

Co-Pierre Georg

University of Cape Town
Rondebosch 7701
South Africa

E-Mail: co-pierre.georg@uct.ac.za
co-pierre.georg@bundesbank.de
Web: <http://cogeorg.github.io>
GitHub: <https://github.com/cogeorg>

EMPLOYMENT

	University of Cape Town
Since 01/2019	South African Reserve Bank Research Chair in Financial Stability Studies
Since 01/2018	Associate Professor (with tenure) African Institute of Financial Markets and Risk Management and School of Economics
11/2014 - 12/2017	Senior Lecturer, African Institute of Financial Markets and Risk Management, and School of Economics
06/2013 – 10/2014	Old Mutual Emerging Markets Lecturer, UCT Graduate School of Business
	Deutsche Bundesbank
Since 06/2012	Research Economist (part-time since 06/2013)

ACADEMIC POSITIONS

	Oxford University
Since 12/2016	Research Associate, Oxford Martin School for the 21st Century (INET)
03/2012-03/2014	Collaborating Research Scholar, Network Cluster, Keble College
	Columbia University
Since 01/2017	Affiliate, Center for Global Legal Transformation

EDUCATION

	Universidad Carlos III de Madrid
10/2011 – 06/2012	Postdoctoral Researcher, Interdisciplinary Group of Complex Systems Research, Departamento de Matemáticas
	Friedrich-Schiller-Universität Jena
05/2008 – 09/2011	PhD in Economics (<i>summa cum laude</i>), Dissertation title: „Systemic Risk in Interbank Markets“, Supervisor: PD Dr Markus Pasche, Prof Dr Andreas Freytag
	New York University Stern School of Business
02/2011 – 04/2011	Visiting Scholar (Prof Viral V. Acharya, PhD)
	University of Karlsruhe
10/2000 - 12/2005	Diploma in Physics (<i>final mark:1.8</i>), Title of diploma thesis: „Interference Effects in Vector-boson Fusion“, Supervisor: Prof Dr Dieter Zeppenfeld

VISITING POSITIONS

09/2018-06/2019	MIT Sloan School of Management (Finance)
01/2016-02/2016	Columbia Business School (Decision, Risk, and Operations)
04/2014 –05/2014	Princeton University (Bendheim Center for Finance)
1/2014	Federal Reserve Bank of New York (Financial Institutions)
12/2012 – 01/2013	Xiamen University (Wang Yanan Institute)
2012, 2013	University of Oxford (Saïd Business School)

● PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. „*Information Contagion and Systemic Risk*“ (with Toni Ahnert, Bank of Canada), *Journal of Financial Stability*, 35(5), 159-171, (2018)
2. „*Contagious Herding and Endogenous Network Formation in Financial Networks*“ (with Christoph Aymanns, Oxford), *Journal of Banking and Finance* 50(1), 273-285, (2015)
3. Georg, Co-Pierre, „*The Effect of the Interbank Network Structure on Contagion and Common Shocks*“, *Journal of Banking and Finance* 37(7), 2216-2228 (2013)

POLICY AND OTHER PUBLICATIONS

1. „*Managing Duration Gaps: The Role of Interbank Markets*“ (with Marcel Bluhm, Xiamen University, and Jan-Pieter Krahnen, Goethe University Frankfurt) — Available as [Deutsche Bundesbank Discussion Paper 16/2016](#) (2016)
2. „*A Network View on Interbank Liquidity*“ (with Silvia Gabrieli, Banque de France), Banque de France Working Paper 531 / Deutsche Bundesbank Discussion Paper 44 (2014) — Available on [SSRN](#)
3. „*Revealing Patterns of Local Species Richness Along Environmental Gradients with a Novel Network Tool*“ (with Mara Baudena, Utrecht, Angel Sanchez, UC3M, Paloma Ruiz-Benito, Stirling, Miguel A. Rodriguez Alcala, Miguel A. Zavala, Alcala, and Max Rietkerk, Utrecht); *Nature Scientific Reports* 5, 11561, (2015)
4. „*Complex Derivatives*“ (with Stefano Battiston, Zurich, Guido Caldarelli, IMT Lucca, Robert M. May, Oxford University, and Joseph E. Stiglitz, Columbia University); *Nature Physics* Vol. 9, No. 3, (2013)
5. „*Systemic Risk in the Financial Sector*“, with Ian Goldin, Oxford University, Mike Mariathasan, KU Leuven, and Tiffany Vogel, University of Oxford. In: „*The Butterfly Defect – Globalization and Systemic Risk*“, Ian Goldin and Mike Mariathasan, *Princeton University Press* (2013)
6. Brink, Nicola and Georg, Co-Pierre, „*Note on Systemic Risk in the South African Interbank Market*“, Special Note in the *Financial Stability Review*, South African Reserve Bank March 2011, (2011).

