

Name, first name: **DOBAY, Akos**
Nationality: Swiss
Current employment: Lecturer (Wissenschaftliche Mitarbeiter mit Lehraufträgen)
Employer: University of Zurich
Zurich Institute of Forensic Medicine (IRM)
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DEGREES / HIGHER EDUCATION

University of Lausanne (UNIL), **PhD**, 1998 - 2002. PhD supervisor: **Jacques Dubochet** (Nobel laureate in Chemistry 2017). Department of Biology, Laboratory of Ultrastructural Analysis (LAU).

University of Lausanne (UNIL), **MSc**, 1996 - 1997. MSc supervisor: **Jean-Jacques Loeffel** (MSc thesis under the 1945 Nobel laureate in Physics Wolfgang Pauli). Department of Physics, Institute of Theoretical Physics (ITP).

University of Lausanne (UNIL), 1992 - 1996. Department of Physics, focus area: quantum physics, quantum field theories, particle physics.

EMPLOYMENT / PROFESSIONAL CAREER

Lecturer, University of Zurich (UZH), 2015 - present.

Postdoctoral researcher, University of Zurich (UZH), 2010 - 2017.

Founding director, StudioArkhai UG (Ltd.), Berlin, 2009 - 2013.

Postdoctoral researcher, Ludwig-Maximilians-Universität (LMU), Munich, 2006 - 2009.

Postdoctoral researcher, Max-Delbrück-Center (MDC), Berlin, 2006.

SNF postdoctoral fellow, Ludwig-Maximilians-Universität (LMU), Munich, 2005 - 2006.

Guest researcher, University of Charlotte North Carolina (UNCC), Charlotte, 2004.

Guest researcher, University of Santa Barbara (UCSB), Santa Barbara, 2003.

Oberassistent (assistant professor), University of Lausanne (UNIL), 2002 - 2004.

PhD candidate, University of Lausanne (UNIL), 1998 - 2002.

APPROVED RESEARCH PROJECTS

Emma Louise Kessler Foundation (CH), Deep Learning for automated Analysis of Pathological Features for forensic Investigations, 2018 - 2019

Wolfermann-Nägeli Foundation (CH), Social selection in wild house mice, 2015 - 2017.

RPH-Promotor Foundation (LI), Social selection in wild house mice, 2014.

Start-up Grant of the German government (D), StudioArkhai UG (Ltd.), 2010.

Bavarian-French Higher Education Grant (D), Implementation and development of noise reduction for live cell images, 2009.

SUPERVISION OF SCIENTISTS (SINCE 2013)

Ongoing: **Samson Apostolakis**, Master (UZH) – **Norio Zimmermann**, Master (UZH) – **Astrid Kurmann**, Master (UZH) – **Philippe Handschin**, Master (UZH).

Already promoted: **Larissa Schuh**, Master (UZH), 2019/2020 – **Brian Kümmel Nielsen**, Master (UZH), 2019 – **Dominic Gaspard**, Internship program (UZH), 2018 – **Samuel Gunz**, Internship program (UZH), 2018 – **Svenja Erne**, Master (UZH), 2018 – **Tobias Wechsler**, Master (UZH), 2016/2017, **Alejandra Manjarrez-Casas**, Research Assistant (UZH), 2013/2014.

FELLOWSHIP

SNSF Grant for advanced researchers, The function of topology on DNA with transcription factors and in knotted macromolecules, 2005 - 2006.

TEACHING ACTIVITIES / ACADEMIC DUTIES

2014 - present

Semester Lecture Series (3 hours per week) for BA, MS and PhD students, UZH, including weekly assignments and programming sessions. In addition, each student has to complete a personal semester project. Since 2014 over 80 projects have been completed.

Title: **Interdisciplinary Research Methods in Computational Biology** (module name: **BIO 394**)

2017

Block course and practical training, UZH, in collaboration with Prof. B. König (responsible for the course)

Title: **Animal Behaviour** (module name: **BIO 324**), **Research Internship in Animal Behaviour** (module name: **BIO 358**)

2012 - 2013

Semester Lecture Series for BA and MSc students, UZH, selected topics in numerical simulations and mathematical modeling, in collaboration with Prof. H. Bagheri (responsible for the course). System administrator in the group of Prof. H. Bagheri.

2006 - 2009

Co-supervision of Master and PhD student projects, LMU, in collaboration with Prof. H. Leonhardt and Dr. L. Shermelleh. Semester practicals for students in Biology including courses in mathematical modeling and biostatistics, LMU.

1998 - 2005

System administrator, UNIL / LAU. Co-supervision of student semester projects, UNIL / EPFL. Biophysics training for 3rd and 4th year students in Biology, UNIL / EPFL, in collaboration with Prof. J. Dubochet.

INDUSTRIAL COLLABORATION

2019

Simple prototype using machine learning techniques to automate segmentation of volumetric data for virtual reality applications (client: InnoSuisse, University of Applied Sciences and Arts Northwestern Switzerland)

2015 – 2016

Software to detect imperfections in pre and post polished sapphire watch covers, ingots and non-polished wafers. The software visualise and analyse volume defects in raw sapphire (client: Scientific Visual SA)

2011 – 2012

HPC stress test on SGI UV Series. Large simulation campaign using a custom-made open source platform called GC3Pie: a Python package for executing computational workflows (client: University of Zurich, Silicon Graphics Inc.)

1999 – 2005

Web service with front and back ends including SMS and MMS communications. The customer was able to send and receive request on her/his mobile phone (client: Symbiotic Yi-King)