A matter of advisor?
Exploring advisor effects on PhD students' scientific productivity and careers
(Annamaria Conti and Maria Roche)

Overview and Motivation

Universities play a fundamental role both in producing knowledge and training future scientists (Stephan, 2012). As a matter of fact, in the United States, the academic sector is the largest producer of science and engineering publications, having accounted for 75.2 percent of U.S. science and engineering publication output in 2016 (National Science Board, 2018). The major players in the production of knowledge within the university are, amongst others, faculty and the PhD students (hereafter referred to as PhDs) they train. Alone in 2015, a total of 55,000 doctorate degrees were awarded in science and engineering disciplines across universities in the USA (National Science Board, 2018).

While PhDs have been shown to play a fundamental role in the production of breakthrough academic discoveries (Conti and Liu, 2015), little is known about how they acquire knowledge capital. Our focus is on the mechanisms through which PhDs pair with their advisors and the effects of advisors' knowledge capital stock on their students' outcomes. Previous research has identified a strong positive impact of aggregate faculty quality on PhDs' research and career outcomes (Waldinger, 2010). At a more micro-level, an emerging stream of literature has detected that gender pairing between advisors and advisees can have important implications for the publication output of PhDs as well as their career outcomes (Hilmer and Hilmer, 2007; Pezzoni et al., 2016).

What remains unknown, however, is how individual professor knowledge capital stock affects PhD student outcomes. For instance, are "star" professors more likely to produce "star" students? The directionality of the effect is unclear. In fact, star professors have larger knowledge capital stocks, but also higher opportunity costs of mentoring. In addition, we know little about how dimensions of homophily, such as ethnicity, nationality, or educational background affect the pairing of PhDs and advisors and, ultimately, PhD outcomes. For example, does coming from the same minority group or country affect PhD-advisor pairing? Accounting for selection, does homophily help PhDs achieve better outcomes? The directionality of the effects is again unclear. Homophily could lower screening costs for both PhDs and advisors, but at the same time, raise the standards required for a pairing to materialize. Furthermore, lower cultural barriers might reduce communication costs, but might also hinder exposure to a multiplicity of relevant knowledge sources.

Over the past years, the university has broadened its role of knowledge producer to include the commercialization of academic discoveries (Hsu et al., 2007). This is partially due to the increasing weight policy makers have placed on academic commercial involvement to foster innovation and economic growth (Mowery et al., 2004). Yet, such involvement, to some extent, goes against the traditional norms that regulate the university (Merton, 1973), especially the norm that scientific findings are a common good (Arrow, 1962; Dasgupta and David, 1994). The existing literature has found mixed results as to the implications the involvement of academicians in commercialization have on their publication output. Whereas Thursby and Thursby (2011) have shown that commercial activities have no significant effect on the production of scientific publications, Murray and Stern (2007) have found evidence for a modest anti-commons effect. While these studies are a useful starting point, our knowledge is limited with regard to how these activities of academicians affect career trajectories of their graduate students.

With this project, we contribute to the existing literature by addressing a set of important questions that have received little attention thus far. We are able to examine these questions using a fine-grained and rich dataset on faculty members and their PhDs from 2000-2017 at a top tier research university in the USA. As we explain below, the specific features of this data set allow us to address important identification issues associated with our set of research questions. Ultimately, understanding these effects will help shed light on the fundamental mechanisms through which advisors transfer their knowledge capital stock to their students and train young innovators.

Methodology: Threats to Identification and Proposed Solutions

There are three major threats to identification in addressing our research questions related to the effects of homophily and advisors' knowledge capital stock on PhD outcomes. The *first* is selection. The matching between

students and their advisors is likely non-random. Students might chose advisors based on a host of their own characteristics and of the professors'. For instance, highly-skilled students might elect more renowned professors as advisors and vice versa. As a consequence, advisor and advisee pairings are endogenous to student outcomes making it difficult, from an empirical standpoint, to identify causal relationships. The *second* major threat to identification is omitted variable bias. The effect of homophily or of a professors' knowledge capital stock, depending on the research question addressed, could jointly be correlated with factors that are unobservable to the econometrician. Finally, the *third* threat is reverse causality, to the extent that student outcomes might circularly be related to the explanatory variables of interest.

