

# Sofie R. Waltl

*Curriculum Vitae – February 2018*

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## Personal Details and Contact Information

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## Education

- 2014–2017 **Doctorate (Dr. rer. soc. oec.) in Economics**, *University of Graz*, Graz, Austria.
  - Degree with distinction (Defence date: 26 January 2017)
  - Dissertation: *Modelling Housing Markets: Issues in Economic Measurement*
  - Supervisor: Robert J. Hill
  - Dissertation examiners: Robert J. Hill and Daniel P. McMillen
- 2011–2013 **Master's degree (DI<sup>1</sup>) in Financial and Actuarial Mathematics**, *Graz University of Technology*, Graz, Austria.
  - Degree with distinction (Defence date: 19 December 2013)
  - Concentration on Statistical Modelling
  - Master's Thesis: *Standard Errors in Negative Binomial Models with Random Effects*. (Supervisor: Herwig Friedl)
- 2009 **Exchange semester**, *University of Puerto Rico*, San Juan, Puerto Rico, USA.
  - Courses in Mathematics, Inter-cultural Communication and Spanish
  - Languages of instruction: English and Spanish
- 2007–2011 **Bachelor's degree (BSc) in Mathematics**, *University of Graz*, Graz, Austria.
  - Bachelor's Thesis: *Modelling a Heat Pump System to Determine the Appropriate Separation between Collectors in the Earth*. (Supervisor: Stephen Keeling)
- 2003–2007 **High School**, *BORG Deutschlandsberg*, Deutschlandsberg, Austria.
  - School leaving exam ("Matura") passed with distinction
  - Areas of concentration: Languages (English, Spanish, Latin) and Mathematics

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## Experience

- since Oct 2017 **Researcher**, *Luxembourg Institute of Socio-Economic Research (LISER)*, Luxembourg.  
Research on measurement issues related to housing markets, (housing) wealth and its distribution
- Feb – Sept 2017 **PhD Trainee**, *European Central Bank, Frankfurt am Main*, Germany.  
Directorate General Statistics. Linking macro (national accounts) and micro (Household Finance and Consumption Survey) data on wealth with the long-term goal to compile Distributional National Accounts and to better understand the distribution of wealth in Europe.
- Oct 2013 – Sept 2016 **Graduate Research Associate**, *University of Graz, Department of Economics*, Austria.  
Research on modelling housing markets and the construction of house price indices (sponsored by the Austrian National Bank, Jubiläumsfonds).

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<sup>1</sup>The Austrian degree DI ("Diplom-Ingenieurin") is internationally equivalent to a MSc degree.

2010 – 2016 **Lecturing**, *University of Graz and Graz University of Technology, Austria*.  
Teaching assistant for Econometrics I and II, Preparation course for Master's students: Introduction to Programming with R, Mathematics for Engineers I and II, Linear Algebra for Physicists, Linear Algebra for Mathematicians, Introduction to Programming with MATLAB

### Research Visits / Visiting Scholar Positions

March 2018 **Vienna University of Economics and Business, Austria**.  
One-week research visit at the institute *Economics of Inequality*.

Oct 2016 – **University of California, Berkeley, USA**.  
Jan 2017 Three-months graduate research stay as visiting scholar at the *Institute of European Studies* sponsored by the Austrian Marshall Plan Foundation.

### Internships

2012 **ecofinance / Reval, Graz, Austria, (1 month)**.  
Provider of cloud treasury software. Department: Product Management.

2011 **Hanover Re, Hanover, Germany, (6 months)**.  
Reinsurance company. Department: Advanced Solutions (department for structural reinsurance)

2010 **UniCredit Bank Austria, Vienna, Austria, (2 months)**.  
Department: Credit Risk Instruments and Methods. Statistical analysis (carried out with SAS) about customer attrition.

2005 **Oesterreichische Nationalbank (Austrian National Bank), Vienna, Austria, (1 month)**.  
Department: Foreign Research Division.

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## Publications

- (1) [Estimating Quantile-Specific Rental Yields for Residential Housing in Sydney](#), *Regional Science and Urban Economics* 68, 2018, 204–225.
- (2) [Variation across price segments and locations: A comprehensive quantile regression analysis of the Sydney housing market](#), *Real Estate Economics*, forthcoming, doi: 10.1111/1540-6229.12177.
- (3) [A hedonic house price index in continuous time](#), *International Journal of Housing Markets and Analysis* 9(4), 2016, 648–670.

