

# CURRICULUM VITAE

## A. PERSONAL DATA

1. Full name: Oleksandr Makeyev
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3. Phone and e-mail: tel. (315) 267-6016, e-mail: mckehev@hotmail.com
4. Place and date of birth: April 27, 1983, Kiev, Ukraine.
5. Marital status: Single.
6. Citizenship: Ukrainian.
7. Languages: Ukrainian (speak, read and write), Russian (speak, read and write), English (speak, read and write), Spanish (speak, read and write).

## B. EDUCATION

1. Ph.D. in Engineering Science  
Clarkson University, Potsdam, NY, USA.  
Date of receiving: In progress, estimated date - May, 2010.
2. M.Sc. in Statistics  
Taras Shevchenko National University of Kyiv, Kiev, Ukraine.  
Date of receiving: June, 2005.
3. B.Sc. in Mathematics  
Taras Shevchenko National University of Kyiv, Kiev, Ukraine.  
Date of receiving: June, 2003.

## C. PROFESSIONAL EXPERIENCE

1. Teaching Assistant  
Department of Electrical and Computer Engineering, Clarkson University, Potsdam, NY, USA.  
September 2008 – Present.  
Teaching assistant for EE321 Systems and Signal Processing (Fall 2008, Fall 2009) and ES250 Electric Science (Spring 2009). Laboratory instructor for EE321 Systems and Signal Processing (Fall 2009).
2. Research Assistant  
Department of Electrical and Computer Engineering, Clarkson University, Potsdam NY, USA.  
May 2006 – August 2008.  
Work on National Institutes of Health Grant R21HL083052-02 “Detection of chewing and swallowing to estimate eating patterns and energy intake”.

## D. PUBLICATIONS

### 1. PAPERS IN INTERNATIONAL JOURNALS

1. Sazonov, E., Makeyev, O., Schuckers, S., Lopez-Meyer, P., Melanson, E., Neuman, M., Automatic detection of swallowing events by acoustical means for applications of

- monitoring of ingestive behavior, *IEEE Transactions on Biomedical Engineering*, 2009 (In print, published online September 2009).
2. Sazonov E., Schuckers S., Lopez-Meyer P., Makeyev O., Melanson E., Neuman M., Hill J., Toward objective monitoring of ingestive behavior in free living population, *Obesity*, Vol. 17, Issue 10, October 2009, pp. 1971–1975.
  3. Sazonov E., Schuckers S., Lopez-Meyer P., Makeyev O., Sazonova N., Melanson E., Neuman M., Reply to 'Comment on "Non-invasive monitoring of chewing and swallowing for objective quantification of ingestive behavior"', *Physiological Measurement*, Issue 5, Vol. 30, May 2009, pp. L5-L7.
  4. Baidyk T., Kussul E., Makeyev O., Vega A., Limited receptive area neural classifier based image recognition in micromechanics and agriculture, *International Journal of Applied Mathematics and Informatics*, Issue 1, Vol. 2, 2008, pp. 96-103.
  5. Kussul E., Baidyk T., Makeyev O., Lara-Rosano F., Saniger J.M., Bruce N., Flat facet parabolic solar concentrator with support cell for one and more mirrors, *WSEAS Transactions on Power Systems*, Issue 8, Vol. 3, August 2008, pp. 577-586.
  6. Sazonov E., Schuckers S., Lopez-Meyer P., Makeyev O., Sazonova N., Melanson E., Neuman M., Non-invasive monitoring of chewing and swallowing for objective quantification of ingestive behavior, *Physiological Measurement*, Issue 5, Vol. 29, May 2008, pp. 525-541.
  7. Makeyev O., Sazonov E., Baidyk T., Martín A., Limited receptive area neural classifier for texture recognition of mechanically treated metal surfaces, *Neurocomputing*, Issue 7-9, Vol. 71, March 2008, pp. 1413-1421.
  8. Kussul E., Baidyk T., Makeyev O., Lara-Rosano F., Saniger J.M., Bruce N., Development of micro mirror solar concentrator, *WSEAS Transactions on Power Systems*, Issue 8, Vol. 2, August 2007, pp. 188-194.
  9. Kussul E., Baidyk T., Wunsch D., Makeyev O., Martín A., Permutation coding technique for image recognition systems, *IEEE Transactions on Neural Networks*, Vol. 17/6, November 2006, pp. 1566-1579.
  10. Baidyk T., Kussul E., Makeyev O., Texture recognition with random subspace neural classifier, *WSEAS Transactions on Circuits and Systems*, Issue 4, Vol. 4, April 2005, pp. 319-325.
  11. Makeyev O., Evolutionary algorithm for measurement of screw parameters, *WSEAS Transactions on Systems*, Issue 2, Vol. 3, April 2004, pp. 861-865.
  12. Baidyk T., Kussul E., Makeyev O., Caballero A., Ruiz L., Carrera G., Velasco G., Flat image recognition in the process of microdevice assembly, *Pattern Recognition Letters*, Vol. 25/1, 2004, pp. 107-118.

