

Moin Nabi

CONTACT INFORMATION	Department of Computer Science and Engineering University of Trento Via Sommarive 9, Trento, Italy	☎ (+39) 345 910 8940 ✉ moin.nabi@unitn.it 🌐 disi.unitn.it/~nabi
RESEARCH INTERESTS	<ul style="list-style-type: none">• Machine Learning Deep Neural Networks, Transfer Learning, Unsupervised Learning• Computer Vision Web-scale Image Understanding, Object Detection, Activity Recognition• Natural Language Processing Computational Semantics, Vision and Language Integration• Computational Neuroscience and Brain Decoding	
EDUCATION	Italian Institute of Technology (IIT) , Genova, Italy Ph.D. of Computer Science , Pattern Analysis and Computer Vision lab. <ul style="list-style-type: none">• Dissertation: <i>Mid-level Representation for Visual Recognition</i>.• Advisor: Prof. Vittorio Murino. Amirkabir University of Technology (Tehran Polytechnic) , Iran Master of Engineering in Artificial Intelligence, Computer Engineering Dep. <ul style="list-style-type: none">• Thesis: <i>Human Action Recognition using Pose Estimation</i>. Shomal University of Amol (SUA) , Amol, Iran Bachelor of Engineering in Software, Computer Engineering Dep. <ul style="list-style-type: none">• Project: <i>Fuzzy Image Processing</i>.	2012 - 2015 2009 - 2011 2003 - 2008
RESEARCH EXPERIENCE	Postdoctoral Research Fellow , Deep Relational Learning Group, University of Trento, Italy Collaborating with: Prof. Nicu Sebe. Visiting Researcher , Graphics and Imaging Laboratory (GRAIL), University of Washington, Seattle, WA, USA Supervisor: Dr. Ali Farhadi. Research Assistant , Machine Intelligence and Vision Lab., Sharif University of Technology, Tehran, Iran. Research Assistant , IPM Vision Group, Institute for Research in Fundamental Sciences (IPM), Iran Advisor: Prof. Mehrdad Shahshahani.	July 2015 - Now Sep 2013 - Mar 2014 2011 - 2012 2008 - 2011
AWARDS AND HONORS	<ul style="list-style-type: none">• Best Paper / Student Paper Award Finalist in IEEE International Conference on Image Processing (ICIP 2016).• Awarded a postdoctoral research grant from EU-FP7 project (xLime) to work at University of Trento, Italy.• Awarded a research grant to work at Graphics and Imaging Laboratory (GRAIL), University of Washington, Seattle, WA, USA.• Ph.D. Fellowship award from the PAVIS Lab at Italian Institute of Technology, Italy.• Awarded a travel grant to attend at INRIA Visual Recognition and Machine Learning Summer School (VRML 2012), INRIA, Grenoble, France.• Awarded Outstanding Student certificate & prize by Shomal University President, Iran.• Honorable Mention in ACM-ICPC Regional Contest, Tehran, Iran.• Semifinalist in Iranian National Olympiad in Informatics (INOI).• Ranked in the top 5% of Iranian exceptional talents (NODET).	2016 2015 2013 2012 2012 2005 2004 2001 1999

PUBLICATIONS AND PREPRINTS • **Action Detection through Self-Paced Deep Learning**, M. Puscas, M. Nabi, E. Sangineto and N. Sebe, *In Progress*.

