

# SMILEN DIMITROV



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## EDUCATION

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### Ph.D. in Electronics (Media Technology)

#### Aalborg University

📅 2007 – 2015

📍 Copenhagen, Denmark

- Thesis: “Towards an open digital audio workstation for live performance: the development of an open soundcard”, <http://dx.doi.org/10.5278/vbn.phd.engsci.00028> (see also <http://smilen.net/phd>)
- Open-source implementations of soundcard hardware, Linux soundcard driver development in C, and development of auxiliary tools in Python, Perl

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### M.Sc. in Media Technology

#### Aalborg University

📅 2004 – 2006

📍 Copenhagen, Denmark

- Thesis: “DMX Director” - Architecture of a 3D light-programming application, in a multi-user Internet environment”
- Development of 3D web user front-end in Virtools (light events sequencer); administration front-end in ASP .NET C# and Macromedia Flash (ActionScript); database in MySQL; real-time control of stage light via DMX. Internship @ Brother, Brother & Sons ApS, Copenhagen.

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### Multimedia Designer

#### Aarhus Technical College

📅 2002 – 2004

📍 Århus, Denmark

- Final project: software for real-time 3D visualization of sensor-equipped machine parts in Macromedia Director (Shockwave3D) via RS-232 serial. Internship @ Brother, Brother & Sons ApS, Copenhagen.

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### B.Sc. in Electronics & Telecommunications

#### Faculty of Electrotechnical engineering, University “Sts. Cyril & Methodius”

📅 1995 – 2001

📍 Skopje, Republic of Macedonia

- Final report discussed Trellis coding

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### High School Diploma

#### “Bonny Eagle” H. S.

📅 1994 – 1995

📍 Standish, Maine, United States of America

### High School

#### S.U. “Orce Nikolov”

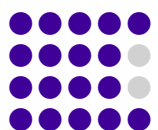
📅 1992 – 1994

📍 Skopje, Republic of Macedonia

## LANGUAGES

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English (Fluent, university lecturer)  
Danish (Fluent, Dansk 3 level)  
Serbo-croatian (Fluent)  
Macedonian (Native)



## PUBLICATIONS

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For full list of publications, please see:

[http://vbn.aau.dk/en/persons/smilen-dimitrov\(06cfcb9e-daa2-48e1-88da-c8a46ba8601a\)/publications.html](http://vbn.aau.dk/en/persons/smilen-dimitrov(06cfcb9e-daa2-48e1-88da-c8a46ba8601a)/publications.html)

# SKILLS

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- Software/programming: C (including embedded/microcontroller), C++, Python, Perl, PHP, HTML/CSS/JavaScript, Pure Data,  $\LaTeX$  (book layout experience); can adapt to working with various SDKs and operating systems (Linux, Windows, MacOS/OSX, Android)
- Design and implementation of prototype-level (2-sided) printed circuit board electronics hardware
- Working knowledge of graphics (Inkscape), audio (Audacity) and office (Libre/OpenOffice) software packages

# WORK EXPERIENCE

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## Lecturer & Teaching assistant

### Aalborg University

📅 2005-2018

📍 Copenhagen, Denmark

- Lecturer for introductory electronics courses (Sensors Technology and Physical Interface Design) for Medialogy undergraduate program
- Teaching assistant for several other courses (Statistics, Sound Processing), technical supervisor for student projects

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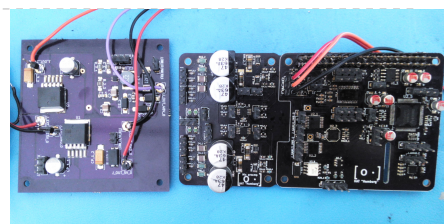
## Hardware/software developer

### BlackBoxEfx

📅 Nov 2017 – May 2018

📍 Copenhagen, Denmark

- Design and build of 2-sided SMD PCB for a Raspberry Pi 3 add-on soundcard
- Linux device tree/drivers for the add-on, and user-space test software



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## Front-end developer

### Brother, Brother & Sons ApS

📅 Feb 2016 – Oct 2016

📍 Copenhagen, Denmark

- Basic Linux server setup and administration
- Development of API and web-scraping client for the <https://www.e-economic.dk> platform, utilizing PHP, HTML, CSS and JavaScript (CasperJS and SlimierJS)

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## Mobile developer

### citysounds.dk

📅 Oct 2015 – Sep 2016

📍 Copenhagen, Denmark

- Development of Android mobile app prototype with real-time sound processing based on location data; implemented in C++ using openFrameworks with several libraries (e.g. libPD, libRocket) as add-ons; PHP for server back-end

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## Application developer

### Brother, Brother & Sons ApS

📅 2007

📍 Copenhagen, Denmark

- Application for interactive artwork by Camille Norment at AMFI Moss, Norway ([http://www.norment.net/temp/studio/art/moss/mossProject\\_pressRelease.pdf](http://www.norment.net/temp/studio/art/moss/mossProject_pressRelease.pdf))
- Front-end application for Windows in C#, receiving real-time GPS location data via serial RS-232, and allowing of user-defined mapping, and control of RGB tiles via DMX

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## Application developer

### Brother, Brother & Sons ApS

📅 2004

📍 Copenhagen, Denmark

- Application for serial manipulation of Barco SLM312 video projector
- Front-end for Windows in Macromedia Director MX; C coding for Atmel AtMega128 microprocessor