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## Articles under Review / Working Papers

- (1) (with R. Hill, M. Steurer) Owner Occupied Housing in the CPI and Its Impact On Monetary Policy During Housing Booms and Busts (working paper)
- (2) (with R. Chakraborty) Missing the wealthy in the HFCS: Micro problems with macro implications (working paper)

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## Grants

2017 **Austrian Academy of Sciences**, “Young Scientist” scholarship to participate in the *6th Lindau Meeting on Economic Sciences (67th Lindau Nobel Laureate Meeting)*.

2017 **American Real Estate and Urban Economics Association (AREUEA)**, Travel grant to participate in the AREUEA/ASSA Conference January 2017 in Chicago, USA.

2016 **Austrian Marshall Plan Foundation**, Research grant (EUR 5,000) funding a graduate research project at the University of California, Berkeley.

2016 **Lincoln Institute of Land Policy**, Travel grant and stipend to participate in the Lincoln Institute Scholars Program in May 2016 in Cambridge, MA, USA.

- 2014 **Council of the University of Graz/Steiermärkische Sparkasse (“JungforscherInnen-Fonds”)**, *Research grant (EUR 24,000) competitively awarded based on the doctoral research proposal to four top-ranked doctoral students at the University of Graz.*

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## Awards, Scholarships, and Competitions

- 2017 **Award of Excellence – Staatspreis für die besten Dissertationen.** The price is awarded annually by the Austrian Ministry of Science, Research and Economy recognizing the 40 best doctoral dissertations completed during an academic year at any Austrian university and covers any subject.
- 2017 Recognition award for the dissertation *Modelling Housing Markets: Issues in Economic Measurement* by the **Dr. Maria Schaumayer Stiftung**
- 2015 & 2017 Performance Scholarship (“Leistungsstipendium”) recognizing excellent academic performance (number of credit points and weighted grade point average) awarded by the School of Business, Economics and Social Sciences at the University of Graz and sponsored by the Federal Ministry of Science, Research and Economy
- 2015 & 2016 Scholarship by the **Club Alpbach Steiermark** to participate in the **European Forum Alpbach**
- 2014 – 2017 Scholarship by the Austrian Academic Scholarship Foundation **Pro Scientia**
- 2013 Talents@Alpbach – Scholarship sponsored by the Austrian Ministry for Transport, Innovation and Technology to participate in the Technology Symposium at the **European Forum Alpbach**
- 2012 & 2013 Performance Scholarship (“Leistungsstipendium”) recognizing excellent academic performance (number of credit points and weighted grade point average) awarded by the Faculty of Mathematics, Physics and Geodesy at the Graz University of Technology and sponsored by the Federal Ministry of Science, Research and Economy
- 2010 3rd place in the **International Mathematics Olympiad** for Bachelor students in Tehran, Iran (participation sponsored by the Embassy of Austria in Iran).

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## Presentations and Talks (incl. scheduled)

### Conferences and Seminars

#### 2018

- August **35th General Conference of the International Association for Research in Income and Wealth**, *Measuring Wealth Inequality in Europe: A Quest for the Missing Wealthy* (preliminary title), Copenhagen, Denmark.
- April 25 **STATEC (Statistical Institute of Luxembourg)**, *Owner Occupied Housing in the CPI and Its Impact On Monetary Policy During Housing Booms and Busts*, Luxembourg.
- March 15 **Oesterreichische Nationalbank (Austrian National Bank)**, *Measuring Wealth Inequality in Europe: A Quest for the Missing Wealthy*, Vienna, Austria.
- March 13 **Vienna University of Economics and Business, Institute “Economics of Inequality”**, *Measuring Wealth Inequality in Europe: A Quest for the Missing Wealthy*, Vienna, Austria.
- Feb 22 **Luxembourg Ministry of Housing**, *Do people know their wealth? Reliability of self-assessed house prices and rents*, Luxembourg.

#### 2017

- Dec 15 **First WID.world Conference**, *Missing the wealthy in the HFCS: Micro problems with macro implications*, Paris School of Economics, Paris, France.
- Nov 21 **User Workshop of the Eurosystem Household Finance and Consumption Survey**, *Missing the wealthy in the HFCS: Micro problems with macro implications*, European Central Bank, Frankfurt, Germany.
- Sept 26 **University of Graz, Department of Economics**, *Measuring Wealth Inequality in Europe: A Quest for the Missing Wealthy*, Graz, Austria.

