Curriculum Vitae – Anja Boisen

Personal data:
- Boisen, Anja
- Date and place of birth:
- Nationality:
- Phone numbers:
- Email&URL:

Education
- *1997 - Industrial PhD in MicroElectroMechanicalSystems*, Technical Univ. of Denmark (DTU)
- *1993 - MSc in Physics*, Univ. of Roskilde

Employment track & research affiliations:
- 2019 - - Professor, group leader and Section Head at DTU Health Tech
- 2015-2026 - Director of DNRF and Villum Centre of Excellence 'IDUN'
- 2009-2014 - Director of VKR Centre of Excellence 'NAMEC'
- 2005-2012 – Head of Section DTU nanotech
- 2005-2018 - Professor at DTU Nanotech. Group leader of the Nanoprobes group.
- 2002 - Development engineer at Cantion A/S (leave from DTU)
- 2001/2003 - Maternity leaves (Jun. '01 – Dec. '01) and (Feb. '03 – Sep. '03)
- 1999-2004 - Associate professor, DTU
- 1997-1999 - Assistant Professor, DTU
- 1994-1997 - Industrial PhD student in DME A/S and DTU

Selected honours and awards:
- 2024 – Awarded the DTU Innovation prize 2024
- 2022 – Awarded the Electrochemical Society Sensor Division Outstanding Achievement Award
- 2021 – MNE 2021 Fellow award, an international award for outstanding contributions to micro and nano engineering
- 2021 – Fellow of the Electrochemical Society (ECS)
- 2021 – Novo Nordisk Foundation Distinguished Innovator award
- 2020 – Awarded Knight of the Order of the Dannebrog
- 2017 - Recipient of Alexander Foss gold medal from DTU
- 2012 - The Sapere Aude 'DFF-Topforsker' from the Danish Research Council
- 2012 - The EliteForsk award from the ministry of Research, Innovation and Higher Education
- 2008 - The Villum Kann Rasmussen award (Denmark's largest research award)
- 2007 - Direktør Ib Henriksens prize for groundbreaking sensor technology research
- 2000 - AEG 'Elektronikpris' for extraordinary research in the electro technical field

Selected funding:
- 2024 – Recipient of European Innovation Council Transition grant (2.5 mio Euros)
- 2022 - Recipient of European Research Council (ERC) Adv Grant 'FREJA' (2.5 mio Euros) and Novo Nordisk Foundation (NNF) challenge grant 'EMGUT' (8 mio Euros)
- 2020 – Recipient of Bio Innovation Institute faculty project BII faculty (2.5 mio Euros)
- 2015 - Recipient of center of excellence 'IDUN' from Danish National Research Foundation and Villum Fonden (in total 17 mio Euros)
- 2013 - Recipient of ERC Adv Grant 'HERMES' & three ERC POC grants (3 mio Euros)
- 2012 - The Sapere Aude 'DFF-Topforsker' from the Danish Research Council (2 mio Euros)

Selected professional activities:

- 2021-2023 Head of Novo Nordisk Foundation committee on International Research Leader Grants
- 2020- - Member of the board of 'LightNovo Aps' and Heliac
- 2019- - Member of the board of Trustees 'Leo Foundation'
- 2019-2023 - Member of the scientific advisory board for the company Arcelik
- 2015-2025 - Member of the board of 'Villum Fonden'
- 2014-2020 - Member of the board of 'Innovation Fund Denmark', Vice chair since Jan. 2015
- Since 2014 - Member of the The Royal Danish Academy of Sciences and Letters
- 2012-2014 - Vice chair of the board of the Norwegian Research Council 'Nano2021'
- 2009-2014 - Member of the board of the Danish National Advanced Technology Foundation
- 2005-2010 - Member of the Danish research council on Production and Technology (FTP)
- Since 2007 - Member of Danish Academy of Tech Sciences (ATV) and ATV think tank (head 2014)
- 2016-2020 - Member of the advisory board for the Lloyds Register Foundation, UK.

