 8(3):154-162.
3. **Ahmed Bilal Ashraf**, S. Gavenonis, D. Daye, C. Mies, M. Feldman, M.A. Rosen, and D. Kontos, "Identification of intrinsic radio-phenotypes for breast cancer tumors: Preliminary associations with prognostic gene expression profiles.", *Radiology*, 2014, **(Impact Factor: 6.34)**
RSNA Interview Link: <https://www.youtube.com/watch?v=v0saQxG8kds>
4. **Ahmed Bilal Ashraf**, S. Gavenonis, D. Daye, C. Mies, M. Feldman, M.A. Rosen, and D. Kontos, "A Multichannel Markov Random Field Framework for Tumor Segmentation with an Application to Classification of Gene Expression-based Breast Cancer Recurrence Risk.", *IEEE Transactions on Medical Imaging (TMI)*, April 2013, **(Impact factor: 4.5)**
5. Simon Lucey, **Ahmed Bilal Ashraf**, "Nearest neighbor classifier generalization through spatially constrained filters", *Pattern Recognition*, January 2013, 46(1):325-331
Simon Lucey, Ahmed Bilal Ashraf, "Nearest neighbor classifier generalization through spatially constrained filters", *Pattern Recognition*, January 2013, 46(1):325-331
6. Simon Lucey, Rajitha Navarathna, **Ahmed Bilal Ashraf**, and Sridha Sridharan , "Fourier Lucas Kanade Algorithm", *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 2012 **(Impact factor: 4.8)**
7. **Ahmed Bilal Ashraf**, Simon Lucey, Tsuhan Chen , "Reinterpreting the application of Gabor filters as a manipulation of the margin in the Support Vector Machines", *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 2010, 32(7):1335-41 **(Impact factor: 4.8)**
8. **Ahmed Bilal Ashraf**, S. Lucey, J. F. Cohn, T. Chen, K. M. Prkachin, and P. E. Solomonl, "The Painful Face II– Pain Expression recognition Using Active Appearance Models", *International Journal of Image and Vision Computing*, Nov, 2009, 27(12):1788-1796

Peer reviewed Conference full papers

9. Azin Asgarian, **Ahmed Bilal Ashraf**, David Fleet, and Babak Taati, "Subspace selection to suppress confounding source domain information in AAM transfer learning", *International Joint Conference on Biometrics (IJCB)*, 2017
10. M Mahrooghly, **Ahmed Bilal Ashraf**, Dania Daye, C Mies, M Feldman, M Rosen, D Kontos, "Heterogeneity Wavelet Kinetics from DCE-MRI for Classifying Gene Expression Based Breast Cancer Recurrence Risk", *Medical Image Computing and Computer-Assisted Intervention–MICCAI* 2013, 295-302
11. **Ahmed Bilal Ashraf**, S. Gavenonis, D. Daye, C. Mies, M. Feldman, M.A. Rosen, and D. Kontos, "A Multichannel Markov Random Field approach for Automated Segmentation of Breast Cancer Tumor in DCE-MRI Data Using Kinetic Observation Model", *Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 2011, 14(Pt 3):546-53.
12. **Ahmed Bilal Ashraf**, Simon Lucey, Tsuhan Chen, "Fast Image Alignment in the Fourier domain", *IEEE International Conference on Computer Vision and Pattern recognition (CVPR)* 2010, pp 2480 -2487
13. **Ahmed Bilal Ashraf**, Simon Lucey, Tsuhan Chen, "Learning patch correspondences for Improved Viewpoint invariant Face recognition", *IEEE International Conference on Computer Vision and Pattern recognition (CVPR)*, 2008, pp 1-8 **(ORAL)**

14. **Ahmed Bilal Ashraf**, S. Lucey, J. F. Cohn, T. Chen, K. M. Prkachin, and P. E. Solomon, “The Painful Face –Pain Expression Recognition Using Active Appearance Models”, *ACM International Conference on Multimodal Interfaces, 2007*, pp 9-14 (**ORAL**)

