

## Curriculum Vitae

### SØREN KRARUP OLESEN

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M.Sc.E.E., Ph.D.  
Experienced programmer and lecturer  
Specialist in signal processing and acoustics

Married to Monica, 13 years

Home page: [raptus.dk](http://raptus.dk)



#### PROFILE

I offer programming of small and larger systems including network and preferably in connection with real-time requirements. As preparation I do tests on focus groups to reveal potential needs before the agile development continues in the next iteration.

Although being a backend guy, I do have a weakness for UI design due to previous teaching in psychology engineering. Also, I slip signal processing into the programming whenever possible.

A considerable amount of thoroughness and excitement characterizes my work. I get many new ideas which call for further reading and the ability to learn new disciplines—both in terms of hardware and software.

I am very fond of teamwork where requests from colleagues flow in various directions. It is simply a cosy and at the same time gripping process.

#### WORK AND EDUCATION

2019, Oct/Nov Guest lecturer, University College Nordjylland (UCN)

2005-2019 Associate professor, Aalborg University (AAU)

2005 Postgraduate teacher training diploma

2001 Assistant professor

2001 Ph.D. entitled "Acoustical Room Simulation and The Influence of Rooms in Binaural Auralization"

1997 Laboratory engineer and research assistant at AAU

1994 Ph.D. fellow, co-financed by Danish STVF

1992 Introductory grant from AAU

1991 M.Sc.E.E., system construction, acoustics from AAU. Mark: 11 (~A)

1985 High school, math/physics branch. Dronninglund Gymnasium, Denmark

#### DEVELOPED SOFTWARE

2017 The Android app DigitSpanTest, used for testing subjects' (typically students') memory span of spoken numbers. See [play.google.com/store/apps/details?id=dk.raptus.digitspantest](https://play.google.com/store/apps/details?id=dk.raptus.digitspantest)

2014-2015 Development (C++) of Low-Frequency Sound Meter for noise exposed citizens. See (in Danish) [ing.dk/artikel/aalborg-forskere-udvikler-lavfrekvent-stoejmaaler...](http://ing.dk/artikel/aalborg-forskere-udvikler-lavfrekvent-stoejmaaler...)

#### COMPETENCES

- Programming in C++, C# and Java on
  - Linux and Windows
  - Arduino and RaspberryPi
  - Android
- Signal processing, analog and digital
- Acoustics
- Design of analog and digital circuits
- Teaching and supervision of the above mentioned
- HTML5, CSS, JavaScript and PHP
- Design, programming and performing subjective experiments

#### IT TOOLS

- Word, LibreOffice etc.
- Qt Creator and Designer
- Eclipse and IntelliJ IDEA
- Android Studio
- Processing (novice Java variant)
- Analysis w. Python, Octave/Matlab
- MonoDevelop
- Console (CLI)

#### LANGUAGES

- Danish, native
- English, fluent

#### PUBLICATIONS

- [raptus.dk/publications.html](http://raptus.dk/publications.html)

2012 Diktrin, used for testing and placing learners at reading/writing levels. See (in Danish) [raptus.dk/diktrin/](http://raptus.dk/diktrin/)

plus a wide range of software developed during my work at AAU and in the spare time

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### COURSES HELD AT AAU

“Data Acquisition”, Math-Technology, 2<sup>nd</sup> semester

“Procedural Programming”, Psychology Engineering (PDP), 3<sup>rd</sup> semester

“Design af Embedded Systems”, Electronics and IT (EIT), 4<sup>th</sup> semester and Robotics, 6<sup>th</sup> semester

“Electronics and Measuring Techniques”, PDP, 5<sup>th</sup> semester

“Signal Processing”, EIT, 5<sup>th</sup> semester

“Fundamentals of Acoustics” (transducers incl. mechanical physics),

Master Programme in Acoustics, 7<sup>th</sup> semester

Previous (now obsolete) courses in “Architectural Acoustics”,

“Microcomputer Software”, “Programming in C” and “Auralization and Virtual Reality Sound”

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### OTHER ACTIVITIES AT AAU

2009-2013 Co-I on AAU's part of BEAMING, EU/FP7, see

[cordis.europa.eu/project/rcn/93789/factsheet/en](http://cordis.europa.eu/project/rcn/93789/factsheet/en)

A project involving augmented and virtual reality audio.

2007-2008 Member of the institute board

Until 2019 Semester coordinator of

Engineering Psychology, 3<sup>rd</sup> semester (1 yr) and

Engineering Psychology, 5<sup>th</sup> semester (9 yrs)

In the 1990s Projects involving especially 3D/spatial audio, head-tracking, head-and-torso simulators etc.

Supervision of 150+ student projects

### PERSONAL

- Thorough (gcc -pedantic ...)
- Structured
- Inventive
- Curious
- Humorous
- Have broad interests

### SPARE TIME

- Mainly programming, also in relation to teaching and testing tools.
- Amateur radio (HAM), callsigns OU0U and OZ1HNQ. Licensed in 1981 + telegraph diploma in 1982.
- Indexing of Disney comics, see [inducks.org](http://inducks.org) and [en.wikipedia.org/...](http://en.wikipedia.org/...)
- Weed(!), see (in Danish) [ukrudt.info](http://ukrudt.info)

and many other things related to natural science.