Marten Christian Ritterrath

PhD Candidate – University of Cologne & ECONtribute

Redwitzstraße 8 – 50937 Köln

Office: SSC (Building 102) 3.318 Universitätsstraße 22a 50923 Köln

ritterrath@wiso.uni-koeln.de

Letter Writer & Advisor: Prof. Anna Bindler PhD (DIW Berlin)

Dear Selection Committee,

I am writing to express my strong interest in attending the NBER Innovation Research Boot Camp 2025. As a researcher working on the intersection of innovation, behavioral and environmental economics, my work investigates how personal experiences, institutional settings, and behavioral biases shape inventive activity. I am particularly interested in how societal factors, such as exposure to climate risks and democratic institutions, influence innovation decisions.

The boot camp presents an invaluable opportunity to deepen my theoretical and empirical understanding of innovation economics. Engaging with leading scholars and peers will allow me to refine my methodological approaches and better position my research within the broader literature. The structured lectures and discussions will provide crucial insights into the policy implications of my work, particularly in understanding the role of market incentives and government interventions in shaping technological progress.

I am eager to contribute to and learn from the NBER community, and I believe this experience will significantly enhance my ability to conduct impactful research. Thank you for your time and consideration. I look forward to the opportunity to participate.

Sincerely,

Marten Christian Ritterrath

Marten Christian Ritterrath

PhD Candidate

University of Cologne -- Cluster of Excellence: ECONtribute Markets & Public Policy
Albertus-Magnus-Platz, 50923 Cologne, Germany

ritterrath@wiso.uni-koeln.de | https://sites.google.com/view/martenritterrath/

Research Fields

Innovation · Environmental Economics · Behavioral Economics · Public Economics

Education

University of Cologne *Cologne, Germany*
PhD Economics *2022 –*
- Advisors: Prof. Anna Bindler PhD, Prof. Dr. Felix Bierbrauer

University of Cologne *Cologne, Germany*
Master of Economic Research *2019 - 2022*
- Master Thesis
  - *Title*: "Electricity Market Responses to Carbon Pricing in Europe: Emission Avoidance and the Relocation of Emissions"
  - *Supervision*: Prof. Dr. Felix Bierbrauer & Prof. Anna Bindler PhD

University of Cologne *Cologne, Germany*
BSc Economics *2014 - 2018*
- Minor in Politics
- Dean's Award – *Awarded to the top 10% of students*

Hitotsubashi University *Toyko, Japan*
Study Abroad *2017*

Work in Progress

Democracy, Moral Universalism and Innovation

Inventors' Personal Experience of Natural Disasters and Green Innovation (with Lisa Keding)

Risk Denial & Meritocracy (with Melisa Kurtis)

On the Equity-Efficiency-Tradeoff and the Social Cost of Carbon (with Felix Bierbrauer and Niklas Taft)

Affiliations

2022 – **Center for Social and Economic Behavior (C-SEB)**, Junior Researcher
2021 – **Cluster of Excellence ECONtribute: Markets & Public Policy**, Junior Researcher

Conferences

2024 – **Royal Economic Society Conference** (Belfast), **RGS Doctoral Conference** (Essen), **EAERE** (Leuven), **EAERE Summer School** on Data science in environmental economics research (Graz) , **ZEW/MaCCI Conference on the Economics of Innovation and Patenting** (Mannheim)

2023 – **Markets and Governments: A Theoretical Appraisal** (Rome)

Research Visits

10.2024 - 12.2024 – **CREST & École Polytechnique** (Host: Pierre Boyer)

01.2025 - 04.2025 – **UCLA** (Host: Nico Voigtländer)

Teaching

Spring 2022 & 2023 & 2024	**Core Module Macroeconomics**,
Fall 2023 –	**Thesis Supervision**, Master 2x
Fall 2022 –	**Thesis Supervision**, Bachelor 9x
Fall 2016	**Statistics**, Teaching Assistant
2014	**English Teacher**, Suzhou Lanying (Blue Tassel) School - Suzhou China