To address the first threat, selection, we propose to estimate an *ad-hoc* Heckman selection model. Interviews with students and advisors revealed that students first apply to a PhD program and then, once admitted, choose their advisor from the pool of available professors. This important feature makes it possible to estimate a selection equation conditional on being admitted to the PhD program. We plan to explore a set of possible exogenous variables that are unlikely to be correlated with PhD outcomes conditional on controls. For example, we plan to exploit the *9.11 event and subsequent visa restrictions for foreign-born PhD applicants.* These restriction were implemented by the U.S. Department of Homeland Security in January 2003 under the Student and Exchange Visitor Information System program. This program led to an increase in scrutiny of student visas. The initial implementation of the program was fraught with delays caused by the inexperience of colleges and students. This reduced the supply of foreign-born students, especially those from certain countries like China and India, and certain disciplines, such as engineering (Urias and Yeakey, 2005). Such restrictions are likely to have had a negative impact on the supply of foreign-born PhD applicants and thus the likelihood of advisor-student matches of given nationalities.

To account for the two endogeneity threats arising from omitted variable bias and reverse causality, we plan to estimate difference-in-differences models with advisor fixed effects where we exploit the event of advisors leaving the focal university for another employment, which is plausibly exogenous to the PhD outcomes. Crucially, we will exploit the fact that students with certain characteristics, such as having the same nationality as their advisors, or the stage of their graduate studies, will be differentially affected by the leave of their advisors. Finally, to analyze the effect of an advisor's entrepreneurial activity on PhD outcomes, we will examine differences in the placement of students entering the job market just before and after the event of a professor starting a company, having included professor fixed effects in our models.

The Data

Our data consist of a sample of over 1,000 professors and their 3,400 PhDs during the period of 2000-2017 from the following fields: computer sciences, engineering, biological sciences, and chemistry. Some of the data has recently been made available by the Registrar's Office and the Office of Faculty Affairs of the researched institution, the remaining will be gathered by the authors of this project. We currently have information on the professors' nationality, gender, and ethnicity. We also have data on professors' age, the year they were hired at the university, the year they received tenure and/or promotion to full-professorship, as well as their salary and the amount of funds granted by NSF or NIH. We plan to gather information on the number and quality of professors' publications, as well as information on their patenting output and the number of startups they have established. We plan to complement these data by matching professors to their PhD students, based on information provided by the Registrar's Office of the examined institution. Similarly, for PhDs we have information on their nationality, age, term of admission, year of graduation, degree, major, GRE/GMAT scores and term GPA, gender, and ethnicity, as well as their previous degree-granting institutions. We plan to enrich this set of PhD controls by collecting information on the students' commercial interests, proxied by their professional experience before graduation. To assess the PhDs' research output, we will gather data on their publications, citations, and patents. Finally, we will complement this data set with information on PhDs' career outcomes.

Timeframe and Expected Budget

We expect the data gathering process to take approximately two years and the analysis to last approximately one year. To gather our data, we plan to hire two research assistants for a total cost $5,000. Moreover, we expect to incur travel expenses to participate in various conferences, for a total of $15,000.

References

Arrow, K., 1962. Economic welfare and the allocation of resources for invention, The rate and direction of inventive activity: Economic and social factors. Princeton University Press, pp. 609-626.

Conti, Annamaria and Christopher C. Liu. 2015. Bringing the Lab Back In: Personnel Composition and Scientific Output at the MIT Department of Biology. *Research Policy*, **44**, 1633-44.

