

دکتر محمداسماعیل اکبرپور

استادیار گروه مهندسی برق و مهندسی پزشکی

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آدرس: آمل، کیلومتر ۵ جاده هراز، دانشگاه شمال، کد پستی: ۴۶۱۶۱۸۴۵۹۶

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## Education

PhD in Electrical and Electronics Engineering, University of Birjand (Iran)	2012 – 2018
Research Assistant, University of Alberta (Edmonton, AB, Canada)	Jan/ 2016-Sep/2016
M.Sc. in Electrical and Electronics Engineering, Amirkabir University of technology (Iran)	2002 – 2005
B.Sc. in Electrical and Electronics Engineering, Amirkabir University of technology (Iran)	1997 – 2002

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## Research and work Experience

<b>Assistant professor, Shomal University.</b> (Amol, Iran)	Sep/2010 – Present
Teaching B.Sc. and M.Sc. courses in electrical and electronic engineering.	
• Manager of the Department of Electrical Engineering, Shomal University, Amol, Iran.	Sep/2010-Sep/2012
• Manager the all of the Laboratories, Shomal University, Amol, Iran.	Sep/2008-Sep/2010
• Director of Education, Shomal University, Amol, Iran.	Sep/2018-present

- Project scope: object recognition and image enhancement based on Human Visual System (HVS).

**PhD thesis:** “Design and computational implementation of an optimal combinational model for the object recognition inspired by the human visual system”

**Highlights:**

- Optimization of edge detection by optimized Gabor filter parameters, Ph.D. thesis.
- Object detection without pattern, Ph.D. thesis.
- Texture segmentation, Advisor in M. Sc. Project.
- Genetic Algorithm Implementation for extracting best patches in HMAX by MATLAB, Ph.D. seminar.
- Extraction best patches from image by inspiring from HVS, Ph.D. project.
- Application of active contour in image edge detection, image processing course project.
- Implementation of various classifiers, Pattern recognition course project.
- Genetic Algorithm Implementation to create a new color space, Evolutionary algorithm course project.
- Implementation of wavelet in image processing, Advanced engineering mathematics course project.
- Image Classification in Human Visual System (HVS), Ph.D. seminar.

**Honor:**

- First rank among all electronic engineering student in PhD (GPA=19.63).

## Publication

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1. E. Akbarpour, M. Mandal, M. Hashemi Kamangar, “Novel patch selection based on object detection in HMAX for natural image classification”, November 2021, DOI: <https://doi.org/10.1007/s11760-021-02059-1>
2. E. Akbarpour, N. mehrshad, M. Razavi, “object recognition inspiring HVS” Indonesian Journal of Electrical Engineering and Computer Science (IJEECS), Vol. 12, No. 2, pp. 783-793, 2018.
3. محمداساعیل اکبرپور، ناصر مهرشاد و سید محمد رضوی، «ارائه یک روش موثر بازشناسی شیء مبتنی بر هرس کردن احتمالی مشخصه‌های دیداری تصویر در مدل HMAX»، مجله مهندسی برق دانشگاه تبریز، بهار ۱۳۹۸، جلد ۴۹، شماره ۱.
4. E. Nadernejad, E. Akbarpour, Hamid Hassanpour, “μPET Data De-Noise Using Wavelet Packets,” Contemporary Engineering Sciences, Vol. 1, No. 2, pp. 91 – 104, 2008.
5. S. M. Hosseini, E. Akbarpour, S. Amjadi and H. Mirsalari, “Genetic Algorithm -Based Color Space Generation,” International Conference on Computer Engineering and Applications IPCSIT, 2009, vol.2.
6. E. Akbarpour, M. R. Karami Mollaei, “Image Enhancement by Thresholding on Wavelet Coefficient” International Journal of Soft Computing and Engineering (IJSCE), Volume-2, Issue-3, pp. 483-486, 2012.
7. A. Aliabadian, E. Akbarpour, Mohammad Yosefi, “Kernel Based Approach toward Automatic object Detection and Tracking in Surveillance Systems” International Journal of Soft Computing and Engineering (IJSCE), Volume-2, Issue-1, pp. 82-87, March 2012.

## Teaching Experience

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### Teacher:

- Engineering mathematics, include Fourier transform, complex analysis, heat and wave equation.
- MATLAB programing, include M-file and function.
- MATLAB programing in Image Processing, include image enhancement and edge detection.
- Electrical Circuits-I, reference: Basic Circuit Theory by Charles A. Desoer, Ernest S. Kuh
- Technical language in electrical and biomedical Engineering, lecturer at Shomal University
- Signals and Systems Analysis, reference: signals-and-systems-Alan V. oppenheim, S. willsk  
lecturer at Shomal University
- PSPICE programing in electrical Circuits and Electronics, lecturer at Shomal University.

### Advisor:

- M.Sc. final projects: Texture segmentation with GMM.

## Professional / Volunteer Activities

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- Reviewer of internal electronics Conference, Azad Univercity, Babol, Iran.
- The main partner in the electronic journal, Shomal Univercity, Amol, Iran.
- Reviewer of first Iranian conference on Pattern Recognition and Image Analysis (PRIA 2013), Birjand University.
- Responsible for scientific-research Olympiad, Shomal university, Amol, Iran.