## 2. BOOK CHAPTERS

1. Baidyk T., Kussul E., Makeyev O., General purpose image recognition systems based on neural classifiers, In: *Progress in Neurocomputing Research*, Ed. by Gerald B. Kang, Nova Science Publishers, 2008, pp. 83-114.
2. Makeyev O., Baidyk T., Martín A., Limited receptive area neural classifier for texture recognition of metal surfaces, In: *IFIP International Federation for Information Processing*, Vol. 217, *Artificial Intelligence in Theory and Practice*, Ed. by Max Bramer, Springer, 2006, pp. 375-384.
3. Kussul E., Baidyk T., Lara-Rosano F., Makeyev O., Martín A., Wunsch D., Micromechanics as a testbed for artificial intelligence methods evaluation, In: *IFIP International Federation for Information Processing*, Vol. 218, *Professional Practice in Artificial Intelligence*, Ed. by John Debenham, Springer, 2006, pp. 275-284.

4. Kussul E., Baidyk T., Ruiz-Huerta L., Caballero-Ruiz A., Velasco G., Makeyev O., Techniques in the development of micromachine tool prototypes and their applications in microfactories, In: MEMS/NEMS Handbook: Techniques and Applications, Ed. by Cornelius T. Leondes, Vol. 3, Springer, 2006, pp. 1-61.

### **3. PROCEEDINGS OF THE INTERNATIONAL CONFERENCES**

1. Sazonov E., Lopez-Meyer P., Schuckers S., Makeyev O., Melanson E., Neuman M., Objective prediction of ingested food mass using support vector regression, The Obesity Society's 2009 Annual Scientific Meeting, Washington D.C., USA, October 24-28, 2009.
2. Baidyk T., Kussul E., Makeyev O., Vega A., Image recognition with neural classifiers in micromechanics and agriculture, Proceedings of the 10th WSEAS International Conference on Neural Networks NN'09, Prague, Czech Republic, March 23-25, 2009, pp.100-103.
3. Makeyev O., Sazonov E., Schuckers S., Lopez-Meyer P., Baidyk T., Melanson E., Neuman M., Recognition of swallowing sounds using time-frequency decomposition and limited receptive area neural classifier, in Applications and Innovations in Intelligent Systems XVI: Proceedings of AI-2008, The Twenty-eighth SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence, Eds. Tony Allen, Richard Ellis and Miltos Petridis, Springer, ISBN: 978-1-84882-214-6, Cambridge, UK, December 9-11, 2008, pp. 33-46.
4. Baidyk T., Kussul E., Makeyev O., Computer vision systems for manufacturing of micro workpieces, in Applications and Innovations in Intelligent Systems XVI: Proceedings of AI-2008, The Twenty-eighth SGAI International Conference on Innovative Techniques and Applications of Artificial Intelligence, Eds. Tony Allen, Richard Ellis and Miltos Petridis, Springer, ISBN: 978-1-84882-214-6, Cambridge, UK, December 9-11, 2008, pp. 19-32.
5. Kussul E., Baidyk T., Makeyev O., Lara-Rosano F., Saniger J.M., Bruce N., Flat facet parabolic solar concentrator, in Proc. 2nd WSEAS/IASME International Conference on Renewable Energy Sources (RES-08)-2008, Corfu, Greece, October 26-28, 2008, pp. 46-51.
6. Makeyev O., Sazonov E., Schuckers S., Lopez-Meyer P., Melanson E., Neuman M., Limited receptive area neural classifier for recognition of swallowing sounds using continuous wavelet transform, in Proc. 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society EMBC 2007, Lyon, France, August 23-26, 2007, pp. 3128-3131.
7. Sazonov E., Krishnamurthy V., Makeyev O., Browning R., Hill J., Schutz Y., Automatic recognition of postural allocations, in Proc. 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society EMBC 2007, Lyon, France, August 23-26, 2007, pp. 4993-4996.
8. Makeyev O., Sazonov E., Schuckers S., Melanson E., Neuman M., Limited receptive area neural classifier for recognition of swallowing sounds using short-time Fourier transform, in Proc. International Joint Conference on Neural Networks IJCNN 2007, Orlando, USA, August 12-17, 2007, pp. 1417.1-1417.6.
9. Kussul E., Baidyk T., Makeyev O., Pairwise Permutation Coding Neural Classifier, in Proc. International Joint Conference on Neural Networks IJCNN 2007, Orlando, USA, August 12-17, 2007, pp. 1471.6-1471.6.
10. Kussul E., Baidyk T., Makeyev O., Lara-Rosano F., Saniger J.M., Bruce N., Development of micro mirror solar concentrator, 2nd IASME/WSEAS Int. Conf. on Energy & Environment EE 2007, Portoroz, Slovenia, May 15-17, 2007, pp. 293-298.

