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Education

- 1996** PhD (UvA, Amsterdam) [1]; Promotors: C.A. Grimbergen (Medical Physics) and M.J. Janse (Experimental Cardiology)
1989 MSc Physics (University of Amsterdam, Amsterdam)[2] (including 'le graads bevoegdheid')

Workexperience

- 2015** **Physics Teacher** at highschool, Vinseschool in Amsterdam and Luzac in Alkmaar.
2015 **Teacher** at the TU Delft. Part time, subject: Bioelectricity.
2011–2014 **Post Doc/ Researcher** at the AMC. Fulltime, STW project 10959 and BMM project ICARUS.
2009–2011 **Post Doc/ Researcher** at the AMC. Fulltime, except during the teaching period.
2009–2010 **Teacher** at the University of Applied Science in Amsterdam (Hogeschool van Amsterdam. Part-time 50%.
2006–2009 **Postdoc** NHS project 2005b92 *A non-invasive modality to determine pro-arrhythmic mechanisms in primary sodium channelopathies* AMC, Amsterdam
2005 – 2006 **Post Doc/ Researcher** at the AMC.
2003 – 2005 **Postdoc** AMC/Hart Lung Centrum Utrecht, NHS project 2002b087 *Arrhythmogenic Late Potential Imaging by Non-Invasive Electrocardiography (ALPINE)*.
2003 **Assistant Professor** 50 % at the Hart Lung Centrum Utrecht and 50% AMC, Amsterdam
2001 – 2002 **Postdoc** 50 % at the Hart Lung Centrum Utrecht and 50% AMC, Amsterdam
1996 – 2001 **Postdoc** STW project *Localization of arrhythmias by combining biplane x-ray, catheter-mapping and body surface mapping*, AMC, Amsterdam.
1989 – 1996 **Researcher** STW (Dutch Technology Foundation) project: *Development of a system for on-site processing and analysis of body-surface-maps*
1989 **Researcher** AMC, Amsterdam.

Memberships of boards, committees and professional organizations

- 2015 – current** Secretary of the regional (Zaanstreek) professional artists foundation ‘Tengel’ (www.tengel.nl)
- 2015 – current** Past-Chair of the Council of Societies of the IFMBE
- 2014 – current** Chair of the ‘Zien Weten Kunnen’ Foundation that promotes art, science and technology education at primary schools (www.zienwetenkunnen.nl)
- 2013 – current** Secretary General of the European Alliance for Medical and Biological Engineering & Science, EAMBES (www.eambes.org)
- 2012 – 2015** Member of the Administrative Council of the International Federation for Medical and Biological Engineering, IFMBE (www.ifmbe.org)
- 2012 – 2015** Chair of the Council of Societies of the IFMBE
- 2012 – current** Member committee Women in Medical and Biological Engineering of the IFMBE
- 2012 – 2014** Member committee ICT and Research, AMC
- 2009 – current** Member Working Group Developing Countries of the IFMBE
- 2006 – current** Member of the board of the Vereniging voor Biofysica & Biomedische Technology (VvB-BMT, Dutch Biophysical society, www.BioPM.nl)
- 2006 – 2012** Member Societies Committee of the IFMBE
- 1985 – 1987** Member of the board, subfaculty of Physics and Astrophysics of the University of Amsterdam.
- 1982 – 1989** Member of various committees within the subfaculty.

Research interests

- 64 channel ECG (Body Surface Mapping) as a means to study localized phenomena in the heart.
- Signal and image processing
- 3D reconstruction. E.g. for creation of 3D volume conduction models of specific patients
- Programming, visualization of data and building user-interfaces
- Combining data from different systems and interfacing between systems
- Data storage, data integrity, Electronic Patient Records, security

Supervision

- Copromotor of dr. ing. M.J. v/d Horst (electrical engineer, 2012) [3]
- Copromotor of dr. P.F.H.M. van Dessel (MD, 2001) [4].
- Copromotor of dr. M. Potse (physics, 2001)[5].
- Supervisor MSc and Bachelor students.

Publications

see separate list of publications. <http://www.bytehouwer.nl/publications.nl>

Hobbies

- Foundations of computer science, in particular correctness of programs.
- Ceramics, paper mache and other (virtual) 3D modelling techniques.
- Scientific visualization, Visualization of complex data, design of book covers for theses.

References

- [1] A. C. Linnenbank, *On-site recording, analysis, and presentation of multichannel ECG data*. PhD thesis, University of Amsterdam, The Netherlands, Aug. 1996. e-mail: a.c.linnenbank@amc.uva.nl.
- [2] A. C. Linnenbank, “Software to analyse body surface maps,” Master’s thesis, University of Amsterdam, The Netherlands, 1989.
- [3] M. J. van der Horst, *Systematic Design of EMI-resilient Negative-feedback Amplifiers*. PhD thesis, Technical University of Delft, The Netherlands, Sept. 2012.
- [4] P. F. H. M. van Dessel, *Visualization and functional characterization of the postinfarction arrhythmogenic substrate*. PhD thesis, University of Utrecht, The Netherlands, Nov. 2001. e-mail: p.van.dessel@deskart.nl.
- [5] M. Potse, *Integrated Electrocardiographic Mapping*. PhD thesis, University of Amsterdam, The Netherlands, Dec. 2001. e-mail: mark@potse.nl.