Moin Nabi

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Research Interests:

- Machine Learning *(Deep Learning, Transfer and Multi-task Learning)*
- Computer Vision *(Web-scale Image Understanding, Object Detection, Activity Recognition)*
- Natural Language Processing *(Text Categorization, Machine Translation, Computational Semantics)*
- Neuroscience and Brain Decoding

Education:

- **Postdoctoral Research Fellow**, Department of Information Engineering and Science **(DISI)**, University of Trento (**UNITN**), Trento, Italy, July 2015 - Present.
  Research Area: Deep Relational Learning. ***Collaborating with*: Prof. Nicu Sebe.**
- **Visiting Scholar** Graphics and Imaging Laboratory **(GRAIL)**, University of Washington (**UW**), Seattle, WA, USA, September 2013 - March 2014.
  Research Topic: Webly-supervised Object Category Recognition ***Advisor*: Dr. Ali Farhadi, Co-advisor: Dr. Santosh Divvala**
- **Ph.D. of Computer Vision**, Pattern Analysis and Computer Vision Lab **(PAVIS)**, Italian Institute of Technology **(IIT)**, Genova, Italy, Jan 2012- April 2015.
  Research Area: Mid-level Representation for Visual Recognition.***Advisor*: Prof. Vittorio Murino.**
- **Intern Student** Machine Intelligence and Vision Laboratory **(MIV-Lab)** , Sharif University of Technology (formerly **IPM Vision Group**), Tehran, Iran, 2008-2012.
  Research Topic: Monocular 3D Human Body Pose Estimation ***Advisor*: Prof. Mehrdad M.Shahshahani.**
- **Master of Engineering** in Artificial Intelligence, Amirkabir University of Technology **(Tehran Polytechnic)** Department of Computer Engineering and IT, Tehran, Iran, 2009-2011.
  Thesis: Human Action Recognition using Pose Estimation (20/20) ***Supervisor*: Dr. M.Rahmati.**
- **Bachelor of Engineering** in Software, Shomal University of Amol **(SUA)**, Computer Engineering Department Amol, Iran, 2003-2008.
  Project: Fuzzy Image Processing (20/20) ***Supervisor*: Dr. M.Rouhani.**
- **Diploma** in Physics and Mathematics, Shahid Beheshti High School, Amol, Iran, 1999 - 2003.
  Affiliated with the National Organization for the Development of Exceptional Talents **(NODET)**

Awards and Honors:

- **Best Paper / Student Paper Award Finalist** in IEEE International Conference on Image Processing (ICIP'16).
- **Awarded a Postdoctoral research fellowship** to work at Multimedia and Human Understanding Group(MHUG), University of Trento, Italy, 2015-2017.
- **Awarded a research grant** to work at Graphics and Imaging Laboratory(GRAIL), University of Washington, Seattle, WA, USA, September 2013 - March 2014.
- **Ph.D. Fellowship award** from the PAVIS Lab at Italian Institute of Technology, 2012.
- **Awarded a travel grant** to attend at INRIA Visual Recognition and Machine Learning Summer School **(VRML2012)**, INRIA, Grenoble, France 2012.
- University of Manitoba Graduate Fellowship **(UMGF)**, Fall 2011, Canada.

- International Graduate Student Entrance Scholarship **(IGSES)**, UofM, Canada , Fall 2011.
- Faculty of Graduate Studies **Special Award**, University of Manitoba, Canada , Fall 2011.
- Awarded **Outstanding Student** certificate and prize by Shomal University President, Iran 2005.
- **Honorable Mention** in ACM-ICPC Regional Contest, Tehran, Iran, November 2004.
- **Semifinalist** in Iranian National Olympiad in Informatics (INOI), 2001.
- **Selected** for National Organization for Development of Exceptional Talents (NODET), 1999.

Publications and Preprints:

