

CV

Personal details and date of CV

- Family name: Heinonen
- Given names: Lauri Matias
- Researcher ID (ORCID): <https://orcid.org/0009-0002-8015-7106>.
- Homepage on the University of Bamberg website: <https://www.uni-bamberg.de/en/hist/digital-history/team/lauri-heinonen/>.
- Profile in the research portal of University of Bamberg, Germany: <https://fis.uni-bamberg.de/entities/person/aada67f4-84c9-4071-b1c2-fad50e0c2107>.
- Profile in the research portal of University of Helsinki, Finland: <https://researchportal.helsinki.fi/en/persons/lauri-matias-heinonen/>
- My Google Scholar profile: <https://scholar.google.com/citations?user=lqiWsolAAAAJ&hl=en>.
- My ResearchGate profile: <https://www.researchgate.net/profile/Lauri-Heinonen>.
- My GitHub profile: <https://github.com/Lauri-M-Heinonen>.
- My LinkedIn profile: <https://www.linkedin.com/in/lauri-m-heinonen>.
- My email at the University of Bamberg: lauri.heinonen@uni-bamberg.de.
- CV was created on **Saturday, 2 May, 2026**.

Degrees and academic titles

- **Future degree: Dr. Phil/PhD**
 - Starting date: 15 August, 2024.
 - Study programme:
 - Bamberg Graduate School for Medieval Studies (BaGraMS).
 - Academic institution: University of Bamberg, Germany.
 - Field: Digital history.
 - Thesis supervisors:
 - First supervisor: Professor Dr. Werner Scheltjens, Professor of Digital History at Institute of History and European Ethnology, Faculty of Humanities, University of Bamberg, Germany.
 - Second supervisor starting in summer 2026: Professor Dr. Jari Eloranta, Professor of Economic History, Department of Economic and Social History, Faculty of Social Sciences, University of Helsinki, Finland.
 - Thesis title: The working title of my PhD thesis is **“Rhine trade based on the customs**

registers of Schenkenschans (1630-1810): institutions, trade patterns and industriousness". We have so far agreed that I will write three articles as a part of my work in the "*The 'invisible carriers' on the Rhine, 1630-1810*" project. However, I will also write one or two more articles and an introduction to my thesis besides the three articles with following themes agreed on already:

- **"Tariffs, privileges and trade barriers on the Rhine in the early modern period"**
- **"A quantitative analysis of shipping and trade on the Rhine based on the SSZ"**
- **"Evidence of industriousness in Rhine shipping in the early modern period"**.
- Year of study: the second year started on 15 August, 2025. The formal admission as a PhD student besides my employment as a PhD researcher took place on 26 August, 2025.
- Coursework that I will take:
 - Python programming
 - Open-access self-study class in Python programming for historians called **"Python für Historiker:innen"** by Humboldt University in Berlin (summer semester 2026)
 - The link to the open-access class: <https://digital-history-berlin.github.io/Python-fuer-Historiker-innen/home.html>.
 - German language studies:
 - **Deutsch als Fremdsprache: Sprachpraxis C1: Sprach- und Kulturvermittlung: Deutsche Kultur - Kulturstadt Bamberg 2** (summer semester 2026)
 - I will study advanced class of German culture in German in the summer semester 2026. I will not get credits for my participation and completion of the class as I am a PhD student.
 - **Deutsch als Fremdsprache: Sprachpraxis C1: Hörverstehen 4** (summer semester 2026)
 - I will study advanced listening comprehension of German language in the summer semester 2026. I will not get credits for my participation and completion of the class as I am a PhD student.
 - **Level B1 German class for international researchers by the Welcome Center of the University of Bamberg** (summer semester 2026)
 - I will study German language in the summer semester 2026 in a class for international researchers. I will not get credits for my participation and completion of the class.
- Coursework that I have taken:
 - University pedagogy and Python programming
 - University pedagogy certificate **"Zertifikat Hochschulelehre der Bayerischen Universitäten - Grundstufe (60 Arbeitseinheiten (AE) oder 45 Stunden)"** (winter semester 2024/2025)
 - For more details, please see the section "Teaching merits" and its subsection "Pedagogical training".
 - Programming class **"KInf-IPKult-E: Programmierung Informatik für die Kulturwissenschaften"** (summer semester 2025)
 - In summer semester 2025, I studied a class in Python programming meant for students in humanities. I did not get credits for my participation and completion of the class as I am a PhD student.
 - German language studies:
 - **Deutsch als Fremdsprache: Sprachpraxis B2: Landeskunde und**

