

Curriculum Vitae

Dipl.-Ing. Rolf Black MSc (né Paus)

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I am a dedicated pragmatist who has enjoyed reinventing himself from mechanical engineer to entrepreneur to researcher with a heart for training, teaching, and establishing technology that supports people of any ability and age.

My achievements include a patent for a successfully marketed advanced orthotic hip joint (Otto Bock, Germany) and the establishment of the exclusive NF-Walker distribution network in Germany (EO-Funktion GmbH, now Made for Movement GmbH, Germany).

I have been Researcher Co-Investigator on assistive technology related EPSRC projects since 2010, having started my work at Computing in Dundee University's School of Science and Engineering (SSEN) in 2005.

I recently took on the role of Deputy Director for Public Engagement for the School and currently divide my work between SSEN as Research Assistant (0.5 FTE at Computing) and Public Engagement Officer on maternity cover at the Leverhulme Research Centre for Forensic Science (0.5 FTE).

Research Grants (Researcher Co-Investigator):

ACE-LP: Augmenting Communication using Environmental Data to drive Language Prediction.
1 February 2016 – 31 January 2020, RCUK EPSRC EP/N014278/1 (£1,007,562)

"How was School today? – in the Wild". January 2010 – June 2011,
RCUK Digital Economy EP/H022570/1 (£193,881)

Selected Research Projects (Research Assistant):

"How was School today...?" - Supporting narrative for non-speaking children, a feasibility study. April 2008 – March 2009, RCUK Digital Economy EP/F067151/1 (£102,258)

"Stories at the Dentists". September 2013 – September 2014, RCUK Digital Economy EP/K012797/1 (£293,221)

Public Engagement Grants (Project Lead/Manager)

Giving People a Voice - Telling the Story. April 2018 – September 2018,
EPSRC Telling Tales of Engagement Award 2016 (£10,000)

Outer Space | Inner Space. October 2014 – ongoing, Collaboration of School of Life Sciences with School of Science and Engineering, and Leisure and Culture Dundee, University of Dundee (approx. £95k)

User Groups Grants

Aphasia iPad User Group at the User Centre, School of Computing: "Tap and Talk" User Group, SCVO grant (£13,250), "It's not one thing" Aphasia iPad Workshop and Workbook, CHSS and RSA Grants (total £4,800)

Selected Publications:

PO Kristensson, J Lilley, R Black, A Waller. (2020). A Design Engineering Approach for Quantitatively Exploring Context-Aware Sentence Retrieval for Nonspeaking Individuals with Motor Disabilities. CHI 2020, April 25–30, 2020, Honolulu, HI, USA (Best Paper Award)

R Black, A Waller, R Turner and E Reiter. (2012). Supporting Personal Narrative for Children with Complex Communication Needs. Transactions on Computer-Human Interaction (TOCHI)

R Black, A Waller, N Tintarev, E Reiter and J Reddington. (2011). A Mobile Phone Based Personal Narrative System. The 13th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS). Dundee, UK, 24-26 October 2011

R Black, J Reddington, E Reiter, N Tintarev and A Waller. (2010). Using NLG and Sensors to Support Personal Narrative for Children with Complex Communication Needs. First Workshop on Speech and Language Processing for Assistive Technologies (SLPAT) at the 11th Annual Conference of the NAACL. Los Angeles, 1-6 June 2010

- A Waller, R Black, DA O'Mara, H Pain, G Ritchie, R Manurung. (2009). Evaluating the STANDUP Pun Generating Software with Children with Cerebral Palsy. ACM TransAccessComp (TACCESS) 1(3)
- R Black, A Waller, G Pullin, E Abel (2008). Introducing the PhonicStick: Preliminary evaluation with seven children. 13th Biennial Conference of the International Society for Augmentative and Alternative Communication. Montreal, Canada, 2-7 August 2008
- E Moar, A Waller and R Black (2007). Children as designers. Communication Matters, National Symposium Conference Programme, pp.28. Leicester, 23-25 September

Career History:

- Since Nov '05 : School of Science and Engineering (Computing), University of Dundee, Scotland
Research Assistant in the field of Augmentative and Alternative Communication (AAC) and Assistive Technology (AT)
- Jun '09 - Dec '09 : Department of Computing Science, University of Aberdeen, Scotland
Research Fellow on the Natural Language Generation Platform Grant
- Dec '06 - May '06 : School of Design, University of Dundee, Scotland
Visiting Tutor for 4th year Innovative Product Design (IPD) students
- Sep '05 - Aug '08 : Tayside Centre of General Practice, University of Dundee
Tutor for 1st, 2nd and 3rd year medical students
- Jan '04 - Mar '11 : Motico - Motion & Communication
Consultancy Work for Rehabilitation Technology (Self employed)
- Jan '99 - Dec '03 : EO-Funktion GmbH (now: "Made for Movement"), Hannover, Germany
Managing Director (Co-founder)
- Aug '96 - Feb '99 : University of Hanover, IMR, Germany
Research and Teaching Assistant

Awards:

- Best Paper Award: A Design Engineering Approach for Quantitatively Exploring Context-Aware Sentence Retrieval for Nonspeaking Individuals with Motor Disabilities. PO Kristensson, J Lilley, R Black, A Waller. CHI 2020
- Best Public Engagement Project of the Year: **Outer Space | Inner Space**. Brian Cox Award (2016), School of Life Sciences, University of Dundee
- Stephen Fry Awards for Excellence in Public Engagement with Research (Commendations), University of Dundee: **Outer Space | Inner Space (2017)**, and **Engaged Researcher (2019)**
- First prize: Postgraduate Student Research Competition: R Black. **The PhonicStick** - A Joystick to Generate Novel Words Using Phonics. The 13th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS). Dundee, UK, 24-26 October 2011
- Finalist: Community Project of the Year: R. Black, A. Waller, E. Reiter, R. Turner. (2010). **"How was School today...?"**. BCS UK IT Industry Awards
- Outstanding ICT Learning Initiative of the Year: Corseford School, Kilbarchan. **"How was School today...?"**, Times Educational Supplement (TES) Schools Awards (2010)

Patents:

- Bi-axial Joint: Hip Joint for a Reciprocating Gait Orthosis (RGO) to Stabilise the Lower Extremities (German Patent Nr. 196 45 494)
Marketed by Otto Bock HealthCare, Germany: Gehorthese 17H100
- PhonicStick: Apparatus and Method for Speech Generation; with colleagues and University of Dundee support (National phase with coverage in the US, the EU and Japan)

Education & Qualifications:

- Oct '89 - Aug '96 : University of Hanover, Germany: **Dipl.-Ing. in Mechanical Engineering**
Title of thesis : Realisation of an Improved Reciprocating Gait Orthosis for Children with Spina Bifida
- Oct '93 - Oct '94 : University of Strathclyde, Scotland: **Master of Science in Bioengineering**
Title of thesis : Biomechanical Evaluation of the Progressive Gait Correcting Orthosis
- Aug '85 - Jan '88 : GS-Werbung, Gießen, Germany: **Apprenticeship in Advertising and Business**