CURRICULUM VITAE

Konstantinos Mitsakakis (PhD, MSc)

Personal information

Marital status	Single
Military status	Jun.2010 - Jun.2011: Serving the Hellenic Air Force (duty: assistant meteorologist)

Contact information

Address	35 Varnis Street, GR-71305, Heraklion Crete, Greece Ferdinand-Weiss Str. 54, D-79106, Freiburg, Germany
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EDUCATION / RESEARCH

Sep.2012-Aug.2015	**Research Scientist**, HSG-IMIT & Department of Microsystems Engineering (IMTEK), University of Freiburg, Germany
Sep.2011-Aug.2012	**Humboldt Research Fellow**, IMTEK, University of Freiburg, Germany
Feb.2006-Dec.2009	**PhD in Biosensors' Technology**, Department of Materials Science & Technology, University of Crete; and Institute of Molecular Biology & Biotechnology (IMBB) - Foundation for Research & Technology Hellas (FORTH), Greece
Sep.2003-Dec.2005	**MSc Nanosciences & Nanotechnologies**, Aristotle University of Thessaloniki; Laboratory for Thin Films, Nanosystems & Nanometrology (LTFN), Greece. Grade: 9.0 / 10 (1^{st} in admission)
Oct.1999-Jun.2003	**BSc in Physics**, University of Crete. Grade: 8.88 / 10 (2^{nd} in graduation)
Jun.1999	**High School Graduation**, Grade: 19 $^{7}/_{10}$ out of 20

DISSERTATIONS

2009	**Doctoral dissertation**: "Development of a multi-analyte acoustic biosensing platform for clinical diagnostics"
2005	**MSc thesis:** "Study of SPM probe interaction with materials' surface; imaging and nanolithography of soft materials"

PUBLICATIONS

1. S. K. Vashist, A. G. Venkatesh, K. Mitsakakis, G. Czilwik, G. Roth, F. von Stetten, R. Zengerle, "Nanotechnology-based biosensors and diagnostics: technology push versus industrial/healthcare requirements", *submitted*
2. K. Mitsakakis, S. Sekula-Neuner, S. Lenhert, H. Fuchs, E. Gizeli, "Convergence of Dip-pen nanolithography and acoustic biosensors towards a rapid-analysis multi-sample microsystem", ***Analyst***, 137 (2012) 3076-3082
3. K. Mitsakakis, E. Gizeli, "Detection of multiple cardiac markers with an integrated acoustic platform for cardiovascular risk assessment", ***Anal. Chim. Acta***, 699 (2011) 1-5
4. K. Mitsakakis, E. Gizeli, "Multi-sample acoustic biosensing microsystem for protein interaction analysis", ***Biosens. Bioelectron.***, 26 (2011) 4579-4584
5. G. Papadakis, A. Tsortos, K. Mitsakakis, E. Gizeli, "Characterization of DNA-Hv1 histone interactions; discrimination of DNA size and shape", ***FEBS Lett.***, 584 (2010) 935-940
6. K. Mitsakakis, A. Tsortos, J. Kondoh, E. Gizeli, "Parametric study of SH-SAW device response to various types of surface perturbations", ***Sens. Actuat. B-Chem.***, 138 (2009) 408-416
7. K. Mitsakakis, A. Tserepi, E. Gizeli, "SAW device integrated with microfluidics for array-type biosensing", ***Microelectron. Eng.***, 86 (2009) 1416-1418
8. A. Tsortos/G. Papadakis, K. Mitsakakis, K.A. Melzak, E. Gizeli, "Quantitative determination of size and shape of surface-bound DNA using an acoustic wave sensor", ***Biophys. J.***, 94 (2008) 2706-2715
9. K. Mitsakakis, A. Tserepi, E. Gizeli, "Integration of microfluidics with a Love wave sensor for the fabrication of a multi-sample analytical microdevice", ***J. Microelectromech. Syst.***, 17 (2008) 1010-1019
10. S. Kassavetis, K. Mitsakakis, S. Logothetidis, "Nanoscale patterning and deformation of soft matter by scanning probe microscopy", ***Mater. Sci. Eng. C***, 27 (2007) 1456-1460
11. K. Mitsakakis, S. Lousinian, S. Logothetidis, "Early stages of human plasma protein adsorption on biocompatible thin films probed by Atomic Force Microscope", ***Biomol. Eng.***, 24 (2007) 119-124

PARTICIPATION IN CONFERENCES

1. **NanoBioEurope, Cork, Ireland (2011);** "Multi-analyte acoustic microsystem for biomedical analysis: application in cardiac markers detection" (oral)
   K. Mitsakakis, E. Gizeli
2. **Conference/Meeting "Highlights in Microtechnology", Neuchatel, Switzerland (2009);** "Integrated SAW biosensors for multi-sample analysis" (oral)
   K. Mitsakakis, E. Gizeli
3. **34th International Conference on Micro- and Nano-Engineering (MNE), Athens, Greece (2008);** "SAW device integrated with microfluidics for array-type biosensing" (poster)
   K. Mitsakakis, A. Tserepi, E. Gizeli
4. **IEEE International Frequency Control Symposium, Honolulu HI, USA (2008);** "An integrated microfluidics-on-SAW ("μF-on-SAW") setup for multi-sample sensing" (oral)
   K. Mitsakakis, A. Tserepi, E. Gizeli