- **Analyzing Tracklets for the Detection of Abnormal Crowd Behavior**, H. Mousavi, M. Nabi, H. Kiani, A. Perina and V. Murino, *In Progress*.
- **Vision and Language Integration: Moving beyond Objects**, R. Shekhar, S. Pezzelle, A. Herbelot, M. Nabi, E. Sangineto and R. Bernardi, *Submitted*.
- **Local Binary Tracklets for Abnormality Detection and Segmentation in Crowded Scenes**, M. Ravanbakhsh, H. Mousavi, M. Nabi, L. Marcenaro and C. Regazzoni, *Submitted*.
- **Temporal CNN Pattern for Crowd Motion Monitoring: Application to Abnormal Behavior Understanding**, M. Ravanbakhsh, M. Nabi, H. Mousavi, E. Sangineto L. Marcenaro, C. Regazzoni and N. Sebe. *Submitted*
- **Self-Paced Deep Learning for Weakly Supervised Object Detection**, E. Sangineto*, M. Nabi*, D. Culibrk and N. Sebe, IEEE Transaction on PAMI. *Revision*.
- **CNN-Flow: Action Recognition with Image-Based CNN Features**, M. Ravanbakhsh, H. Mousavi, M. Nabi, M. Rastegari, V. Murino, L. Davis, Patter Recognition Letters. *Revision*.
- **Abnormal Event Recognition in Crowd Environments**, H. Mousavi, H.R. Rabiee, M. Ravanbakhsh, M. Nabi, V. Murino and N. Sebe, In book on "Deep Learning Semantic Recognition: Object, Situation and Event" (2017). *To appear*.
- **Training Adversarial Discriminators for Cross-channel Abnormal Event Detection in Crowds**, M. Ravanbakhsh, E. Sangineto M. Nabi and N. Sebe, arXiv:1706.07680 (2017).
- **Autonomous Crowd-sourcing through Human-Machine Collaborative Learning**, A. Abad, M. Nabi and A. Moschitti, International ACM Conference on Research and Development in Information Retrieval (**SIGIR 2017**), Tokyo, Japan.
- **Generative Adversarial Nets for Abnormal Event Detection in Crowds**, M. Ravanbakhsh, M. Nabi, E. Sangineto, L. Marcenaro, C. Regazzoni and N. Sebe, IEEE International Conference on Image Processing (ICIP 2017), Beijing, China.
- **A Cross-Modal Adaptation Approach for Brain Decoding**, P. Ghaemmaghami, M. Nabi, Y. Yan, G. Riccardi and N. Sebe, IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2017), New Orleans, USA.
- **Self-Crowdsourcing for Relation Extraction**, A. Abad, M. Nabi and A. Moschitti, in Proceedings of the Association for Computational Linguistics (**ACL 2017**), Vancouver, Canada.
- **FOIL it! Find One mismatch between Image and Language caption**, R. Shekhar, S. Pezzelle, Y. Klimovich, A. Herbelot, M. Nabi, E. Sangineto and R. Bernardi, in Proceedings of the Association for Computational Linguistics (**ACL 2017**), Vancouver, Canada. (**Oral Presentation**)
- **Detection and Localization of Crowd Abnormal Behavior using a Novel Tracklet-Based Model**, H.R. Rabiee, H. Mousavi, M. Nabi and M. Ravanbakhsh, In International Journal of Machine Learning and Cybernetics (2017).
- **CNN-aware Binary Map For General Image Segmentation**, H. Mousavi, M. Ravanbakhsh, M. Nabi, M. Rastegari and C. Regazzoni, IEEE International Conference on Image Processing (ICIP 2016), Phoenix, USA. (**Finalist for Best Paper Award: 7/~2000 submissions**)
- **Plug-and-Play CNN for Crowd Motion Analysis: An Application in Abnormal Event Detection**, M. Ravanbakhsh, M. Nabi, Mousavi, E. Sangineto and N. Sebe, arXiv:1610.00307 (2016).
- **Crowd Behavior Representation: An Attribute-based Approach**, H.R. Rabiee, J. Haddadnia, H. Mousavi, M. Nabi, V. Murino and N. Sebe, SpringerPlus Journal (2016).
- **Efficient Convolutional Neural Network with Binary Quantization Layer**, M. Ravanbakhsh, H. Mousavi, M. Nabi, L. Marcenaro, C. Regazzoni, Conference on Neural Information Processing Systems (NIPS 2016), Workshop on Efficient Methods for Deep Neural Network, Spain.
- **Emotion-Based Crowd Representation for Abnormality Detection**, H.R. Rabiee, J. Haddadnia, H. Mousavi, M. Nabi, V. Murino and N. Sebe, arXiv:1607.07646 (2016).
- **Sparse-coded Cross-domain Adaptation from the Visual to the Brain Domain**, P. Ghaemmaghami, M. Nabi, Y. Yan and N. Sebe, IEEE International Conference on Pattern Recognition (ICPR 2016), Cancun, Mexico. (**Oral Presentation**)
- **Novel Dataset for Fine-grained Abnormal Behavior Understanding in Crowd**, H.R. Rabiee, J. Haddadnia, H. Mousavi, M. Kalantarzadeh, M. Nabi, V. Murino, IEEE Advanced Video and Signal-based Surveillance (AVSS 2016), Colorado, USA.

- **Learning with Dataset Bias in Latent Subcategory Models**, D. Stamos, S. Martelli, M. Nabi, A. McDonald, V. Murino and M. Pontil, IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2015**), Boston, USA.
- **Mid-level Representation for Visual Recognition**, M. Nabi, Doctoral Dissertation, Italian Institute of Technology, April 2015.
- **Crowd Motion Monitoring Using Tracklet-based Commotion Measure**, H. Mousavi*, M. Nabi*, H. Kiani, A. Perina and V. Murino, IEEE International Conference on Image Processing (ICIP 2015), Montreal, Canada. * *equal contributions*.
- **Abnormality Detection with Improved Histogram of Oriented Tracklets**, H. Mousavi, M. Nabi, H. Kiani, A. Perina and V. Murino, 18th International Conference on Image Analysis and Processing (ICIAP 2015), Genova, Italy.
- **Webly-supervised Discriminative Patches for Weakly-supervised Object Detection**, M. Nabi, S. Divvala and A. Farhadi, Technical Report, *University of Washington*, 2014.
- **Temporal Poselets for Collective Activity Detection and Recognition**, M. Nabi, A. Del Bue and V. Murino, IEEE International Conference on Computer Vision Workshops (ICCVw 2013), Sydney, Australia. (**Oral Presentation**)
- **Human Action Recognition in Still Images using Bag of Latent Poselets**, M. Nabi and M. Rahmati, 9th European Conference on Visual Media Production (CVMP 2012), London, England.
- **Stock trend prediction using Twin Gaussian Process regression**, M. Mojadadi, M. Nabi and S. Khadivi, Technical Report, *Amirkabir University of Technology*, 2011.
- **A Review on Vision-Based Driver Assistant Systems (ADAS)**, B. Saleh, M. Nabi, M. Rastegari and H. Shafeian, Technical Report, Pars Khodro R&D Center 2009, Tehran, Iran.
- **A Fuzzy Approach to Image Processing**, M. Nabi, BSc Thesis, Shomal University, 2008, Iran.
- **A Tutorial on Digital Image Processing using MATLAB**, M. Nabi, Technical Report, Digital Image Processing Workshop, Shomal University, Aug 2007, Iran.