Dasgupta, P., David, P.A., 1994. Toward a new economics of science. *Research Policy* **23**, 487-521.

Hilmer, C., Hilmer, M., 2007. Women Helping Women, Men Helping Women? Same-Gender Mentoring, Initial Job Placements, and Early Career Publishing Success for Economics PhDs. *American Economic Review* **97**, 422-426.

Hsu, D.H., Roberts, E.B., Eesley, C.E., 2007. Entrepreneurs from technology-based universities: Evidence from MIT. *Research Policy* **36**, 768-788.

Merton, R.K., 1973. The sociology of science: Theoretical and empirical investigations. University of Chicago Press.

Mowery, D.C., Nelson, R.R., Sampat, B., Ziedonis, A., 2004. Ivory tower and industrial innovation. Palo Alto: Stanford Business Books.

Murray, F., Stern, S., 2007. Do formal intellectual property rights hinder the free flow of scientific knowledge?: An empirical test of the anti-commons hypothesis. J*ournal of Economic Behavior & Organization* **63**, 648-687.

National Science Board. 2018. *Science and Engineering Indicators 2018*. NSB-2018-1. Alexandria, VA: National Science Foundation. Available at https://www.nsf.gov/statistics/indicators/.

Pezzoni, M., Mairesse, J., Stephan, P., Lane, J., 2016. Gender and the Publication Output of Graduate Students: A Case Study. *PLOS ONE* **11**, e0145146.

Stephan, P.E., 2012. How economics shapes science. Harvard University Press Cambridge, MA.

Thursby, J.G., Thursby, M.C., 2011. Has the Bayh-Dole act compromised basic research? *Research Policy* **40**, 1077-1083.

Urias, D.A., Yeakey, C.C., 2005. International students and US border security. *Thought & Action* **21**, 187-198.

Waldinger, F., 2010. Quality Matters: The Expulsion of Professors and the Consequences for PhD Student Outcomes in Nazi Germany. *Journal of Political Economy* **118**, 787-831.

CONTI ANNAMARIA

Georgia Institute of Technology
Scheller College of Business
800 West Peachtree Street NW
Atlanta, Georgia 30308

annamaria.conti@scheller.gatech.edu
http://scheller.gatech.edu
Phone: +1 404 713 6133

EDUCATION

PhD in Management of Innovation, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, August 2009

- Dissertation Title: Three Essays on University Industry Technology Transfer and the Economics of Science
- Dissertation Committee: Marie Thursby, Reinhilde Veugelers, Marc Gruber, Anu Wadhwa, and Dominique Foray
- Visiting scholar at Georgia Institute of Technology, Atlanta, United States, from August 2007 to July 2008 and from February 2009 to April 2009

Swiss Program for Beginning Doctoral Students in Economics, Gerzensee, Switzerland, February 2007

MSc (DEA) in International Relations, specialization in International Economics. Graduate Institute of International Studies (Institut Universitaire de Hautes Etudes Internationales), Geneva, Switzerland, October 2004

Bachelor in Political Science (*cum laude*), Università "La Sapienza", Rome, Italy, July 2002

ACADEMIC APPOINTMENTS

2011 –	**Scheller College of Business, Georgia Institute of Technology**, Assistant Professor of Strategic Management
2014 – 2014	**Recanati Business School, Tel Aviv University**, Visiting Assistant Professor of Strategic Management
2009 – 2011	**Scheller College of Business, Georgia Institute of Technology**, Post Doc in Strategy

AREAS OF INTEREST

Entrepreneurship
Economics of Innovation
Economics of Science
Microeconomics

RESEARCH

PEER-REVIEWED PUBLICATIONS

[1] Conti A., Forthcoming. Entrepreneurial Finance and the Effects of Restrictions on Government R&D Subsidies, **Organization Science**.

[2] Hoisl, K., Gruber, M., Conti A., 2017. R&D Team Diversity and Performance in Hypercompetitive Environments, **Strategic Management Journal**, 38(7), 1455-1477.