- **Tracklet Motion Analysis to Detect Abnormality in Videos**, (Co-authors: H. Mousavi, H. Kiani, A. Perina and V. Murino), IEEE Transactions on Systems, Man, and Cybernetics (Submitted).
- **A Cross-Modal Adaptation Approach for Brain Decoding**, (Co-authors: P. Ghaemmaghami, Y. Yan and N. Sebe), IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) (Submitted).
- **Plug-and-Play CNN for Crowd Motion Analysis: An Application in Abnormal Event Detection**, (Co-authors: M. Ravanbakhsh, Mousavi, E. Sangineto, N. Sebe), arXiv:1610.00307 (2016).
- **Emotion-Based Crowd Representation for Abnormality Detection**, (Co-authors: H.R. Rabiee, J. Haddadnia, H. Mousavi, V. Murino and N. Sebe), arXiv:1607.07646 (2016).
- **Self-Paced Deep Learning for Weakly Supervised Object Detection**, (Co-authors: E. Sangineto, D. Culibrk and N. Sebe), arXiv:1605.07651 (2016).
- **Sparse-coded Cross-domain Adaptation from the Visual to the Brain Domain**, (Co-authors: P. Ghaemmaghami, Y. Yan and N. Sebe), IEEE International Conference on Pattern Recognition (ICPR'16), Cancun, Mexico. **(Oral Presentation)**
- **A Dataset for Fine-grained Abnormal Behavior Understanding in Crowd**, (Co-authors: H.R. Rabiee, J. Haddadnia, H. Mousavi, M. Kalantarzadeh, V. Murino), IEEE Advanced Video and Signal-based Surveillance (AVSS'16), Colorado, USA.
- **CNN-aware Binary Map For General Image Segmentatio**, (Co-authors: H. Mousavi, M. Ravanbakhsh, M. Rastegari and C. Regazzoni), IEEE International Conference on Image Processing (ICIP'16), Phoenix, USA. **(Finalist for Best Paper Award: 7/∼2000 submissions)**
- **Learning with Dataset Bias in Latent Subcategory Models**, (Co-authors: D. Stamos, S. Martelli, 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**, Doctoral Dissertation, University of Genova and Italian Institute of Technology, April 2015.
- **Crowd Motion Monitoring Using Tracklet-based Commotion Measure**, (Co-authors: H. Mousavi, H. Kiani, A. Perina and V. Murino), IEEE International Conference on Image Processing (ICIP'15), Montreal, Canada.
- **Abnormality Detection with Improved Histogram of Oriented Tracklets**, (Co-authors: H. Mousavi, H. Kiani, A. Perina and V. Murino), 18th International Conference on Image Analysis and Processing (ICIAP'15), 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**, (Co-authors: A. Del Bue and V. Murino), IEEE International Conference on Computer Vision Workshops (ICCVW'13), Sydney, Australia. **(Oral Presentation)**
- **Human Action Recognition in Still Images using Bag of Latent Poselets**, (Co-author: M. Rahmati), 9th European Conference on Visual Media Production(CVMP'12), London, England.
- **Stock trend prediction using Twin Gaussian Process regression**, (Co-authors: M. Mojadadi and S. Khadivi), Technical Report, *Amirkabir University of Technology, 2011.*
- **Vision-Based Driver Assistant System (ADAS)**, (Co-authors: B. Saleh, M. Rastegari and H. Shafeian) Technical Report, Pars Khodro R&D Center 2009, Tehran, Iran.
- **A Fuzzy Approach to Image Processing**, BSc Thesis, Shomal University, 2008, Iran.

Projects:

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

Invited Talks:

- **From Visual Subcategory to Webly-supervised Visual Recognition**. *UofTrento*, March 2015.
- **Webly-supervised Discriminative Patches**. *University of Washington*, March 2014.
- **All about Examplar-SVMs**. *IIT*, Feb 2013.
- **Temporal-Poselets for Part-based Video Representation**. *IIT*, Dec 2012.
- **Human Action Recognition in Still Images using Bag of Latent Poselets**. *IIT*, March 2012.
- **Poselet-based Human Activity Recognition in Single Images**. *Sharif University*, Aug 2011.
- **Grouplet for Human-Object Interaction**. *IPM*, June 2010.
- **An Invitation to 3D Vision**. *IPM Computer Vision Workshop*, June 2010.
- **Bag of Word Models in Object Class Detection**.*Amirkabir University of Technology*, April 2010.
- **3D Human Body Pose Estimation using GPLVM**. *IPM*, October 2009.
- **2D Human Body Pose Estimation using Graphical Model**. *IPM*. July 2009.
- **Fuzzy Approach to Image Processing**. *Shomal University*. December 2007.

Research and Work Experience:

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

Work Experience:

- **Teaching** Programming Languages *at National Organization for Development of Exceptional Talents, Tehran, Iran 2010.*
- **Developer of** Vision-Based Advanced Driver Assistant System (ADAS) *at Pars-Khodro Automobile Manufacturer, 2008.*
- **Teaching Assistant** Programming Languages, Algorithms Design, and Artificial Intelligence *at Shomal University, 2003 - 2007*
- **System Developer** *at Shomal Pouyesh IT Company, Amol, Iran 2005-2007.*

Attended Schools:

- 5^{th} **PAVIS School on Scene Understanding and Context (PAVIS2014)**
  Sestri Levante (GE), Italy, 2014.
  Under supervision of ***Antonio Torralba***
- 4^{th} **PAVIS School on Matching and Recognition of Object Instances (PAVIS2013)**
  Sestri Levante (GE), Italy, 2013.
  Under supervision of ***Andrew Zisserman*** *and* ***Andrea Vedaldi***
- **INRIA Visual Recognition and Machine Learning Summer School (VRML2012)**
  INRIA Grenoble Rhne-Alpes, LEAR Team, France 2012.
  Under supervision of ***Cordelia Schmid***
- 3^{rd} **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++, Pascal, Assembly
- **Operating Systems**: Linux, Windows, MacOs X
- **Typing Systems**: Microsoft Office, OpenOffice, LaTeX.

Hobbies:

- **Art**: Photography, Classical Music, Short Stories
- **Sport**: Basketball, Mountain Climbing
- **Science**: Cosmology, Philosophy
- **Tourism**

References

References Available Upon Request