CONTACT University of Glasgow E-mail: Agnieszka.Borowska@glasgow.ac.uk

Information School of Mathematics and Statistics Website: aborowska.github.io

University Place Glasgow G12 8QQ

RESEARCH INTERESTS Bayesian methods, Monte Carlo methods, state space models, computational statistics, rare events

Current University of Glasgow, UK

from May 2018

Position Postdoctoral researcher in Statistics (with Prof. Dirk Husmeier),

Position within the SoftMech Centre (an EPSRC centre for Multiscale Soft Tissue Mechanics)

EDUCATION VU Amsterdam, The Netherland,

Jul. 2019

Ph.D. in Econometrics,

Supervisors: Prof. Siem Jan Koopman and Dr Lennart. Hoogerheide

Tinbergen Institute and VU Amsterdam, The Netherlands Aug. 2015

M.Phil., major: Econometrics, minor: Macroeconomics

University of Warsaw, Poland Sep. 2013

Faculty of Mathematics, Informatics and Mechanics B.Sc. in Mathematics, *minor:* Probability Theory

Warsaw School of Economics, Poland Jan. 2012

M.Sc. in Economics, major: Macroeconomic Analysis

Warsaw School of Economics, Poland Jul. 2009

B.Sc. in Economics, major: Macroeconomic Analysis,

minor: Computational and Optimisation Methods in Decision Making

VISITS AND University of Edinburgh, UK

Apr. 2017 – Jun. 2017

EXCHANGES Postgraduate Research Visit at the School of Mathematics,

Host Supervisor: Prof. Ruth King

University of Göttingen, Germany Sep. 2010 – Feb. 2011

Faculty of Economics and Business Administration

M.Sc. programme, exchange within the Erasmus Programme

Publications Journals

Partially Censored Posterior for Robust and Efficient Risk Evaluation, with Lennart Hoogerheide, Siem Jan Koopman and Herman K. van Dijk,

Journal of Econometrics, 2019 (forthcoming)

Time-varying Combinations of Bayesian Dynamic Models and Equity Momentum Strategies,

with Nalan Baştürk, Stefano Grassi, Lennart Hoogerheide and Herman K. van Dijk,

Journal of Econometrics, 2018

Bayesian Dynamic Modeling of High-Frequency Integer Price Changes,

with István Barra and Siem Jan Koopman, Journal of Financial Econometrics, 2018

Conferences

Massive Dimensionality Reduction for the Left Ventricular Mesh,

with Lukasz Romaszko, Alan Lazarus, Hao Gao, Xiaoyu Luo and Dirk Husmeier,

Proceedings of the International Conference on Statistics: Theory and Applications, 2019

Direct Learning Left Ventricular Meshes from CMR Images,

with Lukasz Romaszko, Alan Lazarus, Hao Gao, Xiaoyu Luo and Dirk Husmeier,

Proceedings of the International Conference on Statistics: Theory and Applications, 2019

WORKING PAPERS	Bayesian Risk Forecasting for Long Horizons, with Lennart Hoogerheide and Siem Jan Koopman			
	Semi-Complete Data Augmentation for Efficient State Space Model Fitting, with Ruth King			
	Gaussian Process Enhanced Semi-Automatic ABC: Parameter Inference in a Stochastic Differential Equation System for Chemotaxis, with Diana Giurghita and Dirk Husmeier			
Ongoing Research	Bayesian Optimisation for Left Ventricle Biomechanical Models, with Dirk Husmeier, Hao Gao and Xiaoyu Luo			
	Bayesian Risk Evaluation for State-Space Models, with Lennart Hoogerheide and Siem Jan Koopman			
Conference and Seminar Presentations ([P]-poster)	${\bf 10th~European~Seminar~on~Bayesian~Econometrics~[P]}$ (scheduled), St Andrews, UK	2–3 Sep. 2019	)	
	$\label{lem:conference} \textbf{International Conference on Statistics: Theory and Applications}, \\ Lisbon, Portugal$	13–14 Aug. 2019	)	
	<b>39th International Symposium on Forecasting</b> , 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	í	
	${\bf 2nd}$ 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 Methodological Statistics [P], London, UK	onal 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	0.11 D		

and Financial Econometrics, Seville, Spain

Leuven, Belgium

3rd Bayesian Young Statisticians Meeting, Florence, Italy11th Netherlands Econometric Study Group Meeting [P],