[3] Baruffaldi, S., Visentin, F., Conti A., 2016. The Productivity of Science & Engineering PhD Students Hired from Supervisors' Networks, **Research Policy**, 45(4), 785-796.

[4] Conti, A., Visentin, F., 2015. Science and Engineering Ph.D. Students' Career Outcomes, by Gender. **PlosOne** DOI: 10.1371/journal.pone.0133177.

[5] Conti, A., Visentin, F., 2015. A Revealed Preference Analysis of PhD Students' Choices over Employment Outcomes. **Research Policy** 44(10), 1931-1947.

[6] Conti, A., Liu, C., 2015. Bringing the Lab Back In: Personnel Composition and Scientific Output at the MIT Department of Biology. **Research Policy** 44(9), 1633-1644.

[7] Conti, A., Denas, O., Visentin, F., 2014. Knowledge Specialization in PhD Student Groups. **IEEE Transactions on Engineering Management** 61(1), 52-67.

[8] Conti, A., Thursby, J., Thursby, M., 2013. Patents as Signals for Startup Financing. **Journal of Industrial Economics** 22(2), 592-622.

[9] Conti, A., Thursby, M., Rothaermel, F. T., 2013. Show Me the Right Stuff: Signals for High-Tech Startups. **Journal of Economics & Management Strategy** 22(2), 341-364.

[10] Conti A., Gaulé, P., 2011. Is the US Outperforming Europe in University Technology Transfer? A New Perspective on the European Paradox. **Research Policy** 40(1), 123-135.

BOOK CHAPTERS

[1] Conti, A., Liu., C, 2015. The (Changing) Knowledge Production Function: Evidence from the MIT Department of Biology for 1970-2000. Chapter in Jaffe, A. and Jones, B. (eds.). The Changing Frontier: Rethinking Science and Innovation Policy. NBER Volume.

OTHER PUBLICATIONS

[1] Conti, A., Gaulé, P., 2009. Why do European universities lag in licensing research output to industry? *VOX*.

[2] Conti, A., Thursby, M., Rothaermel, F. T., 2010. Show me what you have: Signaling, Angel and VC Investments in Technology Startups. *Academy of Management Best Paper Proceedings*.

[3] Conti, A., Thursby, M., Rothaermel, F. T., 2011. Show Me the Right Stuff: Signals for High-Tech Startups. *NBER Working Paper. No. 17050*.

[4] Conti, A., Thursby, J., Thursby, M., 2013. Patents as signals for startup financing. *NBER Working Paper. No. 19191*.

WORK UNDER REVIEW

[1] Prominent Venture Capital Influence on Startup CEO Replacement and Performance (with Stuart Graham). *Minor revisions with Management Science.*

[2] Venture Capital Investment Strategies under Financing Constraints: Evidence from the 2008 Financial Crisis (with Stuart Graham, Nishant Dass, and Francesco DiLorenzo). *Under second round revision with Research Policy*.

[3] Venture Capital Investment Strategies under Financing Constraints: Evidence from the 2008 Financial Crisis (with Nishant Dass and Stuart Graham). *Submitted to Strategic Management Journal*.

WORK IN PROGRESS

[1] Academic Spinoffs and Labor Market Conditions (with PhD student Maria Roche).

[2] Labor Market Conditions and Gender Differences in Entrepreneurship (with PhD student Maria Roche).