Refereeing

Journal of the European Economic Association

Professional Service & Activities

2022 –	**ECONtribute Seminar**, Organisation

Grants

2025	**ECONtribute**, 2700€ - Funding for a research visit at UCLA
2025	**C-SEB**, 3000€ - Funding for a research visit at UCLA
2024	**Joachim Herz Stiftung**, 12500€ - Add-on Fellowships for Interdisciplinary Economics and Interdisciplinary Business Administration
2024	**ECONtribute**, 2300€ - Democracy and Innovation
2024	**ECONtribute**, 2500€ - Risk Denial & Meritocracy (1500€) & Inventors' Personal Experience of Natural Disasters and Green Innovation (1000€)
2022	**ECONtribute**, 1100€ - Inventors' Personal Experience of Natural Disasters and Green Innovation

Languages

German (native), English (fluent), French (advanced)

Programming

Proficient in: R, Python, SQL

TRANSCRIPT OF RECORDS
Studienverlaufstranscript

UNIVERSITÄT ZU KÖLN

3. Februar 2025
3 February 2025

Familien- oder Nachname / Family Name:
Ritterrath

Geburtsdatum / Date of Birth:
12. August 1995
12 August 1995

Geburtsort / Place of Birth:
Bergisch-Gladbach

Vorname(n) / First Name(s):
Marten Christian

Geschlecht / Gender:
Männlich
male

Matrikelnummer / Registration Number:
5963338

Angestrebter Abschluss / Intended Degree:
Master of Science (M.Sc.)

Studienfächer / Subjects of Study:
Economic Research
Economic Research

Studiengangsstruktur / Structure of Study:
Masterstudium
Master's programme

Studiengang / Study Programme:
Ein-Fach-Master
Master's programme - 1 subject

Regelstudienzeit / Standard Period:
4 Semester

Prüfungsordnungsversion / Version of Examination Regulations:
20192

Individualisierte Regelstudienzeit / Individualized Standard Period of Study:
8 Semester

Leistungspunkte erhalten / ECTS-Credits obtained:
120 (120) LP: Economic Research

Fachsemester / Semester:
6 Semester

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Es wurden **120** von **120** Leistungspunkten (**100%**) erworben.
120 of 120 ECTS-Credits (100%) have been obtained.

Vorläufige Gesamtnote / Preliminary Overall Grade		**1,2**	120 LP
Masterarbeit / Master's Thesis	22S	1,0	30 LP

Thema: **Electricity market responses to carbon pricing in Europe: Emission avoidance and the relocation of Emissions**

Erstgutachter(in) / Primary Reviewer: Univ.-Prof. Dr. Felix Bierbrauer

Abgabefrist / Submission Deadline: 09.01.2023

Abgabedatum / Submission Date: 31.08.2022

Kennung / Nr.	Bezeichnung / Title	Status	Semester	Note / Grade	Leistungs-punkte / ECTS credits
	Economic Research			1,2	120
	Basis- und Aufbaubereich Core and Advanced Section			1,4	36
1314BMAMa0	**BM Advanced Mathematics** Core Module Advanced Mathematics			2,0	6
1314BMAMa0	Modulprüfung Module Examination			2,0	
	MP BM Advanced Mathematics Prüfer / Examiner: Barbie M Thema / Topic: Advanced Mathematics for Economists	BE Schriftlich	19W/1 03.02.2020	2,0	
	Methods				6
1289BMACM0	**BM Advanced Computational Methods** Core Module Advanced Computational Methods			1,0	6
1289BMACM0	Modulprüfung Module Examination			1,0	
	MP: BM Advanced Computational Methods Prüfer / Examiner: Röttger J Thema / Topic: Advanced Computational Methods	BE Kombinierte Prüfung	19W/1 16.12.2019	1,0	
	Microeconomics				6
1289BMAMi1	**BM Advanced Microeconomics I** Core Module Advanced Microeconomics I			1,0	6
1289BMAMi1	Modulprüfung Module Examination			1,0	
	MP: BM Advanced Microeconomics I Prüfer / Examiner: Münster J Thema / Topic: Adv. Microenonomics I: Research Track	BE Schriftlich	19W/1 27.03.2020	1,0	
	Macroeconomics				6
1302BMAMa1	**BM Advanced Macroeconomics I** Core Module Advanced Macroeconomics I			2,0	6
1302BMAMa1	Modulprüfung Module Examination			2,0	
	MP BM Advanced Macroeconomics I Prüfer / Examiner: Funk P Thema / Topic: Advanced Macroeconomics I	BE Schriftlich	19W/1 18.02.2020	2,0	
	Econometrics				6

