

CV (DTU Compute) / Per Bækgaard

ORCID [0000-0002-6720-1128](https://orcid.org/0000-0002-6720-1128)

Per Bækgaard (1962)

Degrees:

PhD UX/HCI (DTU 2016)

MsC E.E. (DTU 1986)

Distinctions and awards:

Nominated Teacher of the Year (2012, 2018)

Best Poster/Paper Awards (ETRA'19, COGAIN'20)

COGAIN Impact Award (COGAIN'23)

Positions:

DTU Associate Professor, Digital Media Engineering/Human-Centered AI (2017–) and *Head of Studies*, Human-Centered AI (2018–), PostDoc (2016-2017), PhD (2013-2016), External Lecturer (2012).

BRAINCAPTURE Co-owner and co-founder (2019–) **BASEONLINE** Co-owner and co-founder (2012–)

NOKIA MOBILE PHONES Director, Chipset Unit, Global Sourcing (2007-2013), University Relationship Coordinator (2009-2010), Director, Cellular Engine Component Supply Line Management (2004-2007),

Director, GSM Cellular Engines R&D (2002-2004), **NOKIA NETWORKS** Site Manager, (2000-2001), Senior

SW Team Leader, Project Manager, Section Manager R&D (1998-2000) **PINE TREE SYSTEMS** Co-owner

and co-founder (1990-1998) **DANSK DATA ELEKTRONIK** Team Leader/SW Developer (1987-1990)

BRÜEL & KJÆR Team Leader/SW Developer (1987-1990) **GMI DATA SW** Developer (1982-1984)

Research Area:

With a strong industrial background the main focus is in *cross-disciplinary* human- and health-related research projects, often with an *innovation* mindset and a view to the overall *user experience* and *human-computer interaction*. This includes *cognitive information processing*, biometric sensors, *eye tracking* and mobility, e.g. in capturing and analysing human-related data traces, capturing and modelling user behaviour and state of mind, combining interaction traces and physiological measurements, etc.

Memberships of scientific committees, review

Chair of multiple PhD assessment committees (“Adapting hearing aids contextually by learning user preferences from data”, “Software Architecture and Platform for Multi-study and Multi-source Digital Phenotyping Research”, “In-situ and Personalized Cognitive Behavioural Therapy for Mental Health”, “Personalizing Hearing Care and Enhancing User Experience by Adapting Devices to the Changing Mobile Context”). Appointed external examiner (censor) since 1990. External scientific/academic assessor of educations at other universities (3x at AAU, 2020).

Web of Science publications: 34

Citations: 149

h-index: 6

Google Scholar profile: [cxw9UPUAAAAJ](https://scholar.google.com/citations?user=cxw9UPUAAAAJ)

Citations: 368

h-index: 10 / **i-index:** 11

Peer-reviewed Publications not in Web of Science: 8

Patents: (ongoing)

Other innovation activities:

DTU Compute representative in DTU's "Proof of Concept" grant board. Co-founder of several start-ups, including BrainCapture that focuses on EEG recording and diagnosis of epilepsy in low-middle income countries.

Supervision of PhDs, 2018 – present (ongoing og finished in 2018 or later):

"Personalized micro-intervention technology for diabetes self-management" (2020-2023).
(Co-supervision of 6 other PhD's also, including with other departments and hospitals).

Grants, 2018 – present (ongoing or finished in 2018 or later):

BrainCapture discovery grants (DTU, 2x, co-applicant) (2018-2019)
LINC (participant) (EU, 2018-2021)
PUPILS (co-applicant) (Oticon Foundation, 2019-2021)
iPDM-Go (co-applicant) (EU, 2019-2021)
Synsstøtte for synshandicappede (2x, principal investigator) (Synoptik Foundation, 2019-2022)
AL-EYE Individualised Visual Aids using Mixed Reality and Eye Tracking (DTU, co-applicant, 2022)
Reading the Reader (principal investigator, Novo-Nordisk Data Science, 2023-2027)

Selected publications:

A Fitts' law study of click and dwell interaction by gaze, head and mouse with a head-mounted display
JP Hansen, V Rajanna, IS MacKenzie, P Bækgaard
Proceedings of the Workshop on Communication by Gaze Interaction, 1-5

Sensiblesleep: A bayesian model for learning sleep patterns from smartphone events
A Cuttone, P Bækgaard, V Sekara, H Jonsson, JE Larsen, S Lehmann
PloS one 12 (1), e0169901

The low/high index of pupillary activity
AT Duchowski, K Krejtz, NA Gehrler, T Bafna, P Bækgaard
Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems

Pointing by gaze, head, and foot in a head-mounted display
K Minakata, JP Hansen, IS MacKenzie, P Bækgaard, V Rajanna
Proceedings of the 11th ACM symposium on eye tracking research & applications

In the twinkling of an eye: Synchronization of EEG and eye tracking based on blink signatures
P Bækgaard, MK Petersen, JE Larsen
2014 4th International Workshop on Cognitive Information Processing (CIP), 1-6