

## Research Interests

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Internet and Telecommunications adoption | Trade Analysis | Microeconomic estimators | Artificial Neural Networks (R & Python) | Blockchain (Bitcoin) | Complexity Modeling

## Employment

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- 2017- ECONOMIST | ITU, GENEVA  
Analysing and developing ITU strategic targets; Economic impact of AI
- 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

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- 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

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- 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

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

## Software Development

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- 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

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- 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

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Ifo Expert Group (for Switzerland)

Centre for Finance and Development; The Graduate Institute, Geneva

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