WORKING PAPERS

1. „*The Cape of Good Homes: Foreign Demand and House Prices in Cape Town*“ (with Allan Davids, UCT)— Available on [SSRN](#)
Abstract:
We study the discount foreign investors receive buying real estate in an emerging market following large sudden exchange rate depreciations using transaction level data for the city of Cape Town, South Africa. Foreign non-residents purchase properties in more expensive, coastal suburbs, and purchase more expensive properties within these suburbs. While foreign non-residents do not pay higher prices on average, they realize significantly lower capital gains than residents upon resale. Using historically large depreciations as positive shocks to foreign non-resident demand, we find that areas with large pre-existing populations of foreign born citizens experience notable quality-adjusted price increases relative to other geographically close areas in the month following the depreciations.
2. „*Similar Investors*“ (with Diane Pierret, HEC Lausanne, and Sascha Steffen, Frankfurt School) — Available on [SSRN](#)
Abstract:

We study the effect of strategic complementarities among investors on their decisions to continue to invest in a security issuer. Using detailed security level holdings of U.S. Money Market Mutual Funds (MMFs), we construct a novel measure of portfolio similarity among institutional investors (i.e. MMFs) who are exposed to the same security issuer. Consistent with correlated liquidity needs of more similar investors, the similarity of a fund to other investors in an issuer induces a correlation between the default states of the issuer and the states where the fund's liquidity demand is high. Among funds investing in the same issuer at the same time, we find that the funds reducing their exposure to the issuer are the most similar funds. At the issuer level, the average similarity of the funds investing in an issuer predicts the issuer's total funding flows in the next period. In other words, issuers cannot substitute this loss in funds from similar investors, particularly during crises, and are thus exposed to greater funding liquidity risk.

3. „*Systemic Risk-Shifting in Financial Networks*“ (with Matthew Elliott, Cambridge, and Joe Hazell, MIT) — Available upon request.

Abstract:

Banks face different but potentially correlated risks from outside the financial system. Financial connections can help hedge these risks, but also create the means by which shocks can propagate. We examine this tradeoff in the context of a new stylised fact we present: German banks are more likely to have financial connections when they face more similar risks—potentially undermining the hedging role of financial connections and contributing to systemic risk. We find that such patterns are socially suboptimal, but can be explained by risk-shifting. Risk-shifting motivates banks to correlate their failures with their counterparties even though it creates systemic risk.

4. „*Fake News in Social Networks*“ (with Christoph Aymanns, St Gallen and Jakob Foerster, Oxford) — Available on [SSRN](#)

Abstract:

We model the spread of news as a social learning game on a network. Agents can either endorse or oppose a claim made in a piece of news, which itself may be either true or false. Agents base their decision on a private signal and their neighbors' past actions. Given these inputs, agents follow strategies derived via multi-agent deep reinforcement learning and receive utility from acting in accordance with the veracity of claims. Our framework yields strategies with agent utility close to a theoretical, Bayes optimal benchmark, while remaining flexible to model re-specification. Optimized strategies allow agents to correctly identify most false claims, when all agents receive unbiased private signals. However, an adversary's attempt to spread fake news by targeting a subset of agents with a biased private signal can be successful. Even more so when the adversary has information about agents' network position or private signal. When agents are aware of the presence of an adversary they re-optimize their strategies in the training stage and the adversary's attack is less effective. Hence, exposing agents to the possibility of fake news can be an effective way to curtail the spread of fake news in social networks. Our results also highlight that information about the users' private beliefs and their social network structure can be extremely valuable to adversaries and should be well protected.

