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Diabetes Technology Research Group
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EDUCATION:

- **PhD in Electrical and Computer Engineering** 2003
School of Electrical and Computer Engineering
National Technical University of Athens, Greece
- **Diploma in Electrical and Computer Engineering (5 years program with thesis)** 1998
Department of Electrical and Computer Engineering
National Technical University of Athens, Greece

ACADEMIC APPOINTMENTS:

- **November 2008 – to date: University of Bern, Switzerland**
Technical Head of the Diabetes Technology Research Group
- **November 2008 – December 2012: University of Bern, Switzerland**
Assistant Professor (four year fix-term appointment) Diabetes Technology, Faculty of Medicine
- **January 2005 – October 2008: Institute of Communication and Computer Systems, Greece**
Postdoctoral fellow
- **September 2007 – October 2008: University of Central Greece / Faculty of Biomedical Informatics**
Non-tenure track Lecturer
- **September 2006 – September 2008: University of Peloponnese / Faculty of Nursing, Greece**
Non-tenure track Lecturer
- **September 2006 – September 2008: National Technical University of Athens / Department of Electrical and Computer Engineering, Greece**
Research Scientist

OTHER APPOINTMENTS:

- **June 2003 – May 2005: Greek Ministry of Public Order**
Technical Consultant for the project: “C4I: 2004 Athens Olympic Security System” responsible for the Command and Decision Support
- **June 1998 – December 2003: Greek Ministry of Defence**
Junior Consultant in Command, Control, Communications, Computers, and Intelligence (C4I), and in Optimization of Crisis Management Methods using Information Technology

ACTIVE RESEARCH PROJECTS:

Coordinator and Principal Investigator, *Type 1 Diabetes Self-Management and Carbohydrate Counting: A Computer Vision Approach (GoCARB)*, European Commission, FP7, Marie Curie Actions, Industry-Academia Partnerships and Pathways (IAPP), PIAP-GA-2011-286408, on-going, starting date September, 1, 2011.

Coordinator and Principal Investigator, *Reinforcement Learning based Control System for Insulin Treatment Optimization in Individuals with Type 1 Diabetes*, Bern University Hospital, on-going.

PROFESSIONAL ACTIVITIES:

- Member of IEEE, Swiss Society of Biomedical Engineering and Technical Chamber of Greece.
- Co-investigator or technical manager of 14 completed European and Greek funded research projects.
- Reviewer for (among others) IEEE Transactions on Biomedical Engineering, IEEE Transactions on Instrumentation & Measurement, IEEE Transactions on Neural Networks, IEEE Transactions on Information Technology in Biomedicine, IEEE Transactions on Systems, Man, and Cybernetics, Part B, Pattern Recognition Letters, International Journal of Biomedical Imaging, Ultrasound in Medicine and Biology, Artificial Intelligence in Medicine, Investigative Radiology, Journal of Trauma Management and Outcomes, Computer Methods and Programs in Biomedicine, International Journal of Telemedicine and Applications.
- Member of the conference organizing committees of the IEEE International Conference on Imaging Systems and Techniques (IST 2012, 2011, 2007), the IEEE International Conference on Information Technology and Applications in Biomedicine (ITAB 2009, 2010), the IEEE/BIBE 8th International Conference on Bioinformatics and Bioengineering, the International Conference on Computational Technologies in Electrical and Electronics Engineering (IEEE/SIBIRCON), and the Hellenic Bioinformatics & Medical Informatics Meeting 2007.
- Co-chair of the 2nd International Conference on Advanced Technologies and Treatments for Diabetes, and the 8th IEEE International Conference on Bioinformatics and Bioengineering.
- Evaluator for proposals for the Cyprian Research Promotion Foundation.
- External reviewer for the FP7, Information Communication Technologies (ICT), Integrated Project *Controlling Chronic Diseases related to metabolic disorders (METABO)*.
- Member of and Ph.D. review committees at the University of Bern, École Polytechnique Fédérale de Lausanne (EPFL), University of Valencia, the National Technical University of Athens.
- Advisor of six Ph.D. theses (one on-going) at University of Bern and National Technical University of Athens.
- Advisor of ten (three on-going) Diploma and M.Sc. Theses at the University of Bern, National Technical University of Athens, University of Athens and the University of Central Greece.
- External evaluator of the tenure-track position at assistant professor level in Health Information Systems at the Department of Biomedical Engineering, Technological Educational Institute of Athens, Greece.
- ERASMUS Coordinator for Biomedical Engineering (2009 – today).
- IEEE-EMBS Greek Chapter Program Officer (2007 – 2008).

