

CONTACT INFORMATION	University of Glasgow School of Mathematics and Statistics University Place Glasgow G12 8QQ	E-mail: Agnieszka.Borowska@glasgow.ac.uk Website: aborowska.github.io
RESEARCH INTERESTS	Bayesian statistics, computational statistics, high-dimensional problems, Monte Carlo methods, time series, state space models, rare events	
CURRENT POSITION	University of Glasgow , UK Postdoctoral researcher in Statistics (with Prof. Dirk Husmeier) Position within the SoftMech Centre (an EPSRC centre for Multiscale Soft Tissue Mechanics)	from May 2018
EDUCATION	VU Amsterdam and Tinbergen Institute , The Netherlands Ph.D. in Econometrics Title: <i>Methods for Accurate and Efficient Bayesian Analysis of Time Series</i> Supervisors: Prof. Siem Jan Koopman and Dr Lennart Hoogerheide	Jul. 2019
	Tinbergen Institute and VU Amsterdam , The Netherlands M.Phil. in Econometrics	Aug. 2015
	University of Warsaw , Poland Faculty of Mathematics, Informatics and Mechanics B.Sc. in Mathematics <i>minor</i> : Probability Theory	Sep. 2013
	Warsaw School of Economics , Poland M.Sc. in Economics, <i>major</i> : Macroeconomic Analysis	Jan. 2012
	Warsaw School of Economics , Poland B.Sc. in Economics, <i>major</i> : Macroeconomic Analysis <i>minor</i> : Computational and Optimisation Methods in Decision Making	Jul. 2009
VISITS AND EXCHANGES	University of Edinburgh , UK Postgraduate Research Visit at the School of Mathematics Host Supervisor: Prof. Ruth King	Apr. 2017 – Jun. 2017
	University of Göttingen , Germany Faculty of Economics and Business Administration M.Sc. programme, exchange within the Erasmus Programme	Sep. 2010 – Feb. 2011
PUBLICATIONS	JOURNALS	
	<i>Partially Censored Posterior for Robust and Efficient Risk Evaluation</i> with Lennart Hoogerheide, Siem Jan Koopman and Herman K. van Dijk <i>Journal of Econometrics</i> , 2020	
	<i>Time-varying Combinations of Bayesian Dynamic Models and Equity Momentum Strategies</i> with Nalan Baştürk, Stefano Grassi, Lennart Hoogerheide and Herman K. van Dijk <i>Journal of Econometrics</i> , 2018	
	<i>Bayesian Dynamic Modeling of High-Frequency Integer Price Changes</i> with István Barra and Siem Jan Koopman <i>Journal of Financial Econometrics</i> , 2018	
	CONFERENCES	
	<i>Massive Dimensionality Reduction for the Left Ventricular Mesh</i> with Lukasz Romaszko, Alan Lazarus, Hao Gao, Xiaoyu Luo and Dirk Husmeier <i>Proceedings of the International Conference on Statistics: Theory and Applications</i> 2019	
	<i>Direct Learning Left Ventricular Meshes from CMR Images</i> with Lukasz Romaszko, Alan Lazarus, Hao Gao, Xiaoyu Luo and Dirk Husmeier <i>Proceedings of the International Conference on Statistics: Theory and Applications</i> 2019	

SUBMITTED	<i>Efficient Bayesian Risk Estimation for Long Horizons</i> with Lennart Hoogerheide and Siem Jan Koopman (submitted to <i>Computational Statistics and Data Analysis</i>)	
	<i>Semi-Complete Data Augmentation for Efficient State Space Model Fitting</i> with Ruth King (submitted to <i>Journal of Computational and Graphical Statistics</i>)	
	<i>Gaussian Process Enhanced Semi-Automatic ABC: Parameter Inference in a Stochastic Differential Equation System for Chemotaxis,</i> with Diana Giurghita and Dirk Husmeier (submitted to <i>Journal of Computation Physics</i>)	
ONGOING RESEARCH	<i>Bayesian Optimisation for Parameter Inference in Cardio-Mechanic Models</i> with Dirk Husmeier, Alan Lazarus, Hao Gao and Xiaoyu Luo	