GRANTS

[1] Fellowship from the Center for International Business Research and Education at Georgia Tech. July 2016

[2] Fellowship for prospective researchers. Swiss National Science Foundation (N. 127745). October 2009 to September 2010. $36,000

[3] Research Fellowship. Swiss National Science Foundation (N. 120216). September 2008 to August 2009. $80,000

[4] Fellowship for prospective researchers. Swiss National Science Foundation (N. 118734). September 2007 to February 2008. $16,000

[5] Fellowship for International Short Academic Visit to Switzerland. Swiss National Science Foundation (N. 141676). May 2012. $4,300

[6] Research Fellowship. External Collaborator. Swiss National Science Foundation (N. 149931). $260,000

SELECTED CONFERENCE AND SEMINAR PRESENTATIONS

Annamaria Conti, *R&D Team Diversity and Performance in Hypercompetitive Environments*

[1] Academy of Management, Atlanta, August 2017

Annamaria Conti, *Venture Capital Investment Strategies under Financing Constraints: Evidence from the 2008 Financial Crisis*

[1] Barcelona GSE workshop on Economics of Science and Innovation, Barcelona, Spain, June 2017

[2] 13th Annual Smith Entrepreneurship Research Conference, University of Maryland, April 2017

[3] INFORMS, Annual Meeting, November 2016

Annamaria Conti, *Prominent Venture Capital Influence on Startup CEO Replacement and Performance*

[1] Financial Management Association, Annual Meeting, October 2016

[2] Northwestern Pritzker School of Law, Searle Center on Law, Regulation, and Economic Growth, Ninth Annual Conference on Innovation Economics, June 2016

[3] Barcelona GSE workshop on Economics of Science and Innovation, Barcelona, Spain, June 2016

[4] Israel Strategy Conference, Jerusalem, Israel, December 2015

[5] Bar-Ilan University, Tel Aviv, Israel, December 2015

[6] Roundtable on Engineering Entrepreneurship Research (REER), Atlanta, USA, November 2015

Annamaria Conti, *PhD Students' Career Outcomes in the Short and in the Long-Run, by Gender*

[1] American Economic Association Meetings, Boston, USA, January 2015

Annamaria Conti, *Entrepreneurial Finance and the Effects of Restrictions on Government R&D Subsidies*

[1] NBER Entrepreneurship Working Group Meeting, Boston, USA, December 2014

[2] Roundtable on Engineering Entrepreneurship Research (REER), Atlanta, USA, November 2014

[3] Recanati Business School, Tel Aviv University, Tel Aviv, Israel, November 2014

[4] Barcelona GSE workshop on Economics of Science and Innovation, Barcelona, Spain, June 2014

[5] Atlanta Competitive Advantage Conference (ACAC), Atlanta, USA, May 2014

Annamaria Conti, *PhD student preferences over career outcomes: A revealed preference analysis*

[1] Harvard Business School, October 2015

[2] Imperial College London, London, UK, June, 2014

Annamaria Conti, *Network effects on knowledge production: Evidence for PhD students*

[1] Copenhagen Business School, Copenhagen, Denmark, September, 2013

[2] Politecnico di Milano, Milan, Italy, May 2013

[3] "The Organization Economics and Policy of Scientific Research", Turin, Italy, May 2013

Annamaria Conti, *The (Changing) Knowledge Production Function: MIT Department of Biology From 1970-2000*

[1] NBER Conference Rethinking Science and Innovation Policy, Chicago, August 2013

[2] NBER Conference Rethinking Science and Innovation Policy, Boston, October, 2012

Annamaria Conti, *Patents as signals for startup financing*

[1] Barcelona GSE workshop on Economics of Science and Innovation, Barcelona, Spain, June, 2013

[2] NBER Entrepreneurship Working Group Meeting, Boston, December, 2012

[3] Washington D.C. Conference on Patents, Entrepreneurship and Innovation, Washington, May, 2012

Annamaria Conti, *Show Me the Right Stuff: Signals for High-Tech Startups*

[1] NBER Entrepreneurship Working Group Meeting, Boston, December, 2010

[2] Academy of Management Annual Meeting, Montreal, Canada, August, 2010

Annamaria Conti, *Knowledge Specialization in PhD Student Groups*

[1] Workshop on Science of Science Policy, University of Michigan, Ann Arbor, June 2014

[2] Workshop "The Organization Economics and Policy of Scientific Research", Turin, Italy, 2013.