HONOURS AND AWARDS:

1999-2002	“Thomaedio” Awards for the best paper on biomedical engineering
1999	Scholarship from the National Technical University of Athens

PUBLICATIONS:

- **Peer reviewed papers in international journals:** 22
- **Book chapters:** 5
- **Peer-reviewed conference proceedings:** 37
- **Peer-reviewed conference abstracts:** 29
- **Other scientific publications:** 25
- **Patents:** 2

LANGUAGE SKILLS:

Greek (mother language); English (fluent); German (fluent)

PUBLICATIONS

For the complete publication list please visit:

http://www.artorg.unibe.ch/content/research_units/diabetes_technology/publications/index_eng.html

PUBLICATIONS LIST (PAST 5 YEARS):

Peer-reviewed articles (original publications)

1. M. Anthimopoulos, L. Gianola, L. Scarnato, P. Diem, **S. Mougiakakou**, "A Food Recognition System for Diabetic Patients based on an Optimized Bag of Features Approach" *IEEE Journal on Biomedical and Health Informatics* (under revisions). (IF: 1.676, Ranking: 0.803).
2. E. Daskalaki, K. Nørgaard, T. Züger, A. Prountzou, P. Diem, **S. Mougiakakou**, "An Early-Warning System for Hypo-/Hyperglycemic Events Based on Fusion of Adaptive Prediction Models," *Journal of Diabetes Science and Technology*, vol. 7, no. 3, pp. 689-698, 2013.
3. E. Daskalaki, P. Diem, **S. Mougiakakou**, "An Actor-Critic Based Controller for Glucose Regulation in Type 1 Diabetes," *Computer Methods and Programs in Biomedicine*, vol. 109, no. 2, pp. 116-125, 2013. (IF: 1.516, Ranking: 0.869).
4. T. Zueger, P. Diem, **S. Mougiakakou**, C. Stettler, "Influence of Time-Point of Calibration on Accuracy of Continuous Glucose Monitoring in Individuals with Type 1 Diabetes," *Diabetes Technology and Therapeutics*, vol. 14, no. 7, pp. 583-588. (IF: 1.931, Ranking: 0.325).
5. E. Daskalaki, A. Prountzou, P. Diem, **S. Mougiakakou**, "Real-Time Adaptive Models for the Personalized Prediction of Glycemic Profile in Type 1 Diabetes Patients," *Diabetes Technology and Therapeutics*, vol. 14, no. 2, pp. 168-174. (IF: 1.931, Ranking: 0.325).
6. **S. Mougiakakou**, E. Kyriacou, H. Papadopoulos, K. Perakis, A. Androulidakis, R. Tranfaglia, L. Pecchia, G. Konnis, U. Bracale, C. Pattichis, D. Koutsouris, "Towards the Integrated Provision of eHealth Tools and Services: INTERMED and the Experience in the Region of South-East Mediterranean," *BMC BioMedical Engineering*, 2011. (IF: 1.405, Ranking: 0.389).
7. K. Zarkogianni, A. Vazaiou, **S. Mougiakakou**, A. Prountzou, K. Nikita, "An Insulin Infusion Advisory System based on Auto-tuning Nonlinear Model Predictive Control," *IEEE Transactions on Biomedical Engineering*, vol. 58, no. 9, pp. 2467-2477, 2011. (IF: 2.278, Ranking: 0.708).
8. I. Kouris, **S. Mougiakakou**, L. Scarnato, D. Iliopoulou, A. Vazeou, P. Diem, D. Koutsouris, "Mobile Phone Technologies and Advanced Data Analysis towards the Enhancement of Diabetes Self-management," *International Journal of Electronic Healthcare*, vol. 5, no. 4, pp. 386-402, 2010.
9. I.K. Valavanis, **S.G. Mougiakakou**, K.A. Grimaldi, K.S. Nikita, "A Multifactorial Analysis of Obesity as CVD Risk Factor: Use of Neural Network based Methods in a Nutrigenetics Context," *BMC Bioinformatics*, 11, 453, 2010, DOI:10.1186/1471-2105-11-453. (IF: 2.751, Ranking: 0.891).
10. V.M. Banz, O. Sperisen, H. Zimmermann, D. Candinas, M. DeMoya, **S. Mougiakakou**, A.K. Exadaktylos, "A 5-year follow-up of patients discharged with non-specific abdominal pain: out of sight, out of mind?" *Internal Medicine Journal*, 16, 2010, DOI:10.1111/j.1445-5994.2010.02288.x. (IF: 1.786, Ranking: 0.705).
11. **S.G. Mougiakakou**, C. Bartsocas, E. Bozas, N. Chaniotakis, D. Iliopoulou, I. Kouris, S. Pavlopoulos, A. Prountzou, M. Skevofylakas, A. Tsoukalis, K. Varotsis, A. Vazeou, K. Zarkogianni, K. S. Nikita, "SMARTDIAB: A Communication and Information Technology Approach for the Intelligent Monitoring, Management and Follow-up of Type 1 Diabetes Patients," *IEEE Transactions on Information Technology in Biomedicine*, 14, 3, pp. 622-633, 2010. (IF: 1.676, Ranking: 0.803).
12. **S.G. Mougiakakou**, I.K. Valavanis, N.A. Mouravliansky, A. Nikita, K.S. Nikita, "DIAGNOSIS: A Telematics Enabled System for Medical Image Archiving, Management and Diagnosis Assistance," *IEEE Transactions on Instrumentation and Measurement*, vol. 58, no. 7, pp. 2113-2120, 2009. (IF: 1.214, Ranking: 0.6).

