

Contact Information

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Location: Copenhagen Area



Highly Skilled Engineer and Physicist

My core competences are within precision mechanics, hardware, [design for EMC](#), software, test & validation and high-quality technical/regulatory documentation.

My educational background is Bachelor of Science in Electronics Engineering, Control Theory and Computer Science, Master of Science in Physics, and NLP Practitioner & Certified Coach.

As a person I am curious, inventive and I thrive with technically complex challenges that require out-of-the-box thinking. I am proactive and a conceptual thinker with strong analytical and communication skills. I like to acquire new knowledge and use/share it, and I appreciate sparring with skilled colleagues. I am quality conscious, and I emphasize "doing it right the first time". I also believe that sense of humor enhances the communication between people.

Professional Experience

- 2022 – Senior Engineer, R&D @ FORCE Technology; Photonics, Light & Optics
- Responsible for design of mechanical components for retroflectometers.
 - Feasibility study – measurement of the height (thickness) of road stripes using lasers.
 - EMC troubleshooting.
- 2020 – 2021 Freelance R&D Engineer and Technical Writer @ eriknielsen.eu
- Embedded systems – mechanics, hardware and firmware.
 - High-quality technical/regulatory documentation.
- 2015 – 2019 Production Engineer @ Radiometer Medical ApS
- I wrote requirements specifications, test specifications and developed data acquisition software for automated test systems for medical devices. The software was linking to an SQL database.
 - I wrote software validation protocols.
 - I wrote technical/regulatory documentation.
 - I handled production issues at the EMS.
- 2011 – 2015 Senior R&D Engineer @ LITHIUM BALANCE A/S
- I developed highly EMI and environmental robust electronics hardware for embedded systems to control Li-Ion battery packs ("[Aarhusiansk torturkammer](#)").
 - I handled production start-up at the EMS'.
 - I developed production test equipment.
- 2010 – 2011 IT Consultant @ DMI – Research Department
- I parallelized (using MPI) and ported a large Fortran program, used for simulation of radio occultation, from a Windows PC to a Cray supercomputer running Linux.
 - I validated the parallelized program executing on 1200 nodes.
- 2004 – 2009 Head of Technical Development @ DTU Physics
- I developed experimental research equipment for research within material properties at the nanoscale – precision mechanics, electronics hardware and software.
 - I was manager for the mechanics workshop and the electronics workshop.
- 2002 – 2003 Process Development Engineer @ SonionMEMS A/S
- I developed precision mechanical (spark machined) vacuum pick-up tools for flip chip die bonding of silicon microphones.
 - I developed mechanical production tools for dicing of silicon wafers.
- 1999 – 2001 Software Engineer @ Intel Denmark ApS
- I developed firmware (C) for embedded systems – routers and switches.

- 1997 – 1998 R&D Engineer @ Grundfos A/S – Grundfos Research
- I developed a mathematical model for thick film resistors and Manganin resistors on ceramic substrates. The resistors were used for current measurements in motor controllers, and the purpose was to study the measurement errors due to temperature.
Using the mathematical model, I developed software for analysis and design of thick film resistors and Manganin resistors. The mathematical model and the software were both validated by measurements on physical devices.
 - I participated in the development, environmental testing and production maturation of an electronic differential pressure sensor utilizing MEMS technology.
- 1991 – 1994 R&D Engineer @ PBI-Development A/S
- I developed embedded hardware for controlling a copper-vapor laser used for skin treatment.
 - I developed embedded hardware for controlling a handheld scanner used for skin treatment.
 - I developed embedded hardware and firmware (assembly language), for a gas analyser (O₂ and CO₂).
- 1989 – 1991 R&D Engineer @ Purup Prepress A/S
- I wrote system specifications, requirements specifications and design specifications for software that converted TIFF images into a proprietary image format and wrote them to a tape drive.
 - I developed and validated the software (C) together with an external consultant.
 - I participated in the development of embedded hardware and self-test software (C) for a laser image setter.
- 1987 – 1989 Quality Assurance Engineer @ Purup Electronics A-S
- I performed reliability predictions for electronics hardware at the PCB level.
 - I was responsible for the implementation of burn-in at the PCB level.
 - I participated in the selection and ongoing assessment of subcontractors and international OEM partners.
- 1986 – 1987 R&D Engineer @ DEVI A/S
- I developed two electronic thermostats for electrical floor heating.
 - They were approved regarding regulatory requirements in respectively Denmark and Finland.
 - I started an electronics production facility from scratch to manufacture the thermostats.

Educations

- 2009 – 2009 NLP Practitioner & Certified Coach. Pete Andersen NLP og Coaching.
1994 – 1997 Master of Science in Physics. Technical University of Denmark.
1981 – 1986 Bachelor of Science in Electronics Engineering, Control Theory and Computer Science. Engineering College of Aarhus.
1978 – 1980 Svagstrømsteknisk Værkstedsskole. Aarhus Technical School and Scanelectric ApS.

Latest Courses

- 2022 GMP for samarbejdspartnere til Life Science (Pharmakon, 1 day).
2017 PSP – Problem Solving Process (Danaher, 2 days).
2016 SQL Programming (Superusers, 3 days).
2015 Teststand 1 (National Instruments, 3 days).
2015 LabVIEW core 2 (National Instruments, 2 days).
2015 LabVIEW core 1 (National Instruments, 3 days).
2014 Noise, EMI & Signal Integrity (Richard Hartley, 2 days).
2013 The Best Ideas for Developing Better Firmware *Faster* (Jack Ganssle, 1 day).
2013 CALT – calibrated accelerated life test (Larry Edson, 1 day).
2013 Design for EMC – at the Component and PCB Level (Martin O’Hara, 1 day).
2012 PSpice Advanced (Nordcad, 2 days).
2012 PSpice Introduction (Nordcad, 1 day).
2012 OrCad/Allegro PCB Editor Introduction (Nordcad, 1 day).
2008 SolidWorks Certified Expert (Solid Design House, 17 days).

Languages

- Danish – my native language
- English – I read, write, and speak fluently
- German – I read and speak fluently

Skills

Skill	Proficient	Intermediate	Knowledge about
Operating systems			
Windows	■		
Unix / Linux			
Hardware platforms			
Microcontroller / embedded systems	■		
PC / workstation	■		
Supercomputer	■		
Programming languages			
C	■		
Assembly language	■		
SQL		■	
C++			■
Teststand		■	
LabVIEW		■	
Pascal			■
Perl		■	
Python			■
Fortran			■
MATLAB / GNU Octave			■
Development tools			
Visual Studio Code		■	
Eclipse		■	
Tortoise SVN		■	
Makefile systems		■	
3D Mechanical CAD			
SolidWorks	■		
Electronics CAD			
OrCAD Capture	■		
OrCAD CIS	■		
OrCAD PCB Designer		■	
OrCAD PSpice Designer		■	
Text processing & page layout			
Microsoft Office	■		
Libre Office / Open Office	■		
LaTeX	■		
Image manipulation			
GIMP	■		
WEB technologies			
XHTML	■		
CSS	■		
JavaScript			■
PHP			■