Egon Geerardyn

Electronics Engineer with a passion for IT

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born 15 April 1988 (Belgian)

education

2011 – 2016	**PhD Electrical Engineering (dr.)**	Vrije Universiteit Brussel
prospect June 2016	In my research on user-friendly identification of linear systems, I gained expertise in **system identification** and **measurements**. During my two-month stay at the Control System Technology group at the Technische Universiteit Eindhoven, I improved my proficiency in **robust control** and applied my research in the field. Promotors: Johan Schoukens and Tom Oomen (TU/e).	

2006 – 2011	**BSc & MSc Engineering Science: Electronics and IT (ir.)**	Vrije Universiteit Brussel
	In my thesis "A Simulation Method for Pinpointing the Dominant Nonlinear Contributors in CMOS Circuits" I wrote a tool in **ANTLR**, **Java** and **MATLAB** that performs a labor-intensive Volterra analysis on electrical circuits. Promotors: Piet Wambacq and Gerd Vandersteen. For this work I received the IMEC award for best master thesis at the VUB.	

2011 – now	I continually strive to perfect my abilities by taking courses such as **LabView Core 2** and **LabView FPGA**, hence I became a **Certified LabView Associate Developer** in 2014. I have successfully completed online courses such as Convex Optimization, Functional Programming with Scala, Machine Learning and Databases that were taught by experts from Stanford and EPFL.

experience

2012 – now	**Major contributor and maintainer (since 2015)**	github:matlab2tikz
	I maintain the open-source program `matlab2tikz` that converts **MATLAB/Octave** figures to **TikZ** (LaTeX) code. This program is one of the most-downloaded programs on FileExchange. I give guidance to half a dozen volunteers and keep track of the codebase using **git** and **Jenkins**.	

2009 – 2011	**Engineering summer jobs**	ELEC (Vrije Universiteit Brussel)
	For the statistics, system theory, system identification, and courses, I made course notes, lab instructions, and measurement set-ups using **LyX**, **LabView** and **NI Elvis II**.	

2007 – 2009	**Web master and server admin**	Polytechnische Kring
	For my engineering fraternity, I updated the website to **Joomla** and helped to maintain the **Gentoo Linux** web server running **Apache**, **MySQL** and **PHP**.	

languages

Dutch	Native	
English	Advanced	Daily use in an academic setting.
French	Intermediate	I have been living in Ixelles (Brussels) since 2013.

skills

For my everyday work, I rely on **Mac OS X**, **Linux**, **MATLAB**, **SimuLink**, **LabView**, **Sage**, **R**, **LaTeX** and, **git**. In previous projects, I have used **Python**, **ANTLR**, **Scala**, **Java**, **Delphi**, **assembly** and **VHDL** amongst others.
As a teaching assistant, I taught **C** for **microcontroller** programming for electronics and control labs.

publications

journals

Egon Geerardyn, Mikaya L.D. Lumori, John Lataire. "FRF Smoothing to Improve Initial Estimates for Transfer Function Identification". In: *IEEE Transactions on Instrumentation and Measurement* 64.10 (Oct. 2015), pp. 2838–2847. ISSN: 0018-9456. DOI: 10.1109/TIM.2015.2427732

Matthijs van Berkel, Gerd Vandersteen, **Egon Geerardyn**, Rik Pintelon, Hans Zwart, Marco de Baar. "Frequency domain sample maximum likelihood estimation for spatially dependent parameter estimation in PDEs". In: *Automatica* 50.8 (2014), pp. 2113–2119. ISSN: 0005-1098. DOI: 10.1016/j.automatica.2014.05.027

Mikaya L.D. Lumori, **Egon Geerardyn**, Johan Schoukens, John Lataire. "Smoothing the LPM Estimate of the Frequency Response Function Via an Impulse Response Truncation Technique". In: *IEEE Transactions on Instrumentation and Measurement* 63.1 (Jan. 2014), pp. 214–220. ISSN: 0018-9456. DOI: 10.1109/TIM.2013.2273594

Egon Geerardyn, Yves Rolain, Johan Schoukens. "Design of Quasi-logarithmic Multisine Excitations for Robust Broad Frequency Band Measurements". In: *IEEE Transactions on Instrumentation And Measurements* 62.5 (May 2013), pp. 1364–1372. ISSN: 0018-9456. DOI: 10.1109/TIM.2012.2232474

conferences

Robbert Voorhoeve, Annemiek van Rietschoten, **Egon Geerardyn**, Tom Oomen. "Identification of High-Tech Motion Systems: An Active Vibration Isolation Benchmark". In: *17th IFAC Symposium on System Identification SYSID 2015Beijing, China, 19-21 October 2015*. Vol. 48. 28. 2015, pp. 1250–1255. DOI: 10.1016/j.ifacol.2015.12.303

Egon Geerardyn, Tom Oomen, Johan Schoukens. "Enhancing $\mathcal{H}_\infty$ Norm Estimation using Local LPM/LRM Modeling: Applied to an AVIS". in: *19th IFAC World Congress*. Cape Town, South Africa, Aug. 2014. DOI: 10.3182/20140824-6-ZA-1003.01186

Egon Geerardyn, Tom Oomen, Johan Schoukens. "Improving the $\mathcal{H}_\infty$ norm estimate of an active vibration isolation system using local rational models". In: *ISMA conference on Noise and Vibration Engineering*. Leuven, Belgium, Sept. 2014

Adam Cooman, **Egon Geerardyn**, Gerd Vandersteen, Yves Rolain. "Determining the Dominant Nonlinear Contributions in a multistage Op-amp in a Feedback Configuration". In: *2012 International Conference on Synthesis, Modeling, Analysis and Simulation Methods and Applications to Circuit Design (SMACD)*. Seville, Spain, Sept. 2012

Christian Larsson, **Egon Geerardyn**, Johan Schoukens. "Robust Input Design for Resonant Systems under Limited A Priori Information". In: *Proceedings of the 16th IFAC Symposium on System Identification, July 11-13*. Brussels, Belgium, July 2012, pp. 1611–1616

Egon Geerardyn, Yves Rolain, Johan Schoukens. "Quasi-logarithmic Multisine Excitations for Broad Frequency Band Measurements". In: *I²MTC 2012, IEEE International Instrumentation and Measurement Technology Conference, May 13-16*. Graz, Austria, May 2012, pp. 737–741