

# Boshra Rajaei

## Contact info:

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## Job info:

- Sadjad University of Technology  
Assistant professor  
Faculty member  
Computer dept.  
2013 – present  
2011 – 2013
- ESPCI ParisTech University, France  
Postdoctoral researcher  
Institut Langevin  
2014-2016
- ENS de Cachan University, Paris, France  
Research fellow  
CMLA lab.  
2014 – present
- Ferdowsi University of Mashhad  
Researcher  
MV lab  
2008 – 2013
- ENS de Cachan University, Paris, France  
Internship  
CMLA lab.  
Jan – July 2012
- EPFL University, Lausanne, Switzerland  
Internship  
LTS4 lab.  
Jan – July 2012

- Yesna Pars Company Mashhad, Iran
  - Project manager advisor 2013 – present
  - Software analyzer and developer 2005 – 2007
- Ferdowsi University of Mashhad Computer dept.
  - Lecturer 2008 – 2009
- Bina Pardaz Shargh Company Mashhad, Iran
  - Software analyzer and developer 2007 – 2008
- Khorasan Higher Education Institute Computer dept.
  - Faculty member 2007 – 2010
- Khayyam Higher Education Institute Computer, dept.
  - Lecturer 2007 – 2008
- Azad University, Quchan branch Computer dept.
  - Lecturer 2005 – 2008

#### Education:

- Ferdowsi University of Mashhad Mashhad, Iran
  - Ph.D. in Software Engineering 2008 – 2013
  - M.Sc. in Software Engineering 2004 – 2007
- Azzahra University Tehran, Iran
  - B.Sc. in Software Engineering 1999 – 2004

#### Research interests:

- Image/video processing
- Image/video compression
- Compressed sensing
- Image denoising
- 3D video

Teaching experiences:

Image processing (2010 – present)

Software engineering (2005 – present)

Selected Publications:

- Boshra Rajaei, Rafael Grompone von Gioi, Jean-Michel Morel, “**Gestaltic grouping of line segments**”, to be submitted to image processing online (IPOL), 2016.
- Boshra Rajaei, Sylvain Gigan, Florent Krzakala, Laurent Daudet “**Robust phase retrieval with the swept approximate message passing**”. Submitted to image processing online (IPOL), 2016.
- Philipp del Hougne, Boshra Rajaei, Laurent Daudet, Geoffroy Lerosey “**Intensity-only measurement of partially uncontrollable transmission matrix: demonstration with wave-field shaping in a microwave cavity**”. Accepted for publication in Optics Express, 2016.
- Boshra Rajaei, Sylvain Gigan, Florent Krzakala, Laurent Daudet “**Fast phase retrieval for high dimensions: A block-based approach**”. Accepted for publication in IEEE SPL, 2016.
- Boshra Rajaei, Thomas Maugey, Hamid-Reza Pourreza and Pascal Frossard. “**Rate-distortion analysis of multiview coding in a DIBR framework**”. Annals of Telecommunication, 2013.
- Boshra Rajaei. “**An analysis and improvement of BLS-GSM denoising method**”. Image Processing Online, 2013.

- Arian Maleki, Boshra Rajaei and Hamid-Reza Pourreza. **Rate-distortion analysis of directional wavelets**. IEEE Transactions on Image Processing. Vol. 21, No. 4, pp. 588 – 600. 2012.
- Boshra Rajaei, Hadi Sadoghi Yazdi, Sohrab Effati. **Fisher over Fuzzy Samples**. Int. J. of Computer Theory and Engineering (IJCTE). Vol. 1, No. 5, pp. 632 – 637. 2009.

#### Selected Conferences:

- Boshra Rajaei. **“Depth map compression using directional wavelets transform”**. To be submitted to 12<sup>th</sup> VISAPP conference, Porto, Portugal, 2017.
- Boshra Rajaei, Eric W. Tramel, Sylvain Gigan, Florent Krzakala, and Laurent Daudet. **“Intensity-only optical compressive imaging using a multiply scattering material: a double phase retrieval system.”** 41<sup>th</sup>, IEEE international conference ICASSP 2016, Shanghai, China.
- Boshra Rajaei, Rafael Grompone von Gioi, Jean-Michel Morel. **“From line segments to more organized gestalts”**. 2<sup>th</sup> IEEE conference SSIAl 2016, New Mexico, USA.
- Arian Maleki, Boshra Rajaei and Hamid-Reza Pourreza. **Rate-distortion improvement of directional wavelets by Megablocking**. 36<sup>th</sup> IEEE international conference ICASSP, 2011. Prague, Czech Republic.
- Boshra Rajaei, Hadi Sadoghi Yazdi. **Real Data Classification Using Fuzzy Type of Fisher Discriminator**. 3<sup>rd</sup> Joint Congress on Fuzzy and Intelligent Systems. ISFS2009. Yazd, Iran.
- Boshra Rajaei, Mohamad Hosein Yaghmai Moghadam. **A Fuzzy Routing Algorithm for Low Earth Satellite Networks**. First Joint Congress on Fuzzy and Intelligent Systems. ISFS2007. Mashhad, Iran.
- Boshra Rajaei, Hamid-Reza Pourreza. **Texture Classification using Curvelet Transform**. Third Int. Conf. on Artificial Intelligence in Engineering and Technology. ICAIET-2006. Sabah, Malaysia.

## Projects involved in:

- Analysis, design and development of Executive Information System (EIS) software  
Yesna Pars Company
- Design and implementation of virtual studio tracking system  
Bina Pardaz Shargh Company
- A nonseparable directional wavelet transform for image compression  
MV lab, Ferdowsi University of Mashhad
- Rate allocation in multiview video coding  
LTS4 lab, EPFL University, Lausanne, Switzerland
- Analysis and improvement of BLS-GSM denoising method  
CMLA lab, ENS de Cachan, Paris, France

## Programming skills:

- Matlab
- C/C++/C#