#### **Thomas Hardahl**

Date of birth 16<sup>th</sup> of May 1980 Fredericiagade, 32.kld. 9000 Aalborg Denmark

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## Strengths

- Great ability to assess and analyse complex problems.
- Great analytical ability in designing solutions to technical problems.
- Excellent presentation and communication skills.
- Energetic, outgoing and easily adaptable.

#### Education

#### Aalborg University, Department of Health Science and Technology

Sept. 2000 - Present

Bachelor and Master of Science in Biomedical Engineering and Informatics

GPA 9.46 (US Equivalent B+)

Aalborg, Denmark

- Majored in Medical Signals and Systems.
- Courses include: Matematics I, II, III and IV. Computer Science. Physics. Applied physics I and II. Circuit theory. Electromagnetism. Anatomy and Physiology. Internal medicine, theory and clinic. Surgery, theory and praxis. Probability Analysis. Statistics I and II. Biostatistics. Stochastic Processes I and II. Human computer interaction. Medical Image Analysis I and II. Pattern Recognition I and II. Decision Support Systems I and II. Medical Imaging Systems.
- Project works include: Medical Technology Evaluation. Basic Medical Systems Design. Biomedical Instrumentation. Acquisition, Processing and Presentation of Biological Signals. Technology in the Health Care Sector a 4 month internship at Aalborg Hospital. Advanced Medical Systems Design. Biomedical Signals. Biomedical Signals and Systems Design. For more information on these projects check out the description on <a href="https://www.hardahl.dk">www.hardahl.dk</a>.

**Oure Sports College** 

Sep. 1999 - Dec. 1999

Student at Alpine skiing, Ski-instructor Valdisere, France

#### **Brønderslev Gymnasium**

Aug. 1996 – Jun. 1999

Matematical high school graduate

GPA 8.70 (US Equivalent B)

Brønderslev, Denmark

Courses include highest level of mathematics and physics.

## **Working Experience**

#### **Aalborg University, Technology Transfer Office**

July 2004 - Present

Research Associate, Aalborg, Denmark

 Responsible for the ongoing development and validation of the invention "A system and method for analyzing ECG curvature".

Responsible for writing the technical part of the patent application.

#### **GE Healthcare, Information Technologies**

Feb. 2005 – Apr. 2005

Guest Researcher, Milwaukee, USA & Freiburg, Germany

- Employed by Aalborg University, Denmark to perform co-development with engineers from GE Healthcare Information Technologies
- Responsible for the software integration and refinement of the AALQTEC-system: "A system and method for analyzing ECG curvature".
- Located in Milwaukee, USA for 1,5 month and Freiburg, Germany for 1,5 month

Nightclub Pakhuset Jun. 1999 – Present

Manager of Bar, Løkken, Denmark

- Managed and operated 5 bars in the summer season nightclub.
- Responsible for overall sale in the bars, organizing work schedule and staff meeting.
- Part of the advertising and event-maker team.

Kvickly Aalborg Nov. 2000 – Jun. 2004

Sales assistant, Aalborg

- Spare time job as sales assistant in Kvickly supermarket.
- Responsible for fruit and green department from midday until closure.

**PN Beslag** Feb. 2000 – Jun 2000

Factory worker, Brønderslev

- Full time job as a factory worker
- Engaged in producing various fittings on a number of different punching and rivet machines

Q8 gasstation May 1998 – Sep 1999

Sales assistant, Brønderslev

- Spare time job as sales assistant at a Q8 gasstation
- Responsible for sale of gasoline and merchandise in the associated shop.

#### Kvickly Brønderslev

Oct.1995 - May 1998

Sales assistant, Brønderslev

Spare time job as service personnel and checkout operator in Kvickly supermarket.

### **Publications**

#### **Refereed contributions:**

J.J. Struijk, J. K. Kanters, M. P. Andersen, **T. Hardahl**, C. Graff, M. Christiansen, E. Toft **Classification of the long-QT syndrome based on discriminant analysis of T-wave morphology** Medical & Biological Engineering & Computing, Accepted 042406.