Conferences and editorial activities:

- Since 2016 member of the editorial advisory board for the journals 'Lab on a Chip' and 'ACS Sensors'.
- 2002-2019 member of the international steering committee for the Micro and Nano Engineering (MNE) conference. Chair of the 2007 conference with 600 participants. Chair of the 2018 conference with 700 participants.
- 2025 organizer of symposium on 'Energy materials for the body'. Copenhagen, May 9-11.

Research activities:

- Micro and nano sensors; nanomechanical sensors such as cantilevers, strings and bridge structures, nanoplasmonics, exploring nanopillar substrates and related structures, electrochemistry and agglutination assays with focus on integration into complete sensor systems.
- Centrifugal microfluidics as a simple way of achieving integration.
- Nanofabrication and new materials (polymers).
- Oral drug delivery using micro-fabricated devices.
- Energy materials – solutions for harvesting energy in the gut.
- 'Swallow your doctor'. Developing ingestible devices that can potentially sense, deliver and sample in the gut.

Management experience:

- Currently head of center of excellence with approx. 50 members – see www.idun.dtu.dk and head of section at DTU health tech (incl. 3 assoc. prof. and 1 prof.).
- Head of the Nano Systems Engineering Section at DTU Nanotech with more than 40 members and member of DTU Nanotech management group (2005-2011)
- Leader of research groups since 1999.
- PI of several larger collaborative research projects.

Patenting & innovation:

- Co-founder of companies Cantion, Silmeco, BluSense Diagnostics, Lightnovo, and Mycro3D. 42 international patent applications and 7 issued patents (US/European).
- 1/2 years of industrial R&D experience.
- Examples of past and present industry collaborations: Grundfos, Virogates, Unisensor, Danfoss, Foss, Radiometer, Austrian Microsystems (AMS).
- My students have won more than 20 Venture prizes and have established additional two companies (Spectro Inlets and Cellari).

Total Publications/citations:

- **401** peer-review journal papers and more than **200** reviewed conference proceedings, 2 book chapters.
- More than **130** invited talks at international conferences.
- Citations: 14327/21574, Hirsch h-index: 59/74. [ISI Web of Science/Google scholar, February 11, 2025] Research ID: F-9442-2011

Major contributions to early careers of excellent researchers PhD student Rodolphe Marie is now associate professors at DTU. PhD students Stephan Keller and Maria Tenje are today professors at DTU Nanolab and Univ. of Uppsala. Postdocs Yu Xiaomei, Silvan Schmidt, Montserrat Calleja and Winnie Svendsen are now professors (Univ. of Beijing, Tech. Univ. of Vienna, CNM, Spain and DTU). Maria Tenje, Stephan Keller, Silvan Schmidt and Monserrat Calleja have all attracted ERC grants themselves. More than 30 of my former students are employed in research/management positions in industry (Sandoz, Radiometer, Dako, Agilent, Novo, etc.). Former PhD students, Jakob Thaysen, is today CEO of Illumina.

International experience:

- Lived and studied one year at Stanford University, USA (1986/87).
- External research stay in the group of Dan Rugar, IBM Almaden, USA (1996).
- Many ongoing international collaborations with e.g., Prof. Nikolaj Gadegaard, University of Glasgow, UK.

Teaching, supervision, mentoring, outreach experience:

- Lecturer in undergraduate and graduate classes on nanotechnology (5 BSc/MSc, 2 PhD classes)**.**
- Outreach activities such as giving talks at conferences for high school students and at the Danish TV show 'Danish academy'. Organized a session on 'how much do you want to know about yourself' at the European Science Open Forum (ESOF) meeting in Copenhagen in 2014 and talked at the 275th anniversary of the royal academy of science and letters (video link).
- Supervisor/mentor for in total 64 finished PhDs and 42 postdocs (of minimum 2 years).
- Member of faculty at 'Singularity University' (SU) with base in Silicon Valley and Copenhagen. SU is a science/technology think tank and communicator of exponential technologies (video link).
- Facilitator of a range of outreach activities related to our IDUN center of Excellence – such as IDUN industry day, 'Forskningens Døgn' and public talks at The Royal Danish Academy of Sciences and Letters (video link).