Econometrics Brown Bag Seminar, Amsterdam, The Netherlands

TI Ph.D. Lunch Seminar, Amsterdam, The Netherlands

9-11 Dec. 2016

20-21 Jun. 2016

17-18 Jun. 2016

 $24~\mathrm{May}~2016$ 

21 Jan. 2016

TRAVEL GRANTS AND SCHOLARSHIPS	IIF travel award grant to attend ISF 2019 and the forecasting sun International Institute of Forecasters	nmer school Mar. 2019
	Cside 2018 1st place prize (2 subcompetitions for SDE models)	Nov. 2018
	ISBA travel award to attend BAYSM 2018	Apr. 2018
	SMC2017 scholarship to attend the workshop and the intensive co	ourse Aug. 2017
	Tinbergen Institute merit-based scholarship Tinbergen Institute, full scholarship, first and second year	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  Honours and MSc Projects supervision (Statistics)  Co-supervision with Dirk Husmeier	2018/2019
	VU Amsterdam, the Netherlands  Econometrics II (B.Sc. course)  Teaching Assistant of Lennart Hoogerheide	Feb. – Mar. 2017
	Business Mathematics (B.Sc. course, evaluation: 3.8/5)	Sep. – Oct. 2016
	Business Statistics (B.Sc. course, evaluation: 4.1/5)	Feb. – Mar. 2016
	<b>Tinbergen Institute</b> , Amsterdam, the Netherlands <i>Advanced Econometrics II</i> (M.Phil. course, evaluation: 4.1/5) Teaching Assistant of Kees Jan van Garderen	Jan. – Feb. 2015
	Measure Theory and Stochastic Processes (M.Phil. course, evaluation: 4.2/5	Sep. – Oct. 2014

## PROFESSIONAL AND RESEARCH EXPERIENCE

## University of Warsaw, Poland

Researcher

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.

## Civil Development Forum, Warsaw, Poland

Internship in the Analytical Department

Teaching Assistant of Peter J. C. Spreij

Jul. 2010

Analysis of the privatisation process in Poland; comparison of fiscal policy rules in selected EU countries; development of a database on fiscal stability reforms in the EU.

## National Bank of Poland, Warsaw, Poland

Internship in the Economics Institute, Monetary Policy Strategy Bureau Aug. 2009 Comparison and evaluation of the communication tools and institutional solutions implemented in selected central banks worldwide.

Additional Courses and Trainings Forecasting Summer School

Thessaloniki, Greece

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
Gaussian processes, distributed and subsampling MCMC, variational Bayes, deep ;earning

Intensive PhD level course on Sequential Monte Carlo Methods

Uppsala University, Sweden

Aug. 2017

Oct. 2017

Jun. 2019

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 nonparamteric 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, Fortran, R

Limited experience with Python, C/C++, BUGS/JAGS

Familiarity with EViews, Stata, SPSS

Other: LATEX, Linux, GitHub

FOREIGN LANGUAGES

Referees

Polish (native), English (fluent), German (good command), Russian (intermediate), French (basic), Dutch (basic)

Prof. Siem Jan Koopman

The Department of Econometrics

Vrije Universiteit Amsterdam, e-mail: s.j.koopman@vu.nl

Dr Lennart Hoogerheide

The Department of Econometrics

Vrije Universiteit Amsterdam, e-mail: 1.f.hoogerheide@vu.nl

Prof. Ruth King

The School of Mathematics,

The University of Edinburgh, e-mail: ruth.king@ed.ac.uk

Prof. Herman K. van Dijk

Econometric Institute,

Erasmus University Rotterdam, e-mail: hkvandijk@ese.eur.nl