

Vahid Abolghasemi

- CONTACT INFORMATION** School of Electrical & Robotics Engineering vabolghasemi@shahroodut.ac.ir
Shahrood University of Technology, Shahrood, IRAN vabolghasemi@ieee.org
Post Code: 3619995161
- EDUCATION** **University of Surrey**, Guildford, UK
Doctor of Philosophy **2008 – 2011**
 - Majored in Computer and Electronic Engineering
 - Thesis title: Advances in Compressive sensing and its applications in blind source separation**Shahrood University of Technology**, Shahrood, IRAN
M.Sc, Electronic Engineering **2005 – 2007**
 - Majored in Electronic Engineering**Shahrood University of Technology**, Shahrood, IRAN
B.Sc, Electronic Engineering **2000 – 2005**
 - Majored in Electronic Engineering
- WORK EXPERIENCE** **University of Shahrood**, Shahrood, IRAN
Assistant Professor **Jan. 2013 – present**
- Brunel University**, Uxbridge, UK
Post-Doctoral Research Assistant **Oct. 2011 – Oct. 2012**
 - Terahertz Imaging and Compressive Sensing
- JOURNAL PUBLICATIONS**
1. Y. Dong, H. Lin, **V. Abolghasemi**, L. Gan, J. A. Zeitler, Y.-C. Shen, “Investigating Intra-Tablet Coating Uniformity With Spectral-Domain Optical Coherence Tomography”, *Journal of Pharmaceutical Sciences*, vol. 106, no. 2, pp. 546-553, February 2017.
 2. T. A. Javaran, H. Hassanpour, **V. Abolghasemi**, “Non-Blind image Deconvolution Using a Regularization based on Re-blurring Process”, *Computer Vision and Image Understanding*, vol. 154, pp. 16–34, January 2017.
 3. M. M. Alyan Nezhadi, A. Pouyan, **V. Abolghasemi**, “An efficient algorithm for multisensory data fusion under uncertainty condition”, *Journal of Electrical Systems and Information Technology*, October 2016.
 4. T. A. Javaran, H. Hassanpour, **V. Abolghasemi**, “A noise-immune no-reference metric for estimating blurriness value of an image”, *Signal Processing: Image Communication*, vol. 47, pp. 218–228, September 2016.
 5. R. Ameri, A. Pouyan, **V. Abolghasemi**, “Projective dictionary pair learning for EEG signal classification in brain computer interface applications”, *Neurocomputing*, vol. 218, pp. 382-389, 2016.
 6. T. A. Javaran, H. Hassanpour, **V. Abolghasemi**, “Automatic estimation and segmentation of partial blur in natural images”, *The Visual Computer*, vol. 33, no. 2, pp. 151–161, October 2015.
 7. S. Ferdowsi, **V. Abolghasemi**, and S. Sanei, “A new informed tensor factorization approach to EEG-fMRI fusion”, *Journal of Neuroscience Methods*, vol. 254, pp. 27–35, October 2015.
 8. **V. Abolghasemi**, H. Shen, Y. Shen, and L. Gan, “Subsampled terahertz data reconstruction based on spatio-temporal dictionary learning”, *Digital Signal Processing*, vol. 43, no. 01, pp. 1–7, August 2015.
 9. **V. Abolghasemi**, S. Ferdowsi, and S. Sanei, “A Block-Wise Random Sampling Approach: Compressed Sensing Problem”, *Journal of AI and Data Mining*, vol. 03, no. 01, pp. 90–97, Spring 2015.
 10. **V. Abolghasemi**, and S. Ferdowsi, “EEG-fMRI: Dictionary learning for removal of ballistocardiogram artifact from EEG”, *Biomedical Signal Processing and Control*, vol. 18, pp. 186–194, April 2015.
 11. S. Ferdowsi, S. Sanei, and **V. Abolghasemi**, “A Predictive Modeling Approach to Analyze Data in EEG-fMRI Experiments”, *International Journal of Neural Systems*, vol. 25, no. 01, February 2015.
 12. S. Ferdowsi, S. Sanei, **V. Abolghasemi**, J. Nottage and O. O’Daly, “Removing Ballistocardiogram artifact from EEG using Short-and-Long-Term Linear Predictor”, *IEEE Transactions on Biomedical Engineering*, vol. 60, no. 7, pp. 1900-1911, April 2013.
 13. **V. Abolghasemi**, S. Ferdowsi, and S. Sanei, “Fast and incoherent dictionary learning algorithms with application to fMRI”, *Signal, Image and Video Processing*, vol. 9, no. 1, pp. 147-158, February 2013.