5. „*The Importance of Informal Intellectual Collaboration with Central Colleagues*“ (with Daniel Opolot, University of Cape Town, and Michael E. Rose, University of

Cape Town) — Available on [SSRN](#)

Abstract:

When preparing a research article, academics engage in informal intellectual collaboration by asking their colleagues for feedback. This collaboration gives rise to a social network between academics. We study whether informal intellectual collaboration with an academic who is more central in this social network results in a research article having higher scientific impact. To address the well-known reflection problem in estimating network effects, we use the assignment of discussants at NBER summer institutes as a quasi-natural experiment. We show that manuscripts discussed by a discussant with a 10% higher than average Bonacich centrality rank results in 1.4% more citations and a 5% higher probability that an article is published in a top journal. To illustrate our results, we develop a structural model in which a positive externality from intellectual collaboration implies that collaborating with a more central colleague results in larger scientific impact of the research article.

6. „*Illiquidity Spirals in Coupled Over-the-Counter Markets*“ (with Christoph Aymanns, St. Gallen, and Ben Golub, Harvard) — Available on [SSRN](#)

Abstract:

Banks provide intermediation of two economically coupled assets, each traded on an OTC market—e.g., secured debt and the underlying collateral. We model banks' decisions to provide liquidity as a game of strategic complements on two coupled trading networks: incentives to be active in one network are increasing in its neighbors' activity in both networks. When an exogenous shock renders some banks inactive, other banks follow in an illiquidity spiral across the two networks. Liquidity can be improved if one of the two OTC markets is replaced by an exchange. For a class of market structures associated with random graphs, liquidity changes discontinuously in the size of an exogenous shock, in contrast to contagion on one network.

WORK IN PROGRESS

1. „*Contagious Zombies*“ (with Christian Bittner, Deutsche Bundesbank, and Falko Fecht, Frankfurt School of Finance and Management)
2. „*Anticipated Financial Contagion*“ (with Toni Ahnert, Bank of Canada and Gideon du Rand, University of Stellenbosch)
3. „*Measuring Regulatory Complexity*“ (with Jean-Edouard Colliard, HEC Paris)

AWARDS AND GRANTS

2018	SARB Research Chair in Financial Stability Studies (ca.
2015	1.000.000 EUR)
2015	Institut Louis Bachelier Grant for „Measuring Regulatory Complexity“, with Jean-Edouard Colliard, HEC Paris (10.000EUR)
2012	„Quantitative Easing and Financial (In-)Stability“ – Volkswagen Foundation; Principle Investigator: Lorian Pelizzon, Goethe University Frankfurt. (UCT: 138.000EUR of project total: 770.000EUR)
2011	Sustainable Architecture for Finance in Europe – SAFE excellence cluster at Goethe University Frankfurt, with Marcel Bluhm (PI) and Jan-Pieter Krahnen (20.000EUR)
2009-2011	European Central Bank, Lamfalussy Fellowship (10.000EUR)
2005	17 th International Conference on Computing in Economics

2004 (CEF2011), San Francisco, Best Student Paper Prize, finalist
 Graduate School „*Foundations of Global Financial Markets – Stability and Change*“, PhD fellowship
 Argonne National Lab, Argonne, IL, Travel Grant
 Albert-Einstein-Institute Golm, Travel Grant

CONFERENCE PRESENTATIONS (*=scheduled)

2020 AEA 2020, San Diego*

2019 FRB Financial Interconnectedness Conference, Washington, D.C.; UMD Short-Term Funding Conference, Bethesda, MD; NY Fed Fintech Conference, New York, NY; SFS Cavalcade, Pittsburgh, PA; EFA 2019, Lisbon*

2018 FIRS 2018, Barcelona; IWH-FIN-FIRE 2018, Halle a.d. Saale; EFA 2018, Warsaw

2017 German Economists Abroad, Frankfurt; Bundesbank Big Data Conference, Frankfurt; Society for Economic Measurement conference 2017, Cambridge, MA; Central Bank Research Association Boston Policy Workshop, Boston, MA; CEPR Spring Symposium in Financial Economics, Imperial College, London

2016 Bank of England CCBS Workshop, London, MIT Center for Finance and Policy 3rd Annual Conference: *"Causes of and Policy Responses to the U.S. Financial Crisis: What Do We Know Now that the Dust Has Settled?"*, Boston, MA, Riksbank conference on *"Challenges in Interconnected Financial Systems"*, Stockholm, European Economic Association Meetings, Geneva, GRI Fields Conference *"The Stability of Financial Systems"*, Toronto, Federal Reserve *"Day Ahead Conference"*, San Francisco

