

PERSONAL INFORMATION

Augier Stanislas

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WORK EXPERIENCE

Nov 2019–Aug 2020

Research Project in Economics

SGH Warsaw School of Economics, Warsaw (Poland)

This project involves both behavioral economists and economic modelers working together on the macroeconomic impact of behavioural biases such as managerial overconfidence. My role is to build and analyze models based on the economic insights provided by the behavioral economists.

- We use agent-based models to link individual-firms behavior with macroeconomic performances.
- The project includes the calibration of models on Polish data to run forecasts and provide policy recommendations.
- Simulation are implemented in R.

Nov 2018–Apr 2019

Research Project in Economics

French Development Agency, Paris (France)

Working in a team of two, we developed a new methodology to estimate large scale multi-sectorial econometric models.

- We used continuous-time models to explicitly take into account the difference between stock and flow variables.
- Our methodology aims at selecting the most significant parameters to build econometric models with limited user-imposed constraints.
- We applied the methodology on Brasil, where we found promising results, though we were limited by the lack and low quality of the data. There is an ongoing project to apply it to the USA, for which better data are available.
- Codes are a mix of R and C++. They are parallelized on CPU using openMP to improve performances.

Jun 2018–Sep 2018

Economics Research Assistant

French Development Agency, Paris (France)

Working mostly in autonomy, I developed tools and resources to ease the modelling work of the AFD research team and help them presenting and spreading their work to other researchers.

- The core of the project was to build an R package for continuous time economic modeling. It regroups a large number of algorithms for simulation and analysis of economic models designed to be easy to handle for unexperimented users.
- A second part of the project was to write tutorials presenting this R package through applications on various economic models. These tutorials were written to serve as raw materials to teach economic modelling.

Jun 2017–Sep 2017

Financial Mathematics Research Assistant

John Von Neumann Institute, Ho-Chi-Minh City (Vietnam)

Assisting two researchers in a project which aimed at comparing different risk-forecasts methodologies, my work was to implement an algorithm to estimate non-linear state-space risk models.

- The methodology was applied on data from six different Asian financial marketplaces.
- I assessed the robustness of the methodology through back-testing on all data sets and showed that the algorithm provides on average better forecasts than other approaches based on GARCH models.
- The code is a mix of R and C++.

EDUCATION AND TRAINING

- Sep 2018– Jul 2019 **Economic Policies in the Age of Globalisation - Erasmus Mundus Master's Course**
Paris 13 University, Villetaneuse (France)
Political Economy and Finance
Thesis: *A Demand-Led Dynamic Stock-Flow-Consistent Monetary Macroeconomic Model of Global Warming*
Thesis Supervisors: Antoine Godin, Jennifer Churchill, Devrim Yilmaz
- Sep 2017–May 2018 **Economic Policies in the Age of Globalisation - Erasmus Mundus Master's Course**
Kingston University of London, London (United Kingdom)
Political Economy and Finance
- Sep 2015–Jul 2017 **Ingénieur Civil des Mines**
Ecole des Mines de St-Etienne, St-Etienne (France)
General engineering studies, majoring in Data Science
Elective courses in macroeconomics, international finance, high performance computing and operational Research.
- Sep 2016–Jul 2017 **Undergraduate Degree in Economics and Management**
Jean-Monet University, St-Etienne (France)
- Sep 2013–Jul 2015 **Scientific Preparatory Classes**
Blaise-Pascal high school, Clermont-Ferrand (France)
- Jul 2013 **Scientific Baccalaureat (final French secondary Diploma)**
Blaise-Pascal high school, Clermont-Ferrand (France)

PUBLICATIONS

Szyska, A., Rzeszutek, M., Augier, S. and Godin, A. (2020). *Managerial Overconfidence in Initial Public Offering Decisions and Its Impact on Macrodynamics and Financial Stability: Analysis Through an Agent-Based Model*. Available at SSRN: <https://ssrn.com/abstract=3514177> or <http://dx.doi.org/10.2139/ssrn.3514177>

PERSONAL CONTRIBUTIONS

Open Software

Numeric Tools for economic modeling

Since my first work at the French Development Agency, I kept writing open-source codes for continuous-time economic modeling.

- Recent contributions include global numerical analysis tools designed to analyze large scale models that can not be solved analytically.
- These codes are based on modern numerical algorithms such as cell-mapping methods.
- The codes are written in C++ with an R user-friendly interface. Most codes are parallelized on GPU using openCL or on CPU using openMP and are fully optimized to allow for very high performances.
- All codes can be found on my gitlab:
https://gitlab.com/Stanislasaugier/Applied_Dynamic_Economic_Modelling_R

PERSONAL SKILLS

Languages

French(mother tongue), english (Fluent), German (Basic knowledge)

Digital Skills

- Fluent in R and C++, including parallel programming using openMP and openCL.
- Good level in Matlab, Python, Java and VBA