

**BIOGRAPHICAL SKETCH**

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NAME Mihai Popescu		POSITION TITLE Research Assistant Professor	
eRA COMMONS USER NAME MPOPESCU			
EDUCATION/TRAINING ( <i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i> )			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Politehnica University of Bucharest, Romania	B.S.	1994	Electrical Engineering
University of Patras, Greece		1994-1995	Biomedical Engineering and Medical Physics
University of Patras, Greece	M.S.	1996	Biomedical Engineering
Summer School on Wavelets, Paris, France		1998	Mathematics
University of Patras, Greece	Ph.D.	2001	Biomedical Engineering

**A. Positions and Honors.**Positions and Employment

1996-2001	Ph.D. Student, Signal Processing Laboratory, Department of Medical Physics, Medical School, University of Patras, Greece
2001-2003	Post Doctorate Scientific Researcher, Human Brain Dynamics Laboratory, RIKEN Brain Science Institute, Japan
2003-2005	Post Doctorate Fellow, Hoglund Brain Imaging Center, University of Kansas Medical Center, Kansas City, KS
2006-present	Research Assistant Professor, Department of Molecular and Integrative Physiology, Hoglund Brain Imaging Center, University of Kansas Medical Center, Kansas City, KS

Honors

1992	"Traian Lalescu" – First Prize Award in the competition on <i>Electrical Circuits</i> from "Politehnica" University of Bucharest
1994	TEMPUS grant holder, TEMPUS S_JEP 2756-91 Programme (Development of Graduated and Postgraduate Education in Signals, Circuits & Systems at PUB, coordinated by the Tampere University of Technology)
1994-1996	TEMPUS grant holder, TEMPUS S_JEP 7817-94 Programme (Structuring University Centers for Medical Physics and Medical Engineering in Romania, coordinated by the University of Patras, Greece)
1996	Best student in the International Postgraduate Studies on Biomedical Engineering, University of Patras, Greece
1997-2001	IKY (Greek State Scholarships Foundation) grant holder (372/1997)

**B. Selected peer-reviewed publications (in chronological order).**

1. Popescu, M., Laskaris, N., Melroi, A., Chiladakis, I., Manolis, A., Cristea, P., Bezerianos, A. (1997). Cardiac Electrical Instability of the Arrhythmogenic Tissue Substrate Assessed by means of Wavelet Transform. *Studies in Health Technology and Informatics* (Vol 43): Medical Informatics Europe 97, (Eds C. Pappas, N. Maglaveras, J.-R. Scherrer), IOS Press Amsterdam, NL, pp. 551-555. PMID: 10179726
2. Popescu, M., Laskaris, N., Chiladakis, I., Stathopoulos, C., Cristea, P., Manolis, A., Bezerianos, A. (1998). Beat-to-Beat Wavelet Variance of the QRS Complex as a Marker of Arrhythmogenic Substrate in Ventricular Tachycardia Patients. *Physiological Measurement Journal* 19: 77-92. PMID: 9522389
3. Popescu, M., Cristea, P., Bezerianos A. (1998). High Resolution ECG Filtering Using Adaptive Bayesian Wavelet Shrinkage. *IEEE Computers in Cardiology*, The Institute of Electrical and Electronics Engineers, Inc., Piscataway, NJ, USA, pp. 401-404.
4. Popescu, M., Cristea, P., Bezerianos, A. (1999). Multiresolutional Distributed Filtering: A Novel Technique that Reduces the Amount of Data Required in High Resolution Electrocardiography. *Future Generation Computer Systems Journal* 15: 195-209.
5. Popescu, M., Papadimitriou, S., Karamitsos, D., Bezerianos, A. (1999). Adaptive Denoising and Multiscale Detection of the V Wave in Brainstem Auditory Evoked Potentials. *Audiology and Neuro-Otology Journal* 4: 38-50. PMID: 9873151
6. Bezerianos, A., Popescu, M., Cristea P. (1999). Non-Phase-Locked Arrhythmogenic Signal detection in High Resolution ECG. *IEEE Computers in Cardiology*, The Institute of Electrical and Electronics Engineers, Inc., Piscataway, NJ, USA, pp 583-586.
7. Popescu, M., Cristea, P., Bezerianos A. (2000). Multiresolutional distributed filtering: a novel technique that reduces the amount of data required in high resolution electrocardiography. *Advanced Infrastructures for Future Healthcare*, A. Marsh, L. Grandinetti, T. Kauranne (Eds) within the IOS press series *Studies in Health Technology and Informatics* 79: 519-535. PMID: 11151634
8. Popescu, M., Cristea, P., Bezerianos, A. (2000). Wavelet Medical Signal Processing. *Advanced Infrastructures for Future Healthcare*, A. Marsh, L. Grandinetti, T. Kauranne (Eds) within the IOS press series *Studies in Health Technology and Informatics* 79:492-518. PMID: 11151633
9. Popescu, M., Otsuka, A., Bezerianos, A., Liu, L.C., Ioannides, A.A. (2000). Inter-hemispheric asymmetry of echoic memory traces with multiple lifetimes. *Proceedings of the 12th International Conference on Biomagnetism*, August 13-17, Espoo, Finland, pp. 43-46.
10. Ioannides, A.A., Popescu, M., Otsuka, A., Bezerianos, A., Liu L. (2003). Magnetoencephalographic evidence of the inter-hemispheric asymmetry in echoic memory lifetime and its dependence on handedness and gender. *Neuroimage* 19: 1061-1075. PMID: 12880832
11. Popescu, M., Otsuka, A., Ioannides, A.A. (2004). Dynamics of brain activity in motor and frontal cortical areas during music listening: a magnetoencephalographic study. *Neuroimage* 21: 1622-1638. PMID: 15050586
12. Dancause, N., Barbay, S., Frost, S.B., Plautz, E.J., Popescu, M., Dixon, P.M., Stowe, A.M., Friel, K.M., Nudo, R.J. (2006). Topographically Divergent and Convergent Connectivity between Premotor and Primary Motor Cortex. *Cerebral Cortex* 16 (8):1057-1068. PMID: 16221929

