

## **CV PROF. DR. IR. BART DE MOOR, DD. 01/01/2018**

### **PERSONAL INFORMATION**

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### **EDUCATION**

Title: Prof. Dr.; PhD Electrical Engineering, July 1988, KU Leuven, Faculty of Engineering, Belgium  
Master Electrical Engineering, Control Theory, July 1983, KU Leuven, Faculty of Engineering, Belgium  
Musical education at Music Academy Alseberg: Solfege, percussion, piano, composition

### **CURRENT POSITION(S)**

Full Professor, Dept. Electrical Engineering, KU Leuven, Belgium (<http://www.esat.kuleuven.be/stadius/>)  
Guest Professor, Dept. Information Engineering & Mathematics, Universita Di Siena ([www.diism.unisi.it/en](http://www.diism.unisi.it/en))  
Affiliated Professor, imec, <https://www.imec-int.com/en/home>

### **PREVIOUS POSITIONS**

1991-1992: Head of Cabinet, Federal Minister of Science Policy (W.Demeester), Brussels  
1994-1999: Main Science Advisor, Minister-President Flanders Region (L. Van den Brande), Brussels  
2007-2009: Head Socio-Economical Cabinet, Minister-President Flanders Region (Y.Leterme), Brussels  
2009-2013: Vice-rector International Policy, KU Leuven, Belgium, <http://www.kuleuven.be/english>  
2010-2015: Scientific Director Department Medical IT, Strategic Research Center, iMinds, [www.iminds.be/en](http://www.iminds.be/en)

### **FELLOWSHIPS**

1983-1988: PhD Grant IWONL (Institute for Scientific Research in Industry and Agriculture)  
1988-1990: Research Associate, Dept. Electr. Eng. and Computer Science (profs. Kailath & Golub), Stanford University, USA  
1990-1999: Senior Research Associate, Scientific Research Foundation, Flanders, Belgium  
1992: Visiting Research Associate, University of Minneapolis, USA

### **INSTITUTIONAL RESPONSIBILITIES**

1995-present: Member Board, remuneration & investment committees, Flanders Biotech Institute ([www.vib.be](http://www.vib.be))  
1999-present: Secretary of the Board (till 2015) and Member of the Scientific Committee of Technopolis (Flanders Children's Science Center, [www.technopolis.be](http://www.technopolis.be))  
2000-2005: Board member Belgian Nuclear Research Center, Belgium ([www.sck.be](http://www.sck.be))  
2007-2015: Chairman Board Hercules Foundation (Research infrastructure funding agency (15 mio €/year), including Flanders Supercomputer), Brussels, merger with <http://www.fwo.be>  
2007-2011: Board member iMinds (merged since 2017 with imec, <http://www.imec-int.com/en/home>)  
2007-2015: Chairman Industrial Research Fund (10 mio €/y, [www.kuleuven.be/research/funding/iof/aims.html](http://www.kuleuven.be/research/funding/iof/aims.html))  
2009-2013: Member of the Board of KU Leuven ([www.kuleuven.be](http://www.kuleuven.be))  
2009-2013: Chairman of the Committee on Internationalisation and Development Cooperation of the Flemish University Council ([www.vluhr.be](http://www.vluhr.be))  
2009-2014: Co-founder & Board member Leuven International School (<http://www.isleuven.org>)  
2009-present: Board member Alamire Foundation (Center for the Study of Polyphonic Music in the Low Countries, <http://www.alamirefoundation.org/en>); Chairman since 2017  
2015-present: Member Steering Group Leuven Mindgate (<http://www.leuvenmindgate.be/en>); Chairman of committees on Entrepreneurship and Health

### **COMMISSIONS OF TRUST**

2006-2008: Selection Committees member for Linnaeus Centers of Excellence (Sweden) and UNIK (Denmark)  
2010-2012: Chairman of the Education Assessment Panel as well as the Research Assessment Panel of Electrical Engineering University Departments in the Netherlands (<https://www.nvao.net>)  
2013-present: Member Panel Computer Sciences European Research Council (<http://erc.europa.eu>)  
2013-present: Member Board Trustees Danish National Research Foundation (<http://dg.dk/en/>)  
2013-2014: Member National Tenure Track Commission for Control and Automation in Italy  
2014-present: Member Board AstraZeneca Foundation (<http://www.azfoundation.be/home.html>)  
2015-present: Chairman University Research Policy Assessment Committee, Finish Academy of Sciences (<http://www.aka.fi/en>)

2015-present: Member of committees in the Swedish, Irish and Luxemburg Science/Research Councils  
2016-present: Member committee of the Villum Young Investigator Grants of the Velux Foundation, Denmark (<http://veluxfoundations.dk/en/young-investigator-call>)  
2016-present: Member Int. Scientific Advisory Board of Wallenberg Autonomous Systems Program (<http://wasp-sweden.se>), Knut and Alice Wallenberg Foundation (<https://www.wallenberg.com/kaw/en>)  
2016-present: Member of the Scientific Advisory Committee of Science Europe (<http://www.scienceeurope.org>)  
2017-present: ‘Sherpa’ for Belgium in the European High Performance Computing Initiative (<http://eurohpc.eu>, <https://ec.europa.eu/digital-single-market/en/eurohpc-joint-undertaking>)  
2018-present: Member ESGAB (European Statistical Governance Advisory Board, nominated by the European Council decision 18/12/2017 (2017/C 439/03), <http://ec.europa.eu/eurostat/web/esgab>)

### **MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

Fellow of the Institute for Electrical and Electronic Engineers ([www.ieee.org](http://www.ieee.org)) and of the Society for Industrial and Applied Mathematics ([www.siam.org](http://www.siam.org)), member of the American Mathematic Society ([www.ams.org](http://www.ams.org)), the International Federation of Automatic Control ([www.ifac-control.org](http://www.ifac-control.org)), the Royal Academy of Belgium for Sciences and Arts ([www.kvab.be/default.aspx?lang=en](http://www.kvab.be/default.aspx?lang=en)).