14. **V. Abolghasemi**, S. Ferdowsi, and S. Sanei, "Blind Separation of Image Sources via Adaptive Dictionary Learning", *IEEE Transactions on Image Processing*, vol. 21, no. 6, pp. 2921-2930, February 2012.
15. **V. Abolghasemi**, S. Ferdowsi, and S. Sanei, "A gradient-based alternating minimization approach for optimization of the measurement matrix in compressive sensing", *Signal Processing*, vol. 92, no. 4, pp. 999-1009, April 2012.
16. S. Sanei, T. K. M. Lee, and **V. Abolghasemi**, "A new adaptive line enhancer based on singular spectrum analysis", *IEEE Transactions on Biomedical Engineering*, vol. 52, no. 2, pp. 428-434, February 2012.
17. **V. Abolghasemi**, and A. Ahmadyfard, "An edge-based color-aided method for license plate detection", *Image and Vision computing*, vol. 27, no. 8, pp. 1134-1142, July 2009.
1. M. Amiri, A. Ahmadifard, and **V. Abolghasemi**, "A fast approach for single image super resolution via dictionary learning", IEEE International Conference on Signal Processing and Intelligent Systems (ICSPIS), pp. 1-5, Tehran, IRAN, 2016.
2. M. Amiri, A. Ahmadifard, and **V. Abolghasemi**, "A probabilistic framework for dense image registration using relaxation labelling", IEEE International Conference on Signal Processing and Intelligent Systems (ICSPIS), pp. 1-5, Tehran, IRAN, 2016.
3. R. Falahati, and **V. Abolghasemi**, "Extraction of Persian coronal stops from ultrasound images using linear discriminant analysis", Ultrafest VII Conference, The University of Hong Kong, December 2015.
4. R. Ameri, A. Pouyan, and **V. Abolghasemi**, "EEG signal classification based on sparse representation in brain computer interface applications", 22nd Iranian Conference on Biomedical Engineering (ICBME), pp. 21-24, Tehran, IRAN, 2015.
5. **V. Abolghasemi**, S. Ferdowsi, H. Shen, Y. Shen, and L. Gan, "Spatio-Spectral Data Reconstruction In Terahertz Imaging", IEEE International Symposium on Telecommunications (IST2014), pp.129 - 133, Tehran, IRAN, September 2014.
6. S. Ferdowsi, **V. Abolghasemi**, and S. Sanei, "EEG-FMRI Integration Using A Partially Constrained Tensor Factorization", IEEE International Conference on Speech and Signal Processing (ICASSP), pp. 6191-6195, Vancouver, Canada, May 2013.
7. **V. Abolghasemi** and L. Gan, "Dictionary Learning for Incomplete SAR Data", 1st International Workshop on Compressed Sensing applied to Radar, 14-16 May 2012, Bonn, Germany, 2012.