2015 Society for the Advancement of Economic Theory 2015, Cambridge, 2nd Annual Society for Economic Measurement Annual Conference, Paris, 24th UMichigan Mitsui Finance/RFS Symposium, Traverse City, FIRS 2015, Reykjavik, 10th Tinbergen Institute Conference, Amsterdam, INET Annual Conference 2015, Paris

2014 INET YSI Europe 2014 Conference, Amsterdam, GKFINM Annual Conference, Jena, DIW/ESMT/Bundesbank Conference on *"Achieving Sustainable Financial Stability"*, Berlin, *"Systemic Risk: Mathematical Modelling and Interdisciplinary Approaches"*, Isaac Newton Institute for Mathematical Sciences, Cambridge, 2014 IEA World Congress, Amman

2013 FDIC 13th Annual Bank Research Conference, Arlington, VA, ECB Workshop *"Structural Changes in Money Markets"*, Frankfurt, UP/SARB/ERSA 3rd Annual Monetary Policy Workshop, Pretoria, Banco Central do Brazil, VIII Financial Stability Seminar, Sao Paulo, European Financial Management Association, Reading, UK, 2nd *"Rethinking Economics"* Conference, Tübingen, Global Systems Dynamics and Policy Conference, Brussels, *"Financial Globalization and Sustainable Finance"*, Cape Town, INET 2013 Plenary Conference, Hong Kong, Marie Curie ITN Conference on *"Financial Risk Management & Risk Reporting"*, Konstanz

2012	RBNZ-UA Conference on „ <i>Stability and Efficiency of Financial Systems</i> “, Wellington, European Center for Financial Integration Studies, „ <i>Mapping European Economic Governance Rules, Processes and Behaviors</i> “, Brussels, Ivie Workshop on „ <i>International Banking and Financial Integration</i> “, Valencia, FDIC 12th Annual Bank Research Conference, Arlington, VA, DFG-NSF Conference on „ <i>Reckoning the Risk of Catastrophe</i> “, Washington, DC, Latsis Symposium „ <i>Economics on the Move</i> “, ETH Zurich, International Finance and Banking Society 4th International Conference, Invited Session on Networks, Valencia, „ <i>Financial and Macroeconomic Stability: Challenges Ahead</i> “, Central Bank of Turkey, Istanbul, UPF-FNA Workshop on „ <i>Financial Networks</i> “, Barcelona, Institut Louis Bachelier 5th Financial Risks International Forum: „ <i>Systemic Risk</i> “, Paris
2011	RBNZ-ANU-UA Conference: „ <i>Macro Policies after the Crisis</i> “, Wellington, „ <i>DSGE and beyond – expanding the paradigm in monetary policy research?</i> “, Narodowy Bank Polski, Warsaw, Biennial Conference of the Economic Society of South Africa 2011, Stellenbosch, VI Annual Seminar on „ <i>Banking, Financial Stability and Risk</i> “, Banco Central do Brazil, Sao Paulo, Workshop on „ <i>Coping with Crises in Complex Socio-Economic-Systems – 2011</i> “, Zurich, 17th International Conference on Computing in Economics and Finance, San Francisco, „ <i>Financial Networks Workshop</i> “, Network Science Center, USMA West Point
2009	MAFIN 09, Reykjavik, Poster on „ <i>Central Bank Policy in a Model of Endogenous Money</i> “

SEMINAR PRESENTATIONS (*=scheduled)

2019	MIT Sloan School of Management; Duke Fuqua Business School
2018	HEC Lausanne, Frankfurt School of Finance and Management, University of St Gallen, European Bank for Reconstruction and Development
2017	Goethe University Frankfurt, Banque de France, Columbia University (Law), UC3M, Copenhagen Business School, University of Zurich, Imperial College Business School
2016	London School of Economics (SRC), HEC Paris, Columbia Business School, University of Wisconsin Business School, Georgia Institute of Technology Scheller College of Business, IMF, GMU, Bank of Canada
2015	Indiana University Bloomington
2014	DIW, Federal Reserve Bank of New York, Stellenbosch University
2013	Banca d'Italia, University of Amsterdam, University of Vienna, Banco Central do Brasil, ECB, Bundesbank, University of Zurich, Oxford University Nuffield College
2012	US Treasury (Office of Financial Research), IMF, Oxford University Keble College, Schumpeter Seminar Humboldt-University Berlin, Universitat Pompeu Fabra, City University London, University of Leicester, Jaume I Universitat, Banco de España, Universidad Carlos III de Madrid, Oxford University Saïd Business School, Banque de France, Deutsche Bundesbank, Cambridge University Judge School of Business

