

Research Interests

Artificial Neural Networks (R & Python) | Machine Learning | Data Science | Microeconomic estimators | Internet adoption | Trade Analysis | Complexity Modeling

Employment

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| 2017- | ECONOMIST ITU, GENEVA
Machine learning researcher; Economic impact of AI; developing ITU strategic targets |
| 2016-17 | RESEARCHER UNCTAD, GENEVA
Gender impact evaluation of FTAs on Developing Countries (East African Community), using Computation General Equilibrium programming (GTAP) |
| 2015-16 | ECONOMIST THE INTERNET SOCIETY, GENEVA
Paper on exogenous increase in availability of local language content and internet adoption, presented at EEA 2016 Conceptualised and executed report "Promoting Local Content in Africa" presented at Africa Internet Summit, leading to Google update advertising policy to help monetise African language content. |
| 2013-15 | RESEARCH CONSULTANT COGINTA, GENEVA / GUINEA
Directed a large scale representative baseline survey of Conakry (Guinea) population Conducted analysis for Canton of Geneva commissioned survey on police victimisation |
| 2014-15 | RESEARCH ASSISTANT CENTRE ON CONFLICT, DEVELOPMENT AND PEACEBUILDING
Collaborated with the "Institute Nationale du Developement Humaine" (govt. Morocco) to direct a survey on behaviour and community relations, using a Regression Discontinuity Design identification strategy |
| 2013-14 | RESEARCH ASSISTANT CENTRE FOR FINANCE AND DEVELOPMENT, GENEVA
Developed survey design on remittances from Geneva Redeveloped Centre's website |
| 2013-14 | TEACHING ASSISTANT THE GRADUATE INSTITUTE, GENEVA
Taught weekly Masters' Statistics workshops Supervised Masters' Research Projects |
| 2012 | RESEARCH CONSULTANT DUTCH DEVELOPMENT FINANCE INSTITUTE FMO, THE HAGUE
Designed and directed survey on implementation of environmental, social, and governance best practices among FMO-invested hedge funds |
| 2009 | RESEARCH ASSISTANT UNIVERSITY OF GRONINGEN, NETHERLANDS
Data collection and analysis for Ministry of Economics Affairs commissioned survey |

Education

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| 2012-16 | PHD IN DEVELOPMENT ECONOMICS THE GRADUATE INSTITUTE GENEVA
Jury: Richard Baldwin (president), Jean-Louis Arcand (supervisor) & Michael Kende
Internet Adoption in Africa Trade & Global Value Chains Gender and Child Growth |
| 2010-12 | MASTER IN QUANTITATIVE ECONOMICS AND FINANCE UNIVERSITY OF ST. GALLEN
Research for Dr. Piedro Veglio, Executive Director for Switzerland to The World Bank
Microhydropower in remote dev. countries, at The World Bank (D.C.) |
| 2006-10 | BSC ECONOMICS UNIVERSITY OF GRONINGEN |
| 2006-10 | BA THEORETICAL PHILOSOPHY UNIVERSITY OF GRONINGEN |

Selected Research Papers

- 2017 “Global Value Chains in LICs” | *CTEI Working Paper Series*
- 2016 “Making the Next Billion Demand Access” | *CFD Working Paper* | *G7 briefing notes*
- 2015 “decompr: GVC decomposition in R” | *CTEI Working Paper Series*
- 2014 “Cryptocurrencies and Inflation” | *CFD Working Paper Series*

Conference Presentations

- 2016 “Making the Next Billion Demand Access: The Local-Content Effect of google.co.za in Setswana” | *EEA Annual Conference 2016*
- 2013 “Urban Violence and Collective Efficacy in Karachi and Dhaka” | *Pictet Foundation / Centre for Finance and Development Conference 2013*

Other Publications, Op Eds and Short Notes

- 2017 “Global Value Chains in Developing Economies” | *VoxEU*

Software Development

- 2016 rnn CRAN. First Recurrent Neural Network in the R language.
<https://cran.r-project.org/package=rnn> | multilayer Recurrent Neural Network (Deep Learning) | > 8000 downloads
- 2015 decompr CRAN. Global Value Chain decomposition.
<https://cran.r-project.org/package=decompr> | Implementation of Wang-Wei-Zhu GVC decomposition algorithm | > 10000 downloads | Used for: World Bank GVC study, VoxEU GVCs eBook, Taiwan Bureau of Statistics China-trade study, etc.
- 2015 sigmoid CRAN. Sigmoid functions (logistic, Gompertz), inverses (logit), and SoftMax
<https://cran.r-project.org/package=sigmoid>
- 2015 rddtools CRAN. Framework for Regression Discontinuity Design | > 6000 downloads
<https://cran.r-project.org/package=rddtools>
- 2014 gvc CRAN. Tools for Global Value Chain analysis | > 7000 downloads
<https://cran.r-project.org/package=gvc>
- 2014 diagonals CRAN. Tools for manipulating fat-diagonal matrices, e.g. block matrices
<https://cran.r-project.org/package=diagonals>

Other Publications

- 2017 Benefits of Local Content Hosting, *The Internet Society*
- 2016 Promoting Content in Africa, *The Internet Society*
- 2014 Diagnostic Local de Sécurité 2014 de Conakry (Guinée), *Coginta*
- 2013 Diagnostic Local de Sécurité 2013 de Genève (Suisse), *Coginta*

Affiliations

Ifo Expert Group (for Switzerland)

Centre for Finance and Development; The Graduate Institute, Geneva

Centre on Conflict, Development and Peacebuilding; The Graduate Institute, Geneva