

Egon Geerardyn

Electronics Engineer with a passion for IT

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born 15 April 1988 (Belgian)

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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 (L^AT_EX)** 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**, **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.

Peer-reviewed Journals

- Egon Geerardyn, Mikaya L.D. Lumori, and 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, and 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, and 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, and 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

International Conferences

- Robbert Voorhoeve, Annemiek van Rietschoten, Egon Geerardyn, and Tom Oomen. "Identification of High-Tech Motion Systems: An Active Vibration Isolation Benchmark". In: *17th IFAC Symposium on System Identification SYSID 2015 Beijing, China, 19-21 October 2015*. Vol. 48. 28. 2015, pp. 1250-1255. DOI: 10.1016/j.ifacol.2015.12.303
- Egon Geerardyn, Tom Oomen, and Johan Schoukens. "Enhancing \mathcal{H}_∞ 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, and Johan Schoukens. "Improving the \mathcal{H}_∞ 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, and 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, and 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, and 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