[3] Roundtable on Engineering Entrepreneurship Research (REER), Atlanta, 2010.

Annamaria Conti, *Is the US outperforming Europe in university technology transfer? A new Perspective on the European Paradox*

[1] DRUID Society Summer Conference, Copenhagen, Denmark, 2009.

[2] Bocconi University, Milan, Italy, 2009.

[3] Third Annual Conference of EPIP Association, Bern, Switzerland, 2008.

[4] Conference on the Economics of Technology Policy, Monte Verità, Switzerland, 2007.

ARES OF TEACHING EXPERIENCE

PhD

- Game Theory

MBA

- Managerial Economics I and II
- Managerial Economics and Strategic Behavior
- Business Analytics

Undergraduate

- Game Theory and Strategic Behavior

MENTIONS

World Intellectual Property Report: The Changing Face of Innovation by the WIPO, 2011. Annual Report on Small and Medium-Sized Enterprises in the EU, 2011/2012. Israel's 2015 IVC research Center Yearbook. Science Careers.

PROFESSIONAL SERVICE AND MEMBERSHIPS

REVIEWING

Science, Management Science, Organization Science, Strategic Management Journal, Journal of Economic Behavior and Organization, Research Policy, Economic Journal, Journal of Economics & Management Strategy, IEEE Transactions on Engineering Management, Journal of Business Venturing, Strategic Entrepreneurship Journal, Journal of Industrial Economics, Economic Letters

MEMBERSHIPS

- Academy of Management (TIM, Entrepreneurship Divisions)
- American Economic Association (AEA)
- Institute for Operations Research and the Management Sciences (INFORMS)
- Financial Management Association (FMA)
- European Finance Association (EFA)
- Rimini Center for Economic Analysis (RCEA)

AWARDS

[1] Brady Family Award For Faculty Research Excellence, 2018.

[2] Academy of Management Best Paper Proceedings, 2010. Paper titled: "Show me what you have: Signaling, Angel and VC Investments in Technology Startups."

[3] DRUID Young Scholar Best Paper Award, 2009. Paper titled: "Are the US outperforming Europe in university technology transfer? A new Perspective on the European Paradox."

[4] Award for the best doctoral paper at REER Conference, Atlanta, Unites States, 2008. Paper titled: "Managing innovations resulting from university-industry collaborations."

INDUSTRY AND INTERNATIONAL ORGANIZATION EXPERIENCE

2004 – 2005	Caterpillar S.A.R.L., Geneva, Switzerland. Headquarter of European, African and Middle East Commercial Operations. Economist in the Economics and Industry Forecasting Division.
2004	World Health Organization (WHO), Geneva, Switzerland. Internship Program in the Vaccines Division.
2003	United Nations Conference on Trade and Development (UNCTAD), Geneva, Switzerland. Internship Program in the Civil Society Outreach Department.

PERSONAL

I was born and raised in Rome, Italy. I spent six months in the UK to complete my undergraduate studies. I moved to Switzerland where I completed my Master's and PhD's degrees. I spent almost four years in the US during and after my PhD. I speak English, French, Spanish, and Italian. I enjoy traveling around the world; my most memorable trips were Somalia, Israel, Colombia, Vietnam, Peru, and Guatemala. I love mountain hiking. In 2009, I finally reached 4900 meters, while hiking in the Andes.

REFERENCES

Available upon request.