Book contributions

1. **S.G. Mougiakakou**, E. Daskalaki, P. Diem, "Adaptive Algorithms for Personalized Diabetes Treatment," in *Data-driven Modeling for Diagnosis and Treatment of Diabetes*, Springer Verlag, 2013. (In press).
2. **S.G. Mougiakakou**, I.K. Valavanis, K. S. Nikita, "Diagnostic Support Systems and Computational Intelligence: Computerized Diagnosis of Hepatic Lesions, *Handbook of Research on Advanced Techniques in Diagnostic Imaging and Biomedical Applications*, IDEA Group Inc, pp. 60-75, 2009.
3. **S.G. Mougiakakou**, A. Prountzou, D. Iliopoulou, K.S. Nikita, A. Vazeou, C.S. Bartsocas, "Simulation of Glucose – Insulin Metabolism for Children with Type 1 Diabetes using Neural Networks," *Encyclopaedia of Healthcare Information Systems*, IDEA Group Inc, pp. 754 -762, 2008.

Other pertinent publications

1. E. Daskalaki, P. Diem, **S.G. Mougiakakou**, "Personalized Tuning of a Reinforcement Learning Control Algorithm for Glucose Regulation," *IEEE Engineering in Medicine and Biology Conference 2013 (EMBC'13)*, IEEE, Osaka, Japan, July 2013.
2. E. Daskalaki, L. Scarnato, P. Diem, **S.G. Mougiakakou**, "Preliminary Results of a Novel Approach for Glucose Regulation using an Actor–Critic Learning based Controller," *Annual UK Conference on Control Engineering (CONTROL 2010)*, Coventry, UK, September 2010.
3. I. Kouris, C. Tsirmpas, **S.G. Mougiakakou**, D. Iliopoulou, D. Koutsouris, "E-Health towards Ecumenical Framework for Personalized Medicine via Decision Support System," *32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Buenos Aires, Argentina, August 2010.
4. **S. G. Mougiakakou**, I. K. Valavanis, G. Karkalis, S. Marinos, K. A. Grimaldi, K. S. Nikita, "An Integrated Web-based Platform for the Provision of Personalized Advices in High Risk Persons for CVD," *International Special Topic Conference on Information Technology in Biomedicine (ITAB2009)*, Cyprus, November, 2009.
5. **S. G. Mougiakakou**, I. Kouris, D. Iliopoulou, A. Vazeou, D. Koutsouris, "Mobile Technology to Empower People with Diabetes Mellitus: Design and Development of a Mobile Application," *International Special Topic Conference on Information Technology in Biomedicine (ITAB2009)*, Cyprus, November, 2009.
6. I. K. Valavanis, **S. G. Mougiakakou**, S. Marinos, G. Karkalis, K. A. Grimaldi, R. Gill, K. S. Nikita, "Gene – Nutrition Interactions in the Onset of Obesity as Cardiovascular Disease Risk Factor based on a Computational Intelligence Method," *8th IEEE Bioinformatics and Bioengineering Conference (BIBE 2008)*, October 8-10, 2008, Athens, Greece.
7. I. Valavanis, **S.G. Mougiakakou**, K. Grimaldi, K.S. Nikita, "Analysis of Postprandial Lipemia as a Cardiovascular Disease Risk Factor using Genetic and Clinical Information: An Artificial Neural Network Perspective," *Engineering in Medicine and Biology Conference 2008 (EMBC'08)*, IEEE, Vancouver, Canada, August 2008.
8. C.S. Pattichis, E.C. Kyriacou, M.S. Pattichis, A. Panayides, **S.G. Mougiakakou**, A. Pitsillides and C.N. Schizas, "A Brief Overview of m-Health e-Emergency Systems," *International Special Topic Conference on Information Technology in Biomedicine (ITAB2007)*, Tokyo, Japan, November, 2007.
9. K. Zarkogianni, **S.G. Mougiakakou**, A. Prountzou, K.S. Nikita, A. Vazeou, C.S. Bartsocas, "An Insulin Infusion Advisory System for Type 1 Diabetes Patients based on Non-Linear Model Predictive Control Methods," *Engineering in Medicine and Biology Conference 2007 (EMBC'07)*, IEEE, Lyon, France, August 2007.
10. M. Skevofilakas, **S.G. Mougiakakou**, K. Zarkogianni, E. Aslanoglou, S. A. Pavlopoulos, K.S. Nikita, A. Vazeou, C.S. Bartsocas, "A Communication and Information Technology Infrastructure for Real Time Monitoring and Management of Type 1 Diabetes Patients," *Engineering in Medicine and Biology Conference 2007 (EMBC'07)*, IEEE, Lyon, France, August 2007.