#### **Unrefereed contributions:**

Kanters JK, Andersen MP, T. Hardahl, C Graff, Christiansen M, Toft E, Struijk JJ. Classification Of The Long-QT Syndrome Based On T-Wave Morphology. Congress of European Cardiac Arrhythmia Society (2005) (abstract)

JJ Struijk, Kanters JK, MP Andersen, **T Hardahl**, C Graff, M Christiansen, E Toft. **Classification of the Long-QT Syndrome based on discriminant Analysis of T-wave Morphology**. Computers in Cardiology 2005; 32:511-514

#### **Invited Contributions:**

Kanters JK, C Graff, Andersen MP, T. Hardahl, Toft E, Christiansen M, Struijk JJ. LQTS Genotyping by ECG: Fact, Fiction, or Something in Between?

International Society of Computerized Electrocardiography 2006(ISCE) (abstract accepted March 2006, article submitted April 2006)

#### **Patents**

#### System and a method for analyzing ECG curvature

IPC: A61B5/0402

US2005177049 - 2005-08-11

### A system and a method for analyzing ECG curvature for Long QT Syndrome and drug influence

EC: A61B5/0452

WO2005058156 - 2005-06-30

#### A system and a method for analyzing an ECG signal

EC: A61B5/0452 IPC: A61B5/0402; G06F17/00

EP1543770 - 2005-06-22

## **Awards**

**Venture Cup 2004** – Winner of Phase I of a national business plan competition for the development and presentation of the system "AALQTEC" for diagnosis of congenital and acquired Long QT Syndrome.

**BioMedCommunity 2004** – Winner of a competition on application-oriented biomedical technology for the development and presentation of the system "AALQTEC" for diagnosis of congenital and acquired Long QT Syndrome.

**Innovationscup.dk 2004** – Winner of engineering competition for young Danish engineers for developing a system for diagnosis of Normal Pressure Hydrocephalus.

**Innovationscup.dk 2003** – Winner of engineering competition for young Danish engineers for developing an eye-controlled computer mouse.

## **Knowledge and Skills**

**Languages:** Fluent – Danish, English; Good Working Knowledge – German.

IT Proficiency: Access, Excel, Microsoft Word, PowerPoint, Microsoft Project, Frontpage, Dreamweaver, Internet data mining, SPSS statistical software, Programming in Matlab, Turbo Pascal, C, Java, Labview and Visual Basic etc., Microsoft Visual Studio .NET

### **Extra-Curricular Activities**

#### International Society of Computerized Electrocardiography (ISCE)

April 2006

Attendee, Niagara-on-the-lake, Canada

Jørgen Kanters from our research group was invited as speaker on ISCE 2006, to present our research work. I also attended the ISCE meeting with the rest of the research group, in order to hear about the newest research in the LQT field.

## Patents and IPR, Kickstart. Aalborg University

April 2006

Guest Speaker, Aalborg University, Denmark

"Patents and IPR: AALQTEC from idea to patent and beyond". Course for students at Aalborg University, about patents and IPR. Spoke on the process of taking a patent as a student and what consideration and should be thought in to the process.

# Course on Patents and commercialization, Rigshospitalet Copenhagen

October 2005

Course participants, Copenhagen, Denmark

The scope of the course was to give basic knowledge about pantents and commercialization for researches in Denmark. The course stretched out on 2 full days. The course was arranged by Copenhagen Technology Transfer Consortium.

# Course on IPR and commercialization strategy, Kickstart Aalborg University

Oct 2005 - Nov.2005

Course participants, Aalborg, Denmark

The scope of the course was to give basic knowledge about IPR and how to use those rights in commercialization. The course stretched out on 7 evening sessions on 3 hours per session. The course was arranged by Kickstart, Aalborg University, the Patent and Contract office Aalborg University and the patent agency Patrade A/S.

## Research weekend, Cardiology dept. Aalborg Hospital

January 2005

Guest Speaker, Gl. Vraa, Tylstrup, Denmark

"A computer system for analyzing ECG-curvatures. Diagnosis of congenital LQTS, and testing for acquired LQTS". Scientific meeting for doctor's from the cardiology department at Aalborg University Hospital. Review of the scientific projects going on at the hospital.

Connect-Denmark September 2004

Guest Speaker, Aalborg, Denmark

"Commercialization of research from the university"; Meeting for prominent people from the universities and the industry, where the issue technology transfer from the university was discussed. Spoke on commercialization of a patent application, from a students perspective.

Rotary club September 2004

Guest Speaker, Brønderslev, Denmark

Spoke on the education "Master of Science in Biomedical Engineering and Informatics" and about the invention of "A system and method for analyzing ECG curvature".

**Other Hobbies:** Soccer, long distance running, skiing, golf, tennis, badminton, playing the guitar and traveling.