**RESEARCH** (see [www.bartdemoor.be](http://www.bartdemoor.be) for exhaustive surveys):

**Scientific disciplines:** numerical linear algebra and algebraic geometry, dynamical systems theory and identification, advanced control theory, machine/deep learning, bioinformatics, digital health, clinical genomics

**Mentorship:** Currently promoter of 10 PhD students and 4 postdocs; Past PhD thesis advisor of 80 PhD’s, all worldwide active in academia, industry, government agencies

**Publications:** (Co-) published more than 400 scientific journal papers, 450 conference papers, 11 books

**Bibliometry:** <https://scholar.google.be>: 92 584 citations (36 878 since 2013); H-index 129 (82 since 2013); i10-index 927 (489 since 2013);

- Rank 13 all time top PhD advisors in mathematics (<https://genealogy.math.ndsu.nodak.edu/extrema.php>);
- Top 100 highly cited Computer Science researchers (<http://sciencewatch.com/sites/sw/files/sw-article/media/worlds-most-influential-scientific-minds-2014.pdf>);
- Rank 19 worldwide and rank 1 Belgium in top H-index for Computer Science and Electronics (<http://www.guide2research.com/scientists/>);
- Rank 127 of most cited scientists ever (<http://www.webometrics.info/en/node/58>)

**Scientific Leadership:** Coordinator of many research projects, financed by regional, Belgian and European funding agencies and third parties (full list [www.bartdemoor.be](http://www.bartdemoor.be))

**Academic Service:** Regular PhD jury member (Belgium/abroad); Invited speaker & member organising committees international conferences; Associate Editor and reviewer scientific journals;

**TEACHING:** University courses on System Theory and Control, Computer Aided Control System Design, System Identification, Cases Studies in Mathematical Engineering, Case studies in Entrepreneurship, University guest courses in the Netherlands, Sweden, Italy, USA.

### **SCIENTIFIC AWARDS & HONORS**

1986: Leybold-Heraus Prize

1989: Leslie Fox Prize, Cambridge, UK (<http://www.numerical.rl.ac.uk/people/nim/fox/winners.php>)

1990: Guillemin-Cauer Award IEEE Transactions Circuits and Systems (<http://ieeecas.org/about/awards/guillemin-cauer-award>)

1992: Laureate of the Royal Academy of Belgium for Sciences and Arts (<http://www.kvab.be>)

1994: Bi-annual Siemens Award by the Flanders Research Foundation (<http://www.fwo.be/en/>)

1996: Automatica Award, International Federation of Control ([www.ifac-control.org](http://www.ifac-control.org))

1999: IEEE Signal Processing Society Award (<http://www.signalprocessingsociety.org>)

2003: Fellow IEEE ([www.ieee.org](http://www.ieee.org)) for ‘Contributions to algebraic/numerical methods for systems and control’

2010: Excellence Award of the Flanders Research Foundation (<http://www.fwo.be/en/>) from King Albert II of Belgium (<http://www.fwo.be/media/205309/FWO-Excellence-prizes.pdf>)

2017: Fellow of the Society of Industrial and Applied Mathematics for ‘Contributions to concepts and algorithms in numerical multilinear algebra and applications in engineering’ (<http://fellows.siam.org/index.php?sort=year&value=2017>)

2018: Holder of KU Leuven Chair, endowed by Health Insurerer CM (<http://www.cm.be>)

### **TECHNOLOGY TRANSFER**

**Spinoffs:** Co-founder of 7 spin-off companies, 6 of which still active: [www.ipcos.com](http://www.ipcos.com) (industrial process control, sold by management buy out), [www.tmleuven.be](http://www.tmleuven.be) (traffic modelling and consulting), Data4s (fraud detection (mobile phones, credit cards, tax evasion), acquired by Norkom, then acquired by [www.baesystems.com](http://www.baesystems.com)), [www.trendminer.com](http://www.trendminer.com) (data mining in the process industry), [www.cartagenia.com](http://www.cartagenia.com) (genomics data analysis, acquired by [www.agilent.com](http://www.agilent.com)), [www.ugentec.com](http://www.ugentec.com) (automated PCR analysis), <https://lindacare.com> (patient tele-monitoring).

**Patents:** Co-holder of several patents

**Member** of the Advisory Committee of the Capricorn Health-tech Fund (<http://www.capricorn.be>)

### **SCIENCE OUTREACH**

1992-present: Co-founder & member of the interdisciplinary philosophical think-tank Worldviews (<http://www.vub.ac.be/CLEA/pub/books/worldviews/>)

2002-present: regular guest in science outreach programmes on national radio and television (incl. Hoe?Zo!)

2005 & 2015: Teacher at the KU Leuven Children's University (<http://www.kuleuven.be/kinderuniversiteit/>)

2009-present: Trustee of the RVO-Society (<http://www.rvo-society.be/en>)

2009-present: Patron of the Flanders Technology Olympiad (<http://www.technologieolympiade.be/vto/>)

2015-2017: Member of the Flanders STEM Platform (<http://www.ond.vlaanderen.be/stem/Stem-platform/default.htm>)

2015-present: Founder & Chairman Board of Health House (<http://www.health-house.be/en>)