8. H. Shen, **V. Abolghasemi**, L. Gan and Y. C. Shen, "Compressive three-dimensional (3D) terahertz imaging", Institute of Physics conference in optics and photonics, Photon12, Durham, UK, 2012.
9. S. Ferdowsi, **V. Abolghasemi**, and S. Sanei, "Blind Separation Of Ballistocardiogram From EEG Via Short And Long-Term Linear Prediction Filtering", IEEE International Workshop on Machine Learning for Signal Processing (MLSP), pp. 1-6, Santander, Spain, 2012.
10. S. Ferdowsi, S. Sanei, J. Nottage, and O. O'Daly, and **V. Abolghasemi**, "A Hybrid ICA-Hermite Transform For Removal Of Ballistocardiogram From EEG", 20th European Signal Processing Conference, EUSIPCO'12, pp. 484 - 488, Bucharest, Romania, 2012.
11. **V. Abolghasemi**, S. Ferdowsi, and S. Sanei, "Adaptive fusion of dictionary learning and blind source separation", IEEE International Conference on Speech and Signal Processing (ICASSP), pp.2421 - 2424, Kyoto, Japan, 2012.
12. S. Ferdowsi, **V. Abolghasemi**, and S. Sanei, "A Comparative Study of alpha-Divergence Based NMF Techniques for fMRI Analysis", European Signal Processing Conference EUSIPCO'11, pp. 71-75, Barcelona, Spain, 2011.
13. B. Makkiabadi, D. Jarchi, **V. Abolghasemi**, and S. Sanei, "A geometrically constrained multimodal time domain approach for convolutive blind source separation", European Signal Processing Conference EUSIPCO'11, pp. 1864-1868, Barcelona, Spain, 2011.
14. S. Ferdowsi, **V. Abolghasemi**, B. Makkiabadi, and S. Sanei, "A new spatially constrained NMF with application to fMRI", Annual International IEEE EMBS Conference, pp. 5052 - 5055, Boston, USA, 2011.
15. **V. Abolghasemi**, S. Ferdowsi, and S. Sanei, "Sparse multichannel source separation using incoherent K-SVD method", IEEE/SP 16th Statistical Signal Processing Workshop, SSP'11, pp. 477-480, Nice, France, 2011.
16. **V. Abolghasemi**, S. Ferdowsi, B. Makkiabadi, and S. Sanei, "On optimization of the measurement matrix for compressive sensing", European Signal Processing Conference EUSIPCO'10, pp. 427-431, Aalborg, Denmark, 2010.
17. **V. Abolghasemi**, D. Jarchi, and S. Sanei, "A robust approach for optimization of the measurement matrix in compressed sensing", International Workshop on Cognitive Information Processing CIP'10, pp. 388-392, Elba, Italy, 2010.
18. S. Ferdowsi, **V. Abolghasemi**, and S. Sanei, "A constrained NMF algorithm for bold detection in fMRI", IEEE International Workshop on Machine Learning for Signal Processing MLSP, pp. 77-82, Kittila, Finland,