Other conference full papers

15. Babak Taati, Pranay Lohia, Avril Mansfield, **Ahmed Bilal Ashraf**, “Video analysis to aid the study of human gait and falls – preliminary results and proof of concept”, *Engineering in Medicine and Biology* (2017)
16. **Ahmed Bilal Ashraf**, B. Gaonkar, A. DeMichele, C. Mies, C. Davatzikos, M. Rosen, and D. Kontos, Pre-treatment prediction of neoadjuvant chemotherapy response in breast cancer patients using DCE-MRI kinetic statistics. In Proc. Workshop on Breast Image Analysis (BIA), *Medical Image Computing and Computer Assisted Intervention (MICCAI), 2011*
17. J. Jayandar, K. G. Vosburgh, E. Gombus, **Ahmed Bilal Ashraf**, D. Kontos, S. C. Gavenonis, F. A. Jolesz, K. Pohl, “Automatic segmentation of breast carcinomas from DCE-MRI using a statistical learning algorithm”. *9th IEEE International Symposium on Biomedical Imaging (ISBI), 2012*, pp 122-125
18. Wei Yu, **Ahmed Bilal Ashraf**, Yao-Jen Chang, Congcong Li, Tsuhan Chen, “3D Augmented Markov Random Field for Object Recognition”, *IEEE International Conference on Image Processing (ICIP), 2010*, pp 3889-3892
19. M.Raffay A. Baloch, **Ahmed Bilal Ashraf**, Nauman Zaffar, “Object Segmentation Using Feature-based Conditional Morphology”. *Proceedings of the 12th International Conference on Image Analysis and Processing - ICLAP 2003*. Mantova, Italy, pp 548-553

Conference Abstracts

20. **Ahmed Bilal Ashraf**, Babak Taati, “Generalization Facial Landmark Detection in Older Adults”, *AGE-WELL Conference 2017*
21. **Ahmed Bilal Ashraf**, Babak Taati, “Facial Pain Recognition in Older Adults with Dementia”, *AGE-WELL Conference 2016*
22. **Ahmed Bilal Ashraf**, S. Gavenonis, D. Daye, C. Mies, M. Feldman, M.A. Rosen, and D. Kontos, “Prediction of prognostic tumor gene expression signatures via kinetic analysis of DCE-MRI for assessing breast cancer recurrence” *In: 97th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA), 2011 (ORAL)*
23. **Ahmed Bilal Ashraf**, Lilie Lin, S. C. Gavenonis, C. Mies, E. Xanthopoulos, D. Kontos, “Predicting axillary lymph node metastasis from kinetic statistics of DCE-MRI breast images”, *SPIE Medical Imaging, Computer Aided Diagnosis, 2012*
24. D. Daye, S. Gavenonis, B. M. Keller, **Ahmed Bilal Ashraf**, C. Mies, M. Feldman, D. Kontos, “Breast MRI tumor features as predictive markers of breast cancer recurrence” *In: 98th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA), 2012*

Book Chapter

25. Simon Lucey, **Ahmed Bilal Ashraf**, Jeff Cohn, “Investigating Spontaneous Facial Action Recognition through AAM representations the face”, *Face recognition book, K.Kuribara, ed. Pro Literatur Verlag, Mamendorf, Germany, 2007*
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TEACHING

Winter 2019	Convolutional Neural Networks, Department of ECE, University of Manitoba
Winter 2019	Introduction to Robotics, Department of ECE, University of Manitoba
Fall 2017	Computer Vision, Department of Computer Science, University of Toronto
Fall 2008	Signals and Systems, Department of ECE, Carnegie Mellon University
Spring 2009	Signals and Systems, Department of ECE, Carnegie Mellon University

POST DOC/STUDENTS

Post doc: Majid Mahrooghi, Department of Radiology, Penn
Dates Mentored: September 2012 –2014
Project: DCE-MRI Image analysis

Student: Pranay Lohia, University of Toronto
Dates Mentored: 2015
Project: Vision based fall detection

Student: Agata Cieselski, Department of Computer and Information Science, Penn
Dates Mentored: February 2012 – July 2012
Project: Analysis of mammograms for breast cancer screening.

Student: Simon Hastings, Department of Computer and Information Science, Penn
Dates Mentored: Spring 2011
Project: Predicting fibroblast activation protein from MRI images.

PEER REVIEW SERVICE

Reviewer for the following Journals/Conferences:
IEEE Transactions on Medical Imaging (TMI)
IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)
Springer Journal of Machine Learning and Cybernetics
Elsevier Computer Methods and Programs in Biomedicine
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
ICCV/ECCV
MICCAI
ICML
Voting Member: Research Ethics Board, University-Health-Network Toronto