PROJECT **xLime: EU-FP7 Cross-medial cross-language knowledge extraction** (ongoing)
This project has received funding (~3.9M Euro) from the European Unions Seventh Framework Programme for research, technological development and demonstration under grant agreement No.611346.

SELECTED SEMINAR PRESENTATIONS

- **Human Behavior Understanding in the Wild.** *UofTrento*, June 2016.
- **Mid-level Representation for Visual Recognition.** *IIT*, April 2015.
- **From Visual Subcategory to Webly-supervised Visual Recognition.** *UofTrento*, Feb 2015.
- **Webly-supervised Discriminative Patches.** *University of Washington*, March 2014.
- **All about Exemplar-SVMs.** *IIT*, Feb 2013.
- **Temporal-Poselets for Part-based Video Representation.** *IIT*, Dec 2012.
- **Poselet-based Human Activity Recognition in Single Images.** *Sharif UT*, Aug 2011.
- **An Invitation to 3D Vision.** *IPM Computer Vision Workshop*, June 2010.

SCIENTIFIC EXPERIENCE

- **Reviewing Activity:**
 - **Conferences:** ICCV 2017, CVPR 2017, ECCV 2016, ICCV 2013, BMVC 2013, WACV 2014.
 - **Journal:** IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI).
- **Member of Scientific Committee of IPM Computer Vision Workshop at IPM, 2010.**
- **Member of Scientific Committee in ACM-ICPC Programming contest at Mazandaran Univ. ,2005.**
- **Editor-in-chief of SEA English Journal, First Issue, summer 2006.**
- **Member of Computer Software Association at Shomal university, 2004-2007.**

- TEACHING EXPERIENCE
- **Co-Instructor of** Doctoral course on Deep Learning at *University of Trento, March 2016.*
 - **Teaching** Programming Languages at *National Organization for Development of Exceptional Talents, Tehran, Iran 2010.*
 - **Teaching Assistant** Programming Languages, Algorithms Design, and Artificial Intelligence at *Shomal University, 2003 - 2007*
- ATTENDED SCHOOLS
- **5th PAVIS School on Scene Understanding and Context (PAVIS2014)**
Sestri Levante (GE), Italy, 2014.
*Under supervision of **Antonio Torralba***
 - **4th PAVIS School on Matching and Recognition of Object Instances (PAVIS2013)**
Sestri Levante (GE), Italy, 2013.
*Under supervision of **Andrew Zisserman***
 - **INRIA Visual Recognition and Machine Learning Summer School (VRML2012)**
INRIA Grenoble Rhône-Alpes, LEAR Team, France 2012.
*Under supervision of **Cordelia Schmid***
 - **3rd PAVIS School on Component Analysis methods for Human Sensing (PAVIS2012)**
Sestri Levante (GE), Italy, 2012.
*Under supervision of **Fernando De la Torre and Jeffrey Cohn***
- SKILLS
- **Languages:** Persian (native), English (fluent), Arabic (moderate), Italian (basic)
 - **Programming Languages:** MATLAB, C/C++, Shell Scripting, Python, Caffe, Torch
- HOBBIES
- **Art:** Photography, Classical Music, Short Stories
 - **Sport:** Basketball, Mountain Climbing
 - **Science:** Cosmology, Philosophy
 - **Tourism**
- REFERENCES
- Professor Nicu Sebe, DISI, University of Trento
Niculae.Sebe@unitn.it
 - Professor Massimiliano Pontil, University Collage London (UCL)
m.pontil@cs.ucl.ac.uk
 - Professor Vittorio Murino, Italian Institute of Technology (IIT)
vittorio.murino@iit.it
 - Professor Mehrdad Shahshahani, Stanford University.
mehrdads@stanford.edu
 - Dr. Ali Farhadi, Assistant Professor, CS&E, University of Washington (UW)
ali@cs.washington.edu