	<i>Bayesian Risk Evaluation for State-Space Models</i> with Lennart Hoogerheide and Siem Jan Koopman	
SERVICE	Reviewing for: <i>Annals of Applied Statistics, Journal of Financial Econometrics, Statistical Applications in Genetics and Molecular Biology, Computational Economics</i>	
SELECTED CONFERENCE AND SEMINAR PRESENTATIONS ([P]–POSTER)	British Applied Mathematics Colloquium (scheduled), Glasgow, UK, Poland	6–9 Apr. 2020
	Seminar Series of the Division of Aerodynamics, Warsaw University of Technology, Warsaw, Poland	12 Dec. 2019
	3rd Annual Workshop on Financial Econometrics , Örebro, Sweden	11–12 Nov. 2019
	10th European Seminar on Bayesian Econometrics [P], St Andrews, UK	2–3 Sep. 2019
	International Conference on Statistics: Theory and Applications, Lisbon, Portugal	13–14 Aug. 2019
	39th International Symposium on Forecasting, Thessaloniki, Greece	16–19 Jun. 2019
	Workshop on Uncertainty Quantification for Cardiac Models [P], Cambridge, UK	5–7 Jun. 2019
	Cside 2018 Conference, Glasgow, UK	26 Nov. 2018
	2nd Joint Liverpool-Glasgow Maths Healthcare Centre Meeting, Liverpool, UK	30 Aug. 2018
	4th Bayesian Young Statisticians Meeting, Warwick, UK	02 – 03 Jul. 2018
	12th Netherlands Econometric Study Group Meeting [P], Amsterdam, The Netherlands	25 May 2018
	1st Bayes Comp [P], Barcelona, Spain	26– 28 Mar. 2018
	10th International Conference of the ERCIM WG on Computational and Methodological Statistics [P], London, UK	16– 18 Dec. 2017
	8th European Seminar on Bayesian Econometrics, Maastricht, The Netherlands	26–27 Oct. 2017
	Sequential Monte Carlo Workshop 2017 [P], Uppsala, Sweden	30 Aug. – 1 Sep. 2017
	1st International Conference on Econometrics and Statistics, Hong Kong	15–17 Jun. 2017
	Statistics Seminar Series of the School of Mathematics, Edinburgh, UK	19 May 2017
	10th International Conference on Computational and Financial Econometrics, Seville, Spain	9–11 Dec. 2016
	3rd Bayesian Young Statisticians Meeting, Florence, Italy	20–21 Jun. 2016
	11th Netherlands Econometric Study Group Meeting [P], Leuven, Belgium	17–18 Jun. 2016

SELECTED PROFESSIONAL RESEARCH EXPERIENCE	University of Warsaw, Poland	
	<i>Researcher</i>	Feb. 2012 – Sep. 2014
	Pension system reform modelling within the OLG framework under time inconsistency; welfare analysis of various fiscal closures; numerical model solving in Fortran; paper writing and editing.	
	National Bank of Poland, Warsaw, Poland	
	<i>Internship in the Economics Institute, Monetary Policy Strategy Bureau</i>	Aug. 2009
	Comparison and evaluation of the communication tools and institutional solutions implemented in selected central banks.	
PROJECT FUNDING	SoftTMech Feasibility Fund (10,000 GBP)	Jan. – Mar. 2020
	co-investigator and co-supervisor (with Dirk Husmeier, Alan Lazarus and Hao Gao) A follow-up 3-month study on the 2019 project to employ a postdoc to develop a large-scale convolutional neural network for direct learning of 3D geometries from images as well as to perform deep-learning based classification of medical images.	
	SoftTMech Feasibility Fund (10,000 GBP)	Jan. – Mar. 2019
	co-investigator and co-supervisor (with Dirk Husmeier and Hao Gao) A 3-month project employing a postdoc to investigate the usefulness of deep learning techniques for dimensionality reduction of 3D geometries and for direct learning these geometries from image data.	