Kennung / Nr.	Bezeichnung / Title	Status	Semester	Note / Grade	Leistungs-punkte / ECTS credits
1314BMAEc2	**BM Advanced Econometrics II** Core Module Advanced Econometrics II			1,3	6
1314BMAEc2	Modulprüfung Module Examination			1,3	
	MP BM Advanced Econometrics II Prüfer / Examiner: Zimmermann T Thema / Topic: Econometrics - Applications	BE Kombinierte Prüfung	20S/1 31.07.2020	1,3	
	Elective				6
1314BMAEc1	**BM Advanced Econometrics I** Core Module Advanced Econometrics I			1,3	6
1314BMAEc1	Modulprüfung Module Examination			1,3	
	MP BM Advanced Econometrics I Prüfer / Examiner: Breitung J Thema / Topic: Advanced Econometrics (Theory)	BE Mündlich	20S/1 09.06.2020	1,3	
	Schwerpunktbereich Specialisation Section			1,2	36
	Schwerpunktbereich I				24
1302SMAPE0	**SM Advanced Public Economics** Specialisation Module Advanced Public Economics			1,0	6
1302SMAPE0	Modulprüfung Module Examination			1,0	
	MP SM Advanced Public Economics Prüfer / Examiner: Bierbrauer F Thema / Topic: Advanced Public Economics	BE Schriftlich	20W/1 16.02.2021	1,0	
1302SMFTI0	**SM Frictions, Technology, and Inequality** Specialisation Module Frictions, Technology, and Inequality			1,7	6
1302SMFTI0	Modulprüfung Module Examination			1,7	
	MP SM Frictions, Technology, and Inequality Prüfer / Examiner: Funk P Thema / Topic: Technical Change, Labor, and Inequality	BE Schriftlich	20S/1 19.08.2020	1,7	
1289BMAEM0	**BM Advanced Experimental Methods** Core Module Advanced Experimental Methods			1,3	6
1289BMAEM0	Modulprüfung Module Examination			1,3	
	MP: BM Advanced Experimental Methods Prüfer / Examiner: Schwerter F Thema / Topic: Advanced Experimental Methods	BE Schriftlich und Mündlich	20W/1 10.03.2021	1,3	

Kennung / Nr.	Bezeichnung / Title	Status	Semester	Note / Grade	Leistungs-punkte / ECTS credits
1302BMAMa2	**BM Advanced Macroeconomics II** Core Module Advanced Macroeconomics II			1,3	6
1302BMAMa2	Modulprüfung Module Examination			1,3	
	MP BM Advanced Macroeconomics II Prüfer / Examiner: Schabert A Thema / Topic: Advanced Macroeconomics II	BE Mündlich	20W/1 22.10.2020	1,3	
	Schwerpunktbereich II				12
1302RGMa00	**Reading Group Macroeconomics** Reading Group Macroeconomics			1,3	6
1302RGMa00	Modulprüfung Module Examination			1,3	
	MP Reading Group Macroeconomics Prüfer / Examiner: Krause M Thema / Topic: ReadingGroup Macroeconomics II	BE Kombinierte Prüfung	20S/1 26.05.2020	1,3	
1314RGEc00	**Reading Group Econometrics** Reading Group Econometrics			1,0	6
1314RGEc00	Modulprüfung Module Examination			1,0	
	MP Reading Group Econometrics Prüfer / Examiner: Wied D Thema / Topic: Reading Group Econometrics	BE Kombinierte Prüfung	20W/1 26.02.2021	1,0	
	Ergänzungsbereich			1,2	18
1289SMTE02	**SM Topics in Energy Markets and Regulation B** Specialization Module Topics in Energy Markets and Regulation B			1,3	6
1289SMTE02	Modulprüfung Module Examination			1,3	
	MP SM Topics in Energy Markets and Regulation B Prüfer / Examiner: Obermüller F Thema / Topic: Quantitative Methods in Energy Economics	BE Kombinierte Prüfung	20W/1 05.02.2021	1,3	
1302SMTG00	**SM Topics in Growth, Labor and Inequality in the Global Economy** Specialization Module Topics in Growth, Labor and Inequality in the Global Economy			1,0	6
1302SMTG00	Modulprüfung Module Examination			1,0	
	MP SM Topics in Growth, Labor and Inequality in the Global Economy Prüfer / Examiner: Hornung E Thema / Topic: Determinants of Growth in Economic History	BE Schriftlich	21S/1 02.08.2021	1,0	