Wortschatz 3 (winter semester 2025/2026)

- I studied German language in winter semester 2025/2026 in a class where we learned to know the German history, society and culture better. I had time to complete only one of three final assignments but learned still a lot through the sessions.
- **Level B1 German class for international researchers by the Welcome Center of the University of Bamberg** (winter semester 2025/2026)
 - I studied German language in winter semester 2025/2026 in a class for international researchers. I did not get credits for my participation and completion of the class.
- **Level B1 German class for international researchers by the Welcome Center of the University of Bamberg** (summer semester 2025)
 - I studied German language in summer semester 2025 in a class for international researchers. I did not get credits for my participation and completion of the class.
- **Deutsch als Fremdsprache: Sprachpraxis B2: Hörverstehen 3** (summer semester 2025)
 - I studied listening comprehension of German language in summer semester 2025. I did not get credits for my participation and completion of the class as I am a PhD student.
- **Deutsch als Fremdsprache: Sprachpraxis B1: Vortrag und Diskussion 2** (winter semester 2024/2025)
 - I studied giving presentations and debating in German language in winter semester 2024-2025. I did not get credits for my participation and completion of the class as I am a PhD student.
- Classes that I have taught and will teach please see the section Teaching merits.

● **MA in Social Science (Finnish: valtiotieteiden maisteri, abbreviated VTM)**

- Date of completion: 27 October, 2023.
- Academic institution: University of Helsinki, Finland.
- Study programme: Master's programme in Society and Change.
 - Specialization in Economic and Social History.
 - Minor fields: Russian language (30 ECTS) and Mandarin Chinese language (26 ECTS in the module, 40 ECTS in total).
- Coursework that I took:
 - I studied classes in Russian until level B1 and in Chinese also until level B1. For the scale, please see the website of CEFR: <https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale>.
 - I studied method classes, including two classes in econometrics at the Aalto University School of Business.
 - I studied advanced classes of my main field, economic and social history, including themes such as labour market policy and its history, history of entrepreneurship, historical demographics and history of economic inequality.
- Theme of the Master's thesis: "Independent innovation from 1880 to 1940 in Finland: Evidence from Patent Data and Inventor Biographies":

<https://helda.helsinki.fi/items/28fd70da-e1dc-43a2-b1fd-8bae068dce2f>.

- I received a full mark of 5/5 for my Master's thesis.

- **BA in Social Science (Finnish: valtiotieteiden kandidaatti, abbreviated VTK)**
 - Date of completion: 20 December, 2019.
 - Academic institution: University of Helsinki, Finland.
 - Study programme: Economic and Social History.
 - Minor field: Russian and East European Studies with Economics (37.5 ECTS) and statistics (25 ECTS).
 - Coursework that I took:
 - I studied 25 ECTS of statistics, including a data analysis class where I did data analysis with SAS environment.
 - I studied Russian and East European Studies with Economics on student exchange at the University College London (UCL) university and its School of Slavonic and Eastern European Studies (SSEES) department in London, the UK. These included, among classes, a 15 ECTS class on the history of economic theory and economic thought and a class in economic change in former socialist countries after the collapse of the USSR.
 - Besides my studies in my main field, I studied other themes as well. These included two introductory classes in German language.
 - Theme of the Bachelor's thesis: "Finnish Interwar Tax Data and Economic Inequality: Evidence against Involvement of Interest Groups"
 - I received a full mark of 5/5 for my Bachelor's thesis.