2011	Banque de France, Bank of England, University of Pretoria, South African Reserve Bank, Stellenbosch University, University of Sao Paulo, Universidad Carlos III de Madrid, Federal Reserve Bank of Philadelphia, New York University, University of Erfurt, University of Jena
2010	University of Leipzig, University of Halle, Deutsche Bundesbank, University of Jena, University of Pretoria, South African Reserve Bank
2009	University of Jena

DISCUSSIONS (* = scheduled)

2019	<ul style="list-style-type: none"> EFA 2019, Bruno Biais, Christophe Bisière, Matthieu Bouvard, Catherine Casamatta, Albert Menkveld, <i>"Equilibrium Bitcoin Pricing"</i> CFIC 2019, Das, Mitchener, and Vossmeier, <i>"Systemic Risk and the Great Depression"</i>
2018	<ul style="list-style-type: none"> EuroFIT 2018, Saleh, <i>"Volatility and Welfare in a Crypto Economy"</i> EFA 2018, Frei and Capponi, <i>"Counterparty Risk and Network Formation in Over-the-Counter Markets"</i> FIRS 2018, Carletti, De Marco, Ioannidou, and Sette <i>"Banks as Patient Lenders: Evidence from a Tax Reform"</i>
2017	<ul style="list-style-type: none"> FIRS, Wang, Paddrik, and Park, <i>"Bank Networks and Systemic Risk: Evidence from the National Banking Acts"</i>
2015	<ul style="list-style-type: none"> EBC-DNB Conference, Amsterdam, Kapadia et al., <i>"Taking uncertainty seriously: simplicity versus complexity in financial regulation"</i>
2013	<ul style="list-style-type: none"> ITN Marie Curie Conference, Horváth and Wagner, <i>"The Disturbing Interaction Between Countercyclical Capital Requirements and Systemic Risk"</i>
2012	<ul style="list-style-type: none"> Institut Louis Bachelier, Lahmann and Kaserer: <i>"Measuring Systemic Risk and Assessing Systemic Importance in Global and Regional Financial Markets using the ESS-Indicator"</i> and Pausch and Welzel: <i>"Regulation, Credit Transfers with CDS, and Bank Lending"</i>

ACTIVITIES AND MEMBERSHIP

Since 01/2019	Associate Editor, Journal of Financial Stability
Since 01/2018	Managing Editor, ERSA Working Paper Series

Referee for: JF, RoF, JFI, JEDC, JEEA, Operations Research, JEBO, JFS, JBF, IJCB, Journal of Financial Regulation, BE Journal of Macroeconomics, JEIC, Review of Development Finance, African Finance Journal, South African Journal of Economics, Computational Economics, Economics in Transition, Emerging Markets Review, Journal of Statistical Mechanics, IEEE Transactions on Knowledge and Data Engineering

Also referee for: National Research Foundation (SA), Swiss National Fund, ECB Working Paper Series, Bank of England Working Paper Series, ERSA Working Paper Series

Academic committee: FIRS 2018-2020;

Conference and Workshop Organization:

1. UCT/ERSA/Imperial/RoF Conference on *"Banking in Emerging Markets"* (Cape Town, **2016**; Mumbai, **2019**)
2. BIS/DNB/Bundesbank/RoF Conference on *"Global Financial Interconnectedness"* (Basle, **2015**)
3. Bundesbank/IMF/INET Workshop *"Interconnectedness: Building Research Into the Policy Agenda"* (Washington, D.C., **2014**)
4. ERSA Financial Economics Workshop (Cape Town, **2013**, Pretoria, **2014**, Pretoria, **2015**)
5. Bundesbank autumn conference *"Supervising Banks in a Complex Financial System"* (Frankfurt, **2013**)
6. Bundesbank/BCBS Workshop *"Supervising Financial Networks"* (Frankfurt, **2013**)
7. Jena Graduate School annual conference 2011 (PhD Workshop, Jena **2011**)