- Aug 24 **Deutsche Bundesbank (German Central Bank)**, *Missing the wealthy in the HFCS: Micro problems with macro implications*, Frankfurt am Main, Germany.
- June 29 **5th Luxembourg Workshop on Household Finance and Consumption**, *Missing the wealthy in the HFCS: Micro problems with macro implications*, Central Bank of Luxembourg, Luxembourg.
- June 7 **Meeting of the Expert Group on Linking Macro and Micro Statistics for the Household Sector**, *Missing the wealthy in the HFCS: Micro problems with macro implications*, European Central Bank, Frankfurt am Main, Germany.
- Jan 30 **Luxembourg Institute of Socio-Economic Research (LISER)**, *Variation across price segments and locations: A comprehensive quantile regression analysis of the Sydney housing market*, Esch-sur-Alzette/Belval, Luxembourg.
- Jan 5 **American Real Estate and Urban Economics Association (AREUEA) Doctoral Poster Session, AREUEA/ASSA Conference**, *Variation across price segments and locations: A comprehensive quantile regression analysis of the Sydney housing market*, Chicago, IL, USA.
- [2016](#)
- Oct 6 **Oesterreichische Nationalbank (Austrian National Bank)**, *Estimating aggregate quantile-specific gross rental yields for residential housing in Sydney*, Vienna, Austria, invited talk.
- May 4 **Lincoln Institute Scholars Program**, *Estimating aggregate quantile-specific, quality-adjusted rental yields for residential housing*, Lincoln Institute of Land Policy, Cambridge, MA, USA.
- April 19 **Economic Research Seminar**, *Estimating aggregate quantile-specific, quality-adjusted rental yields for residential housing*, Department of Economics at the University of Graz, Austria.
- April 5 **Regional Studies Association Annual Conference**, *Variation across price segments and locations: A comprehensive quantile regression analysis of the Sydney housing market*, University of Graz, Austria.
- Jan 15 **ISW Workshop on Empirical Economics**, *Variation across price segments and locations: A comprehensive quantile regression analysis of the Sydney housing market*, WIFO (Austrian Institute of Economic Research) in Vienna, Austria.
- [2015](#)
- July 22 **Conference of the Society for Economic Measurement**, *Going beyond averages: Quantile-specific house price indices*, OECD headquarter in Paris, France, invited talk.
- June 6 **Annual Meeting of the Austrian Economic Association**, *A hedonic house price index in continuous time*, University of Klagenfurt, Austria.
- [2014](#)
- Dec 17 **Workshop on Improvements in Price Index Methodology and Practice: The International Comparisons Program (ICP) and the Measurement of Movements in House Prices**, *A Quantile Regression approach to constructing House Price Indices*, University of Graz, Austria.
- Dec 3 **Faculty Research Seminar**, *House Price Indices. Why measurement matters and how it can be done*, Faculty of Social and Economic Sciences at the University of Graz, Austria.
- Oct 18 **19th Young Statisticians Meeting**, *The Calculation of Standard Errors in the Random Effect Negative Binomial Model*, Basovizza, Italy, invited talk.
- Aug 20 **Inaugural Conference of the Society for Economic Measurement**, *Continuous Time Hedonic Methods: A New Way to Construct House Price Indices*, University of Chicago Booth School of Business, USA.
- [Science to Public](#)
- March 19, 2018 **What it's like to be an economist?**, Talk in the course of the program *Chercheurs à l'école* by the Luxembourg National Research Fund that brings researchers to local high schools to inspire the next generation of researchers, Luxembourg.

- March 7, 2016 **Randomness in Science. Examples from Economic Theory and Financial Mathematics**, *Pro Scientia*, Graz, Austria.
- Jan 13, 2016 **Hedonic methods in a housing context**, *Scholarship holders' colloquium JungforscherInnen-Fonds*, University of Graz, Austria.
- Nov 23, 2015 **How rational are we? The limitations of Homo Economicus**, *Pro Scientia*, Graz, Austria.
- Sept 6 & 8, 2015 **Super Size Me – Workshop on Mathematical Modelling** (transforming thoughts into equations; usage of mathematics to answer everyday life's questions; understanding of modelling as a simplification of the world; how to interpret model results taking into account simplifications), *Pro Scientia*, Celje, Slovenia, (workshop).
- March 23, 2015 **Modelling Housing Markets. Why measurement matters and how it can be done**, *Pro Scientia*, Graz, Austria.
- Dec 3, 2014 **Bayes' Theorem**, *Pro Scientia*, Graz, Austria.
- April 9, 2014 **Game Theory**, *Pro Scientia*, Graz, Austria.
- summer term, 2010 **The Golden Section**, Mathematical workshops for secondary school students in co-operation with Bernd Thaller (University of Graz), Wies, Austria, (workshop).