13. Popescu, M., Popescu, EA., Fitzgerald-Gustafson, K., Drake, W., Lewine, J. (2006). Reconstruction of Fetal Cardiac Vectors from Multichannel fMCG Data Using Recursively Applied and Projected Multiple Signal Classification. *IEEE Transactions on Biomedical Engineering* 53 (12 pt1): 2564-2576. PMID: 17153214
14. Popescu, EA., Popescu, M., Bennet, TL., Lewine, JD., Drake, W., Fitzgerald-Gustafson, K. (2007). Magnetographic assessment of fetal hiccups and their effect on fetal heart rhythm. *Physiological Measurement* 28, 665-676. PMID: 17664620
15. Popescu, EA., Popescu, M., Wang, J., Barlow, SM., Fitzgerald-Gustafson, K. (2008). Non-nutritive sucking recorded *in utero* via fetal magnetography. *Physiological Measurement* 29, 127-139.
16. Popescu, M., Popescu, EA., Chan, T., Blunt, S., Lewine JD. (2008). Spatio-temporal reconstruction of bilateral auditory steady-state responses using MEG beamformers. *IEEE Transactions on Biomedical Engineering* 55 (3):1092-1102.
17. Marc E. Fey, Lizbeth H. Finestack, Byron J. Gajewski, Mihai Popescu, Jeffrey D. Lewine (2008). Does Fast-ForWord Language Enhance Children's Response to Language Intervention? Submitted to *Journal of Speech, Language, and Hearing Research* (October 2008)

### C. Research Support.

#### Active

NIH R21: 1R21EB006776-01A2

National Institutes of Health-NIBIB

Title: *Advanced Source Reconstruction Techniques for Fetal Magnetocardiography*

Role: Principal Investigator

Direct costs: 275,000 \$

Total costs: 411,563 \$

Received score: 130; percentile ranking: 5.

Years: 2 (9/30/2008-9/30/2010)

Kansas Center for Autism Research and Training (KCART)

Title: *Brain/Behavior profiles to distinguish individual differences in Asperger Syndrome*

Role: Co-Principal Investigator (PI: Winnie Dunn)

Direct costs: 40,000 \$

Years: 2

#### Pending

NIH R21: 1 R21 HD059019-01A1

*The Effects of Docosahexaenoic acid (DHA) on fetal cardiac outcomes.*

PI: Kathleen Gustafson

Direct costs: 275,000 \$

Role: co-investigator

Received score: 111; percentile ranking: 0.4

Years: 2

**Completed**

■(PI: W. Brooks)  
Siemens Medical Solutions  
*Imaging Studies at 3 Tesla*  
Role: Co-Investigator

02/02/04 – 06/30/08

■R01 NS039123 (PI: W. Brooks)  
National Institutes of Health  
*Neurometabolism and Outcome in Traumatic Brain Injury*  
Role: Co-Investigator

08/01/03 – 07/31/07