

# László DEMKÓ, Ph.D.

researcher

ETZ Zurich, Laboratory of Biosensors and Bioelectronics

## CURRICULUM VITAE

*phone:* +41 44 632 48 24

*e-mail:* ldemko@dept.phy.bme.hu

*work address:*

ETH Zurich, Institute for Biomedical Engineering

Laboratory of Biosensors and Bioelectronics

ETZ/F83, Gloriastrasse 35, 8092 Zurich, Switzerland

### Nationality

Hungarian

### Education

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| 2010 | Ph.D., physics (“Magnetic phase diagram of correlated <i>d</i> -electron systems”), Budapest University of Technology and Economics (BUTE), Faculty of Natural Sciences, Department of Physics |
| 2002 | M.Sc., engineering physics (“Thermoelectric properties of low-dimensional organic conductors”), BUTE, Faculty of Natural Sciences  |

### Experience

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|-----------|---|
| 2012-     | researcher,<br>Laboratory of Biosensors and Bioelectronics,<br>Institute for Biomedical Engineering, ETH Zurich               |
| 2010-2012 | researcher,<br>Magnetoelectric Spectroscopy Group, ERATO-MF, JST,<br>Department of Applied Physics, The University of Tokyo   |
| 2009-2010 | research associate,<br>Eötvös Loránd University, Institute of Chemistry   |
| 2007-2010 | research associate,<br>Electron Transport Research Group of the Hungarian Academy of<br>Sciences, BUTE, Department of Physics |
| 2005-2009 | research associate,<br>BUTE, Department of Physics  |

### Main research interest and topics

- building and interfacing neural networks, stem cell differentiation
- biosensors, nanosensing of DNA/RNA molecules
- molecular modeling, molecular dynamics simulation, research informatics
- experimental solid state physics; techniques involving low temperature, high magnetic field, and high hydrostatic pressure; development of novel measurement methods and unique setups
- spectroscopy, magneto-optical study of pressure and magnetic field induced phase transitions in correlated electron systems

## Language skills

Hungarian (native), English (fluent), German (basic), Japanese (basic)

## Research visits

2012, 2 weeks	Institute for Physics, University of Augsburg, Augsburg, Germany
2010, 1 month	Department of Applied Physics, University of Tokyo, Tokyo, Japan
2005, 1 month	Correlated Electron Research Center (AIST), Tsukuba, Japan
2003, 1 month	Philipps-Universität Marburg, Marburg, Germany
2003, 2 weeks	Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland
2002, 6 weeks	Philipps-Universität Marburg, Marburg, Germany
2001, 1 month	University of California at Los Angeles, Los Angeles, USA

## Fellowships

2001/2002	Fellowship of the Republic of Hungary
2001/2002	Fellowship of the University (BUTE)
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## IT experience and skills

- 6 years of experience in software and web development
- 7 years of experience in system administration (Linux, Windows)
- programming languages and tools:
  - MATLAB (advanced), C/C++/C# (beginner), fortran (beginner)
  - php/html/javascript (advanced), java (beginner)
  - shell scripting, version control (svn), bug-tracking (trac, mantis), virtualization (VirtualBox, Xen)

## Other skills

- teaching experience (lectures, tutor/laboratory classes for B.Sc and M.Sc. students)
- team working experience (participation in international research projects, software and web development projects)
- organizational/administrative skills (writing research proposals, research project reports, software documentation)