TRAVEL GRANTS, AWARDS AND SCHOLARSHIPS	Örebro University School of Business travel funding (650 EUR)	
	to attend Workshop on Financial Econometrics, Örebro, Sweden	Sep. 2019
	International Institute of Forecasters travel award (1660 USD)	
	to attend ISF 2019 and the forecasting summer school	Mar. 2019
	Cside 2018 1st place prize (250 GBP)	
	for 2 subcompetitions for SDE models	Nov. 2018
	ISBA travel award to attend BAYSM 2018 (400 USD)	Apr. 2018
	SMC 2017 scholarship (15,000 SEK \approx 1600 EUR)	Aug. 2017
	to attend the SMC 2017 workshop and the intensive course	
	Tinbergen Institute merit-based scholarship (30,000 EUR)	
	Tinbergen Institute, full scholarship, 2 years of MPhil	Sep. 2013 – Aug. 2015
	Student Exchange Scholarship	
	Warsaw School of Economics, the LLP Erasmus	Sep. 2010 – Feb. 2011
	Scholarship for excellent academic achievements	
	Warsaw School of Economics	Oct. 2007 – Sep. 2010
TEACHING EXPERIENCE	University of Glasgow, UK	
	<i>Honours and MSc Projects supervision (Statistics)</i>	2018/2019
	Co-supervision with Dirk Husmeier	
	VU Amsterdam, the Netherlands	
	<i>Econometrics II (B.Sc. course)</i>	Feb. – Mar. 2017
	Teaching Assistant of Lennart Hoogerheide	
	<i>Business Mathematics (B.Sc. course, evaluation: 3.8/5)</i>	Sep. – Oct. 2016
	<i>Business Statistics (B.Sc. course, evaluation: 4.1/5)</i>	Feb. – Mar. 2016
	Tinbergen Institute, Amsterdam, the Netherlands	
	<i>Advanced Econometrics II (M.Phil. course, evaluation: 4.1/5)</i>	Jan. – Feb. 2015
	Teaching Assistant of Kees Jan van Garderen	
	<i>Measure Theory and Stochastic Processes (M.Phil. course, evaluation: 4.2/5)</i>	Sep. – Oct. 2014
	Teaching Assistant of Peter J. C. Spreij	

ADDITIONAL COURSES AND TRAININGS	Forecasting Summer School		
	Thessaloniki, Greece		Jun. 2019
	Probabilistic forecasting (scoring rules, combining predictive distributions)		
	Scalable Bayesian Inference		
	Edinburgh, UK		Jun. 2018
	Scalable algorithms for large datasets (embarrassingly parallel MCMC, approximate MCMC), scalable Bayesian methods for very high-dimensional data analysis		
	Workshop on Machine Learning Models and Methods for Econometricians		
	Maastricht, The Netherlands		Oct. 2017
	Gaussian processes, distributed and subsampling MCMC, variational Bayes, deep learning		
	Intensive PhD level course on Sequential Monte Carlo Methods		
	Uppsala University, Sweden		Aug. 2017
	Particle MCMC, high-dimensional filtering, SMC for probabilistic graphical models and probabilistic programming		
	Reading Group on Bayesian Nonparametrics		
	University of Edinburgh, UK		May – Jun. 2017
	Introduction to Dirichlet process and their mixtures, Bayesian nonparametric regression		
	Course on High Performance Computing		
	VU Amsterdam, The Netherlands		Oct. 2016
	Basics of Unix and cluster computing, Hadoop and data analytics, GPU programming, HPC cloud		
	Summer School in Applied Macroeconomics		
	University of Salento, Lecce, Italy		Jul. 2012
	Programming in Matlab, VAR for monetary policy, state space models and the Kalman Filter		
COMPUTER SKILLS	Strong experience in MATLAB, R, Fortran		
	Some experience with Python, C/C++, BUGS/JAGS		
	Familiarity with EViews, Stata, SPSS		
	Other: L ^A T _E X, Linux, GitHub		
LANGUAGE SKILLS	Polish (native), English (fluent), German (good command),		
	Russian (intermediate), French (basic), Dutch (basic)		
REFERENCES	Prof. Siem Jan Koopman		Prof. Dirk Husmeier
	Department of Econometrics and OR		School of Mathematics and Statistics
	Vrije Universiteit Amsterdam,		University of Glasgow,
	s.j.koopman@vu.nl		Dirk.Husmeier@glasgow.ac.uk
	Dr Lennart Hoogerheide		Prof. Ruth King
	Department of Econometrics and OR		School of Mathematics,
	Vrije Universiteit Amsterdam,		The University of Edinburgh,
	l.f.hoogerheide@vu.nl		ruth.king@ed.ac.uk
	Prof. Herman K. van Dijk		
	Econometric Institute,		
	Erasmus University Rotterdam,		
	hkvandijk@ese.eur.nl		