TEACHING

Postdoctoral Students (#: first placement):

1. Joeri Schasfoort (PhD Groningen, since 10/2019)
2. Suraj Shekhar (PhD Penn State, 08/2016-06/2019; #: Assistant Professor, Ashoka University, New Delhi)
3. Christine Makanza (PhD UCT, 06/2016 – 06/2017; #: Senior Lecturer, University of Cape Town)
4. Pawel Fiedor (PhD Krakow, 06/2015 – 06/2016; #: Research Economist, Bank of Ireland)
5. Hylton Hollander (PhD Stellenbosch, 06/2015 – 01/2016; #: Lecturer at Stellenbosch University)

PhD Students:

1. Sabine Bertram (MSc HU Berlin, main advisor, since 01/2018)
2. Allan Davids (MPhil Stellenbosch, main advisor, since 08/2016)
3. Tina Koziol (MBusSc Jena, main advisor, since 04/2016)
4. Esti Kemp (MPhil Pretoria, main advisor, since 04/2016, part-time; SARB Financial Stability Department; #: Bank for International Settlements)
5. Gideon du Rand (MCom Stellenbosch, PhD Student Stellenbosch, 04/2015-10/2019; #: Lecturer at Stellenbosch University)
6. Michael Rose (MSc Kiel, main advisor, 04/2015 - 05/2018; #: MPI for Competition and Innovation, Munich)

Teaching

1. Fintech and Cryptocurrencies (MPhil in Data Science of Financial Technology), University of Cape Town, (**2018, 2019**)
2. Financial Software Engineering (MPhil in Data Science of Financial Technology), University of Cape Town, (**2018, 2019**)
3. Financial Regulation (MCom in Risk Management of Financial Markets), University of Cape Town (**2016, 2017**)
4. Econometrics (MCom in Risk Management of Financial Markets), University of Cape Town (**2016, 2017**)
5. Quantitative Methods in Economics (Module on Econometrics), University of Cape Town (**2015**)
6. Economics for MBA Students, University of Cape Town Graduate School of Business, (**2014**)
7. Seminar, *"Business Cycle Theory and Policy"*, Friedrich-Schiller-Universität Jena, (**2009**)
8. Teaching Assistant, *"Macroeconomics"*, Friedrich-Schiller-Universität Jena,

(2008)

Other Teaching: HEC Paris, MBA core course “Fintech” (2019), MBA elective “Financial Regulation” (2017, 2018); Hanken School of Economics, short-course on Systemic Risk Modelling (2018), WEHIA 2016 Summer School, Universitat Jaume I, (2016), Financial Networks in Emerging Countries, Bank of Uganda, Banco Central do Brazil, (2013), Complexity Economics Summer School, IMT Lucca, (2012), Workshop, „Banking and Modern Financial Economics“, University of Pretoria, (2011)

MEDIA APPEARANCES

TV: CNBC Africa, News24.com, Business Day TV

Radio: Talk702.com, Voice of the Cape FM

Newspaper/News Websites: Financial Times, Bloomberg, Project Syndicate, CNN, Business Day, BDLive, Times, Times Live, The Conversation, EWN, Independent Online, The Sowetan

COMPUTER SKILLS AND SOFTWARE DEVELOPMENT

Software Development (full list available at: <https://github.com/cogeorg>):

- **central-places.net** – Website accompanying our projects on informal collaboration in academia, with Michael Rose (UCT). Available at: <http://www.central-places.net/>
- **Supervisory Data Explorer** – Proprietary visualization software for supervisory financial network data (2015), with Peter Sarlin (RiskLab Finland, Infolytika), Sharat Akhoury (UCT), and Dieter Wang (University of Amsterdam)
- **NetGen** – An open source financial networks cleaning and analysis tool (2014), with Tarik Roukny (ULB). Available at: <http://www.netgen-toolbox.org/>
- **BlackRhino** – An open source financial multi-agent simulation (2013). Available at: https://github.com/cogeorg/black_rhino

Programming Languages: Python, C++, Java, Perl, Fortran, PHP, JavaScript, Solidity

REFERENCES

Available upon request.