11. Makeyev O., Baidyk T., Martín A., Limited receptive area neural classifier for texture recognition of metal surfaces, IFIP WCC AI2006, Santiago de Chile, Chile, August 21-24, 2006, pp. 10.
12. Kussul E., Baidyk T., Lara-Rosano F., Makeyev O., Martín A., Wunsch D., Micromechanics as a testbed for artificial intelligence methods evaluation, IFIP WCC Symposium on Professional Practice in AI2006, IFIP WCC AI2006, Santiago de Chile, Chile, August 21-24, 2006, pp. 10.
13. Kussul E., Baidyk T., Wunsch D., Makeyev O., Martin A., Image recognition systems based on random local descriptors, IJCNN 2006, Vancouver, Canada, July 16-21, 2006, pp. 4722-4727.
14. Baidyk T., Kussul E., Makeyev O., Martín A., Reconocimiento de texturas de superficies metálicas, congreso SOMI XX, Leon, Guanajuato, México, October 23-28, 2005, pp.8 (in Spanish).
15. Baidyk T., Kussul E., Makeyev O. Texture recognition with random subspace neural classifier, WSEAS International Conference on Systems Science and Engineering, ICOSSE2005, Rio de Janeiro, Brazil, April 25-27, 2005, pp. 6.
16. Makeyev O., Evolutionary algorithm for measurement of screw parameters, WSEAS/IASME International Conference on Evolutionary Computation EC'04, Udine, Italy, March 25-27, 2004, pp. 5.
17. Baidyk T., Kussul E., Makeyev O., Image recognition system for microdevice assembly, Twenty-First IASTED International Multi-Conference on Applied Informatics - AI2003. Innsbruck, Austria, 2003, pp. 243-248.
18. Makeyev O., Neural interpolator for image recognition in the process of microdevice assembly, IEEE IJCNN 2003, Vol. 3, Portland, Oregon, USA, July 20-24, 2003, pp. 2222-2226.

#### **4. PAPERS IN REVIEW**

1. Makeyev O., Sazonov E., Moklyachuk M., Lopez-Meyer P., Hybrid genetic algorithm for micro screw thread parameter estimation, *Engineering Applications of Artificial Intelligence*, 2009 (In review).
2. Kussul E., Baidyk T., Lara-Rosano F., Makeyev O., Wunsch D., Micromechanics as a testbed for evaluation of artificial intelligence methods in manufacturing, *Journal of Intelligent and Robotic Systems*, 2009 (In review).
3. Martín-González A., Baidyk T., Kussul E., Makeyev O., Computer vision system for microscrew shape recognition in micromechanics, *Journal of Applied Research and Technology*, 2009 (In review).
4. Baidyk T., Kussul E., Makeyev O., Pattern recognition for micro workpieces manufacturing, special issue on Innovative Applications of Artificial Intelligence (IAAI) of *Computación y Sistemas (Ibero-American Journal of Computing)*, 2009 (Accepted).
5. Lopez-Meyer P., Schuckers S., Makeyev O., Melanson E., Neuman M., Sazonov E., Detection of food intake from swallowing sequences by supervised and unsupervised methods, *Annals of Biomedical Engineering*, 2009 (In review).

#### **E. PERSONAL ACTIVITIES**

1. Reviewer, 2009 International Joint Conference on Neural Networks (IJCNN09).
2. Reviewer, 2008, International Journal of Computer Assisted Radiology and Surgery (Springer, Editor: Michael W. Vannier).

3. Reviewer, 2007 Special Issue of Neural Networks for IJCNN07 (Elsevier, Editor: David G. Brown).
4. Reviewer, 2007 International Joint Conference on Neural Networks (IJCNN07).

#### **F. OTHERS**

1. IEEE Student Member # 41533635 since 2003.
2. International Joint Conference on Neural Networks IJCNN 2007 Student Travel Grant (IEEE, INNS), 2007.
3. International Joint Conference on Neural Networks IJCNN 2003 Student Travel Grant (IEEE, INNS), 2003.

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