Maria P. Roche

Scheller College of Business
Georgia Institute of Technology
Atlanta, GA 30308-1149

maria.roche@scheller.gatech.edu

EDUCATION

2015 – May 2020 (expected graduation)	**PhD, Strategy and Innovation** Scheller College of Business | Georgia Institute of Technology, Atlanta GA Expected date of Graduation: May 2020
June 2016	**Visiting Doctoral Student** Max Planck Institute for Innovation and Competition, Munich, Germany
2013 – 2015	**M.Sc., Business Administration** University of Passau, Germany International Marketing and Management, Innovation Management, Entrepreneurship Thesis: Credit Allocation in Scientific Articles
2011 – 2012	**ERASMUS Study Abroad** University Castilla – La Mancha, Toledo, Spain
2009 – 2012	**B.A., International Cultural and Business Studies** University of Passau, Germany Thesis: Author Contribution and Name Ordering: An Empirical Study of PLOS

RESEARCH ASSISTANCE

2015 -	**Graduate Research Assistant** Scheller College of Business | Georgia Institute of Technology, Strategic Management Assignment: Annamaria Conti, Frank T. Rothaermel, Henry Sauermann, Alexander Oettl
2016 -	**Teaching Assistant** MBA Core Strategy Course, Instructor F.T. Rothaermel
2013 – 2015	**Graduate Research Assistant** University of Passau Organisation, Technology Management and Entrepreneurship

CONFERENCE ATTENDANCE

2018	International Industrial Organization Conference, Indianapolis, IN
	Munich Summer Institute, Munich, Germany
2017	Strategic Management Society Doctoral Workshop, Houston TX
	Academy of Management Annual Conference, Atlanta GA
2016	12th Annual Smith Entrepreneurship Research Conference & 7th Kauffman Doctoral Consortium, College Park MD
2015, 2016, 2017	Roundtable for Engineering Entrepreneurship Research, Atlanta GA

ACADEMIC COMMUNITY SERVICE

2017	*Ad hoc* reviewer for Research Policy
2017, 2018	TIM, ENT division reviewer for the Academy of Management Annual Conference

ACADEMIC PRESENTATIONS

2017	German Culture and Business Environment, E/MBA Program, Scheller College of Business | Georgia Institute of Technology
2018	Paper presenter: Necessity Never Made a Good Bargain: External Conditions, Entrepreneurial Motives, and Startup Outcomes | IIOC, Indianapolis, IN | Munich Summer Institute, Munich

PROFESSIONAL EXPERIENCE

2010 – 2015	**Teaching Assistant** University of Passau | Sports Education
2013 – 2014	**Management Internship** Robert Bosch España Gasoline Systems, S.A., Madrid, Spain Recruitment Management, Marketing, Process Improvement, Organisation
2012 – 2013	**Business Development Internship** Venture Stars GmbH |Incubator for Internet Start-ups, Munich, Germany Entrepreneurship, Online Marketing, Communications, Operations, Project Management for miflora.de
2012	**Management Internship** Osterfestival Tirol, Innsbruck, Austria Marketing, HR, Communications, Project Management
2009	**Cultural Sensitivity Coach** German Olympic Academy
2007	**Stuntwoman** *Wilde Kerle 5*, Bavaria Filmstudios, Munich
2004 – 2015	**Gymnastics coach** for various gymnastics clubs

LANGUAGE SKILLS

	German and English (Native Speaker) Spanish (Proficient User), French (Advanced User), Portuguese (Beginner)

ATHLETIC ACHIEVEMENTS

2010	German National Collegiate Champion, Gymnastics, Bars

AWARDS AND SCHOLARSHIPS

2018	Strategy Science Full Sponsorship for the 2018 Conference and Doctoral Workshop
	Fellowship| Laboratory for Innovation Science at Harvard and the Science Production Function Society
2017	Strategic Management Society Full Sponsorship for the 2017 Conference and Doctoral Workshop
2016	12th Annual Smith Entrepreneurship Research Conference & 7th Kauffman Doctoral Consortium, College Park MD
2015	Acceptance to the 'Bavarian Elite Academy' (competitive state scholarship awarded to 15 individuals annually)
2011/2013	ERASMUS Scholarship

STATUS

Citizenship	Canadian, German

Atlanta, May 2018
Maria Roche