2010.

19. **V. Abolghasemi**, S. Sanei, S. Ferdowsi, F. Ghaderi, and A. Belcher “Segmented compressive sensing”, IEEE/SP 15th Statistical Signal Processing Workshop, SSP’09, pp. 630-633, Cardiff, UK, 2009.
20. M. Zoghi, and **V. Abolghasemi** “Persian signature verification using improved Dynamic Time Warping-based segmentation and Multivariate Autoregressive modeling”, IEEE/SP 15th Workshop on Statistical Signal Processing, SSP’09, pp. 329-332, Cardiff, UK, 2009.
21. S. Ferdowsi, **V. Abolghasemi**, A. Ahmadyfard, and S. Sanei “An improved eye detection method based on statistical moments”, IEEE/SP 15th Workshop on Statistical Signal Processing, SSP’09, pp. 345-348, Cardiff, UK, 2009.
22. F. Ghaderi, S. Sanei, B. Makkiabadi, **V. Abolghasemi**, and J.G. McWhirter “Heart and lung sound separation using periodic source extraction method”, 16th International Conference on Digital Signal Processing, DSP’09, pp. 1-6, Santorini, Greece, 2009.
23. B. Makkiabadi, A. Sarrafzadeh, D. Jarchi, **V. Abolghasemi**, and S. Sanei “Semi-blind signal separation and channel estimation in MIMO communication systems by tensor factorization”, IEEE/SP 15th Workshop on Statistical Signal Processing, SSP’09, pp. 305-308, Cardiff, UK, 2009.
24. S. Sanei, A.H. Phan, Jen-Lung Lo, **V. Abolghasemi**, and A. Cichocki “A compressive sensing approach for progressive transmission of images”, IEEE 16th International Conference on Digital Signal Processing, DSP’09, pp. 1-5, Santorini, Greece, 2009.
25. D. Jarchi, **V. Abolghasemi**, and S. Sanei “Source Localization of Brain Rhythms by Empirical Mode Decomposition and Spatial Notch Filtering ”, 17th European Signal Processing Conference, EUSIPCO’09, pp. 627-631, Glasgow, Scotland, 2009.
26. A. Ahmadyfard, and **V. Abolghasemi** “Detecting license plate using texture and color information”, IEEE International Symposium on Telecommunications, IST’08, pp. 804-808, Tehran, Iran, 2008.
27. **V. Abolghasemi**, and A. Ahmadyfard “Improved Image Enhancement Method for License Plate Detection”, 15th International Conference on Digital Signal Processing, DSP’07, pp. 435-438, Cardiff, UK, 2007.
28. **V. Abolghasemi**, and A. Ahmadyfard “A Fast Algorithm for License Plate detection”, VISUAL 2007, LNCS 4781, Springer, pp. 471-480, Shanghai, China, 2007.
29. **V. Abolghasemi**, and A. Ahmadyfard “Local Enhancement of Car License Plate Detection”, 15th European Signal Processing Conference, EUSIPCO’07, pp. 1382-1386, Poznan, Poland, 2007.
30. **V. Abolghasemi**, and H. Marvi “Modified CELP coder using Root-Cepstrum”, 15th European Signal Processing Conference, EUSIPCO’07, pp. 2179-2183, Poznan, Poland, 2007.
31. **V. Abolghasemi**, and H. Marvi “Application of Cepstrum in Speech Coding”, 14th International Congress on Sound and Vibration, ICSV14, Carin, Australia, 2007.
32. **V. Abolghasemi**, and A. Ahmadyfard “Application of IFT in License Plate Detection”, 3th Conference of Information and Knowledge Technology, IKT07, (In Persian), Mashhad, Iran, 2007.

PROFESSIONAL
EXPERIENCE

University of Surrey, Guildford, UK

Teaching Assistant

January 2011 – May 2011

Teaching assistant for undergraduate courses in computer engineering, including computer networking.

Cardiff University, Cardiff, UK

Teaching Assistant

October 2008 – December 2010

Teaching assistant for undergraduate courses in electrical engineering, including signals and systems, digital signal processing, electronic circuits, MATLAB and C++ programming.
Examination invigilator for undergraduate as well as graduate courses.

Shahrood University of Technology, Shahrood, IRAN

Lecturer

2005 – 2008

Teaching for undergraduate courses in electronic and computer engineering, including communication circuits Lab., Digital electronics, Pulse techniques Lab., electrical circuits, C++ programming.

Shahrood Islamic Azad University, Shahrood, IRAN

Lecturer

2005 – 2008

Teaching for undergraduate courses in electrical engineering, including signals and systems, electronic circuits, C++ programming, electrical circuits.
Supervision of several B.Sc projects on analog and digital circuits.

PROGRAMMING

MATLAB, C++, and Borland C++, Assembly language, Microcontroller programming (AVR, PIC, M16C),

and VHDL;
General Softwares: Latex, Word, Excel, etc.

HARDWARE IMPLEMENTATION	Design and implementation of various analog and digital circuits. Design and implementation of 8051 family programmer and FPGA programmer (my B.Sc final project, with G.P.A 20/20). Microcontroller programmer, speedometer, thermometer, running LCDs, etc.
MEMBERSHIPS	IEEE Senior Member; Served as reviewer for: <ul style="list-style-type: none">• IEEE Signal Processing Letters• IEEE Transactions on Signal Processing• IEEE Transactions on Image Processing• Elsevier Signal processing Journal• IET Image Processing• International Journal of Engineering• Journal of AI and Data Mining
HONORS	Funded by Overseas Research Scholarship award (ORSA) at Cardiff University, from October 2008 to December 2010; Funded by Faculty of Engineering and Physical Sciences at University of Surrey, from January to March 2011; First rank in the M.Sc program in 2007; Superior researcher in year 2007 at Shahrood University of Technology;