Kennung / Nr.	Bezeichnung / Title	Status	Semester	Note / Grade	Leistungs-punkte / ECTS credits
1314SMTE03	**SM Topics in Econometrics C** Specialization Module Topics in Econometrics C			1,3	6
1314SMTE03	Modulprüfung Module Examination			1,3	
	MP SM Topics in Econometrics C Prüfer / Examiner: Zimmermann T Thema / Topic: Machine Learning for Economists	BE Kombinierte Prüfung	20W/1 12.02.2021	1,3	
	Masterarbeit Master Thesis			1,0	30
1287MaER00	**Masterarbeit im Studiengang Economic Research** Master Thesis in Economic Research			1,0	30
1287MaER00	Masterarbeit im Studiengang Economic Research Master Thesis in Economic Research			1,0	
	MP Masterarbeit im Studiengang Economic Research ME Master Thesis in Economic Research	BE	22S/1 31.08.2022	1,0	

Sonstige Leistungen	Status	Semester	Note / Grade	Leistungs-punkte / ECTS credits
MP BM Advanced Microeconomics II Thema / Topic: Advanced Microeconomics II	- / Q	20S	Q	

Erläuterungen/Explanations:

Notenskalen: 1,0 - 1,5 sehr gut, 1,6 - 2,5 gut, 2,6 - 3,5 befriedigend, 3,6 - 4,0 ausreichend, 4,1 - 5,0 mangelhaft / nicht ausreichend
Rechtswissenschaften: 16-18 Punkte sehr gut, 13-15 Punkte gut, 10-12 Punkte vollbefriedigend, 7-9 Punkte befriedigend, 4-6 Punkte ausreichend, 1-3 Punkte mangelhaft, 0 Punkte ungenügend
Humanmedizin: Die Gesamtnote eines Querschnittsbereichs ergibt sich aus der Summe der im Querschnittsblock (0 bis 4 Punkte) und der dazugehörigen drei Kompetenzfeldern (Je 0 bis 1 Punkt) erlangten Punktzahlen mit folgendem Notenschlüssel: 7 Punkte sehr gut, 6 Punkte gut, 5 Punkte befriedigend, 4 Punkte ausreichend, 0 bis 3 Punkte nicht ausreichend
Grading Scales: 1,0 - 1,5 very good, 1,6 - 2,5 good, 2,6 - 3,5 satisfactory, 3,6 - 4,0 sufficient, 4,1 - 5,0 fail
Law: 16-18 points excellent, 13-15 points good, 10-12 points fully satisfactory, 7-9 points satisfactory, 4-6 points adequate, 1-3 points poor, 0 points inadequate
Medical Studies: The overall grade of an Interdisciplinary Field results from the sum of the points achieved in the Interdisciplinary block (0 to 4 points) and the associated three Specific Courses (each 0 to 1 point) with the following grading scale: 7 points very good, 6 points good, 5 points satisfactory, 4 points sufficient, 0 to 3 points insufficient