## Workshops, Additional Course Work, and Professional Meetings

- April 2018 **OECD Conference on wealth inequalities: Measurement and policies**, OECD, Paris, France.
- May 2017 **15th Meeting of the Ottawa Group (International Working Group On Price Indices)**, hosted by Deutsche Bundesbank, Eltville am Rhein, Germany.
- Oct 2016 – Jan 2017 **UC Berkeley**, *Auditing classes in Macroeconomics, Urban Economics, Real Estate Economics, and Economics and Psychology*, Berkeley, CA, USA.
- July 2016 **The Macroeconomics of Credit and Asset Bubbles**, *Barcelona Graduate School of Economics: Macroeconomics Summer School*, 5 days, Instructor: Jaume Ventura, Barcelona, Spain.
- Sept 2015 **Generalized Additive Models based on the R Package mgcv**, *Graz University of Technology*, 2 days, Instructor: Simon Wood, Graz, Austria.
- March – June 2014 **Baysian Statistics**, *Vienna University of Technology*, One-semester course, Vienna, Austria.

## Referee for the following journals

- Journal of Policy Analysis and Management
- Journal of Real Estate Research
- Regional Science and Urban Economics
- Review of Income and Wealth

## Memberships

American Real Estate and Urban Economics Association (AREUEA), International Association for Research in Income and Wealth (IARIW), Society for Economic Measurement (SEM)

## Languages

**German** (native), **English** (fluent), **Spanish** (intermediate), **French** (very basic)

## Miscellaneous

- IG Alpbach Graz Vice-president of the Initiative Group Alpbach Graz (student organization to the [Club Alpbach Steiermark](#)), October 2015 – September 2016

- Pro Scientia Elected representative of the scholarship holders in Graz February 2015 – February 2016; and elected national representative September 2015 – September 2016; member of the scientific program development committee for the Pro Scientia Summer Academy 2016
- ECG Since 2016, I am a member of the advisory board of the [Economics Club Graz](#) and occasionally I also contribute to the [Graz Economics Blog](#).
- EFA Seminar assistant for the seminar *Macroeconomic Imbalances in Europe – Is the European Monetary Union doomed to survive?* at the European Forum Alpbach (Hans-Helmut Kotz, Helene Schuberth, Gertrude Tumpel-Gugerell), Austria, August 2015
- Austrian Students' Union Elected representative of the doctoral students of social and economic sciences at the University of Graz; main achievement: establishing funding opportunities for research activities for doctoral students at the faculty, July 2015 – January 2017
- CUKO Member of the curriculum commission responsible for developing and revising the curriculum for the faculty's doctoral programme at the Faculty of Social and Economic Sciences at the University of Graz, Austria, 2015 – 2016
- Consulting Workshops Participant in the following workshops
- o *Campus 2013*: Seminars and workshops on Microeconomics, Corporate Finance, Strategy and Supply Chain Management (5 days) held by McKinsey, Kitzbühel, Austria, March 2013
  - o *Science in Finance*: Workshop on Financial Mathematics (3 days) held by d-fine, Kronberg im Taunus, Germany, November 2012
  - o *Green Energy at BCG*: Strategy workshop on Renewable Energy (3 days) held by the Boston Consulting Group, Munich, Germany, July 2012
- AIESEC AIESEC is the world's largest student-run nonprofit organization ("The international platform for young people to explore and develop their leadership potential."). Member of the local committee Graz, Austria, 2008–2012. Special functions: member of the *Communications Team*; project leader *Sustainable Development*; president of the organizational committee on an international conference about Sustainable Development held in Bruck/Mur, Austria.
- Train the Trainer Workshop on Presentation Techniques, Facilitation and Training Methods (organized by AIESEC), Salzburg, Austria, 2009
- ProjectEDU Participation in a seminar (10 days) on Non-formal Education and Intercultural Communication (organized by AIESEC), Tallinn, Estonia, 2008
- Mathematical Modelling Participant in the [Week of Mathematical Modelling](#) for highly skilled high school students organized by the University of Graz (Topic: *The Spread of Infectious Diseases*), Schloss Seggau, Austria, 2006