

MINI-COURSE ON NONLINEAR SYSTEM IDENTIFICATION

LIÈGE, BELGIUM, APRIL 09-10, 2018

PROGRAM

MONDAY 09/04/2018

09.00 – 09.15	Welcome	J.P. Noël
09.15 – 10.30	An Introduction to Nonlinear System Identification	J. Schoukens
10.30 – 11.00	Coffee	
11.00 – 11.45	An Introduction to Nonlinear System Identification	J. Schoukens
11.45 – 12.45	Hands On: Multisines and the Best Linear Approximation	M. Schoukens, J.P. Noël & K. Tiels
12.45 – 13.30	Lunch	
13.30 – 15.00	Nonlinear State Space Identification	J.P. Noël
15.00 – 15.30	Coffee	
15.30 – 16.30	Hands On: Nonlinear State Space Identification	K. Tiels & J.P. Noël

TUESDAY 10/04/2018

09.00 – 10.30	Block-Oriented Identification	M. Schoukens
10.30 – 11.00	Coffee	
11.00 – 12.00	Hands On: Block-Oriented Identification	M. Schoukens & K. Tiels
12.00 – 13.00	Lunch	
13.00 – 14.30	An Introduction to Bayesian versus Maximum Likelihood Estimation	K. Tiels
14.30 – 15.30	Open Questions	J.P. Noël, M. Schoukens, K. Tiels

LECTURERS

Dr. Jean-Philippe Noël received a PhD degree in engineering sciences in 2014 from the University of Liège (ULiège), Belgium, as a F.R.S.-FNRS FRIA Research Fellow. From 2014 onwards, he has been a post-doctoral researcher at ULiège and the Vrije Universiteit Brussel, and he was a visiting researcher in 2015 at Duke University, NC, USA. Currently, he is a research fellow and adjunct lecturer in the Aerospace and Mechanical Engineering Department of ULiège. He is also member of the Editorial Board of the 'Mechanical Systems and Signal Processing' journal, and a co-founder of NOLISYS, a start-up company active in the field of nonlinear vibrations.

His research interests lie in experimentally modelling and understanding nonlinear system dynamics.

Website: <http://www.jpnoel.be/>

Prof. Johan Schoukens received both the Master's degree in electrical engineering in 1980, and the PhD degree in engineering sciences in 1985 from the Vrije Universiteit Brussel (VUB), Brussels, Belgium. In 1991 he received the degree of Geaggregeerde voor het Hoger Onderwijs from the VUB, and in 2014 the degree of Doctor of Science from The University of Warwick.

He has been a Fellow of IEEE since 1997. He was the recipient of the 2002 Andrew R. Chi Best Paper Award of the IEEE Transactions on Instrumentation and Measurement, the 2002 Society Distinguished Service Award from the IEEE Instrumentation and Measurement Society, and the 2007 Belgian Francqui Chair at the Université Libre de Bruxelles (Belgium). Since 2010, he is a member of Royal Flemish Academy of Belgium for Sciences and the Arts. In 2011 he received a Doctor Honoris Causa degree from the Budapest University of Technology and Economics (Hungary). Since 2013, he is an honorary professor of the University of Warwick.

His main research interests include system identification, signal processing, and measurement techniques.

Website: <http://homepages.vub.ac.be/~jschouk/>

Dr. Maarten Schoukens received the Master's degree in electrical engineering: electronics and information technology and Ph.D. degree from the Vrije Universiteit Brussel (VUB), Brussels, Belgium, in 2010 and 2015, respectively. From 2015 to 2017, he was a post-doctoral researcher with the ELEC Department, VUB. In October 2017 he joined the Control Systems research group, TU/e, Eindhoven, The Netherlands, as a post-doctoral researcher under the supervision of Dr R. Tóth. He is currently the holder of a Marie Skłodowska-Curie Individual Fellowship. He is an Associate Editor of Measurement, Journal of the International Measurement Confederation (IMEKO).

His main research interests include the measurement, identification and control of linear parameter-varying and nonlinear systems.

Website: <https://maarten.schoukens.eu/>

Dr. Koen Tiels received the degree of master in Electromechanical Engineering in July 2010 and the degree of Doctor in Engineering (Ph.D.) in March 2015, both from the Vrije Universiteit Brussel (VUB), Brussels, Belgium. He was a post-doctoral researcher in the period 2015-2018 at the same university. In February 2018, he joined the Department of Information Technology, Division of Systems and Control of the Uppsala University, Sweden where he is currently a post-doctoral researcher. Koen Tiels is the main developer of the PNLSS 1.0 Toolbox.

His main interests are in the field of nonlinear system identification and Bayesian estimation.

Website: <http://katalog.uu.se/profile/?id=N18-309>