Bewertung von Studienleistungen: BE = bestanden, NB = nicht bestanden, T = teilgenommen, AN = zur Prüfung angemeldet
Performance Key: BE = pass, NB = fail, T = successfully completed , AN = registered for Examination

Status: BE = bestanden, NB = nicht bestanden, EN = endgültig nicht bestanden
Status: BE = passed, NB = fail, EN = Examination failed definitively

Vermerk: X = nicht erschienen, Q = Rücktritt mit anerkanntem Grund, Z = Zurückweisung, U = Ungültig/Täuschung, W = nicht abgegeben, FV = Freiversuch
Notes: X = did not attend, Q = withdrawal with approved reason, Z = rejection, U = invalid/deception, W = not submitted, FV = free attempt

Leistungspunkte: Gemäß dem Europäischen System zur Übertragung und Akkumulierung von Credits (ECTS) Maßeinheit für die Arbeitsbelastung eines Studierenden. Ein Leistungspunkt entspricht der Arbeitszeit von 30 Stunden.
Credits: a unit of measure within the European Credit Transfer System (ECTS) representing student workload. A credit is equal to 30 hours of work.

*) = anerkannt
*) = accredited

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Datum/Zeit-UTC	2025-02-04T00:12:12+01:00
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Research Agenda & Motivation

Innovation plays a crucial role in driving economic growth, yet many questions remain about the factors that influence how and why individuals innovate. My research explores the role of personal experiences, cognitive biases, and institutional settings in shaping inventive activity. Understanding these dynamics is crucial for designing effective policies that encourage meaningful and sustainable technological progress. The NBER Innovation Research Boot Camp 2025 presents an invaluable opportunity to deepen my knowledge in this area, engage with leading scholars, and refine my empirical approaches.

In my current research, I investigate how personal experiences and behavioral patterns affect the way inventors innovate. For instance, we show that inventors' personal experience of natural disasters leads to more green innovation. Exposure makes climate change more salient, such that inventors form more optimistic expectations about the profitability of their green innovations. This is due to them expecting others around them to demand more green products and to vote in favor of more stringent environmental policy. As a consequence, inventors increasingly patent mitigation technologies which are not linked to the type of disaster they experienced. Effects remain highly localized and tied to the inventors' personal experience. In a separate project, we investigate whether individuals downplay or deny societal risks such as climate change and the risk of war to sustain belief in the rewards of hard work. Theoretically, individuals have incentive to do so to sustain optimal effort in the presence of suboptimal willpower. Using the epidemiological approach and survey data, we show that individuals who strongly believe in meritocracy are significantly more likely to downplay future risks.

Clearly, the way we think about risks and societal challenges also affects the way individuals approach problems and the solutions they come up with. Building on these separate strands, I became interested in what other environmental and societal factors drive the way inventors conceive and pursue new ideas. In this spirit, I am currently starting a project that aims to investigate how growing up in a democracy affects the direction and type of innovation inventors work on. Living in a democracy not only affects economically relevant factors such as trust and belief in meritocracy but also the way people approach problems. Understanding these connections can provide valuable insights into how institutional settings shape innovation at both the individual and societal levels.

Furthermore, I aim to explore whether state-led missions, as proposed by prominent economists, are essential for directing innovation or if correcting externalities through market mechanisms is sufficient. Preliminary findings suggest that while such missions can drive progress, they may also crowd out private research efforts.

Attending the NBER Innovation Research Boot Camp 2025 would significantly enhance my research by providing deeper insights into the economic forces that shape innovation. The boot camp's focus on the economics of innovation, combined with exposure to leading scholars in the field, would help me refine my theoretical frameworks and strengthen my empirical strategies. Understanding how market incentives, policy interventions, and behavioral factors interact in shaping technological progress is crucial for my research, and the structured lectures and discussions will provide essential tools to advance my work. Furthermore, the opportunity to engage with experts across different disciplines will help me integrate broader economic perspectives into my research and refine my approach to studying the behavioral determinants of innovation. Additionally, engaging with faculty and peers working on similar topics will offer valuable perspectives and feedback, helping me position my research within the broader innovation literature and identify new directions for future studies.