5. **33rd International Conference on Micro- and Nano-Engineering, Copenhagen, Denmark (2007);** "Integration of microfluidics on Surface Acoustic Wave biosensors for multi-sensing purposes" (poster)
   K. Mitsakakis, A. Tserepi, M.E. Vlahopoulou, E. Gizeli
6. **IEEE International Frequency Control Symposium, Miami FL, USA (2006);** "Sensing the Shape of Biomolecules using Love waves" (oral)
   K. Mitsakakis, G. Papadakis, E. Gizeli
7. **European Materials Research Society (E-MRS), Nice, France (2006);** "Nanoscale patterning and deformation of soft matter by Scanning Probe Microscopy" (poster)
   S. Kassavetis, K. Mitsakakis, S. Lousinian, S. Logothetidis
8. **Instrumented Indentation Testing in Materials Research and Development, Heraklion Crete, Greece (2005);** "Nanoindentation lithography on the surface of soft thin films and polymers" (poster)
   K. Mitsakakis, S. Kassavetis, S. Logothetidis
9. **European Conference on Biomaterials, Sorrento, Italy (2005);** "Haemocompatibility of biocompatible thin films and blood plasma protein adsorption studies by Spectroscopic Ellipsometry and Atomic Force Microscopy" (poster)
   S. Logothetidis, S. Lousinian, K. Mitsakakis, A. Laskarakis, M. Gioti
10. **XXI National Conference on Solid State Physics and Materials Science, Nicosia, Cyprus (2005);**
    (i) "Study of early stages of adsorption of human plasma proteins on nanostructured amorphous hydrogenated carbon thin films" (oral)
    S. Lousinian, K. Mitsakakis, S. Logothetidis
    (ii) "Nanolithography on thin carbon films and polymeric membranes with Scanning Probe Microscope" (poster)
    K. Mitsakakis, S. Kassavetis, S. Logothetidis
11. **European Materials Research Society (E-MRS), Strasbourg, France (2005);** "Early stages of human plasma protein adsorption on biocompatible thin films probed by Atomic Force Microscope" (oral)
    K. Mitsakakis, S. Lousinian, S. Logothetidis

RESEARCH EXPERIENCE

2011-present	Lab-on-a-Chip, microfabrication (hot embossing, thermoforming), centrifugal microfluidics
2006-2010 (PhD)	Microtechnology, clean room processing, microfluidics (soft lithography), (bio)sensors, Surface Acoustic Wave devices, Quartz Crystal Microbalance, Surface Plasmon Resonance, diagnostics, cardiac markers, protein interactions, kinetics analysis, Dip-Pen Nanolithography (DPN)
2003-2005 (MSc)	Nanotechnology, thin film and surface technology, scanning probe microscopy, nanoindentation, AFM nanolithography, protein adsorption

SEMINARS / TRAINING

2-13.Jul.2007	Summer school on "**Highlights in Microtechnology**", F.S.R.M., Neuchâtel, Switzerland

1.Nov.2006-31.Jan.2007	**AutoCAD** seminars at the certified training center of Foundation for Research & Technology Hellas (FORTH), Heraklion, Greece
26.Jun.2006-7.Jul.2006	Summer school on "**Methods in Micro-Nanotechnology and Nanobiotechnology**", N.C.S.R. "Demokritos", Athens, Greece

SCHOLARSHIPS

Sep.2011-Aug.2012	**Alexander von Humboldt Foundation** research fellowship, University of Freiburg, Department of Microsystems Engineering (IMTEK), Germany
Jun.-Jul.2009	**German Academic Exchange Service DAAD** for short term research visit in Institute of Nanotechnology, Karlsruhe Institute of Technology, Germany
Oct.2008-Dec.2009	PhD, from Public Benefit Foundation "**Alexander S. Onassis**"
Oct.2006-Oct.2008	PhD, from Public Welfare Foundation "**Propondis**"
Oct.2004-Oct.2005	MSc, from Public Benefit Foundation "**Alexander S. Onassis**"
2003-2004	MSc, from **Aristotle University of Thessaloniki** due to 1st admission rank in the Postgraduate Course
2000-2002	BSc, from the "**State Scholarships Foundation (IKY)**" for academic excellence

TEACHING EXPERIENCE

2006-2009	Laboratory Assistant, Soft materials (polymer characterization), Materials Science & Technology Department, University of Crete
2003	Laboratory Assistant, Physics (mechanics), Physics Department, University of Crete

FOREIGN LANGUAGES

English	Excellent (near-native fluency) Certificate of Proficiency in English (**Cambridge**) Grade: B (1996) Certificate of Proficiency in English (**Michigan**) (1997)
German	Good Zertifikat Grundstufe (**Palso**) Grade: Gut (1996) Zertifikat (**Goethe-Institut**) Grade: Gut (1996)

COMPUTER SKILLS

- Programming Languages: Fortran
- Operating Systems: Windows 98/2000/XP/Vista
- Software: MS Office, MS Project, Mathematica, Adobe Photoshop, AutoCAD