Language skills

General notes

The language skill levels below are expressed in Common European Framework of Reference (CEFR) levels available here: <https://www.coe.int/en/web/common-european-framework-reference-languages/table-1-cefr-3.3-common-reference-levels-global-scale>.

By language

- Native language: **Finnish**

- Other language skills:

- **English:** level C2 on CEFR.
 - Motivation: I have used English in all my work positions and in all my degrees. I have also completed an academic year in the UK.
- **German:** about level B2-C1 on CEFR.
 - Motivation: I am taking level B2-C1 classes in German at the University of Bamberg, Germany. I have also completed a university pedagogy training programme conducted entirely in German and attended a Python programming class in German in the summer semester 2025. I also read German-language research literature for my PhD thesis.
- **Swedish:** level C1-C2 on CEFR.
 - Motivation: I received the best grade in mandatory classes of Swedish at the University of Helsinki. I have also studied extra classes in Swedish. I have used my skills of Swedish in the position of research assistant at the University of Helsinki. I also use Swedish regularly on free time with my friends whose native language is Swedish.
- **Russian:** level B2-C1 on CEFR.
 - Motivation: I studied a minor course of 30 ECTS in Russian at the University of Helsinki. I recently used my Russian skills at my work as a project researcher at the Finnish National Defence University (FNDU). I have also worked in the Finnish embassy in Moscow, Russia, and the Bank of Finland Institute for Emerging Economies (BOFIT) at the Bank of Finland, the Finnish central bank.
- **Mandarin Chinese:** level B1-B2 on CEFR.
 - Motivation: I studied a minor course of 40 ECTS in Mandarin Chinese at the University of Helsinki (26 ECTS included in the official minor specialisation). I am fluent in reading Chinese. My speaking skills are between elementary and fluent. I recently used my Chinese reading skills at my work as a project researcher at the Finnish National Defence University (FNDU).
- I have used written materials in following languages at my positions:
 - **Early modern Dutch** in which the source materials of my dissertation are written.
 - **Norwegian and Danish** as a research assistant in the project “**Nordic Fiscal States from the 16th to the 21st Centuries**” at the University of Helsinki.
 - **Ukrainian** as a summer employee at the Bank of Finland Institute for Emerging Economies (BOFIT) at the Bank of Finland, the Finnish central bank.

ICT skills

Text editing and office software

- **Microsoft Office** package software
 - **Word**

- I have used the software in all my studies and work positions and know it extremely well.
- **Excel**
 - I have used the software in all my studies and work positions and know it extremely well. I have, for example, done the data analysis for my Master's thesis and created much of the Finnish Patent Database (1842-1940) research infrastructure with the software.
- **Powerpoint**
 - I have used the software in all my studies and work positions and know it extremely well.
- **Outlook**
 - I have used the software in all my studies and work positions and know it extremely well.

Programming and statistics

- **Python**
 - I have written the code of my article "**Women in Business on the Rhine in the 18th Century: Comparison of Business Patterns and Quality Control of Identification after AI-Supported Named Entity Recognition (NER)**" in Python with the help of Opus 4.6. model of Claude AI.
 - I will study the self-study class "**Python für Historiker:innen**" by Humboldt University in Berlin online in the summer semester 2026. In 2025, I studied Python programming at the "**KInf-IPKult-E: Programmierung Informatik für die Kulturwissenschaften**" class. I plan to do the rest of data analysis of my PhD degree with Python.
- **R**
 - I know the basics quite well. I have used R in my studies of social statistics during my Bachelor's degree at the University of Helsinki, especially the continuation classes worth 10 ECTS in total.
- **STATA**
 - I know the basics quite well. I have used STATA in the quantitative methods classes Applied Microeconometrics I and Applied Microeconometrics II class (both 5 ECTS or 10 ECTS in total) at the School of Business at Aalto University, Helsinki, Finland, when doing my Master's degree at the University of Helsinki, Finland.
- **SAS**
 - I know the basics quite well. I have used SAS in my studies of social statistics during my Bachelor's degree at the University of Helsinki in a data analysis class called Data Analysis with SAS (5 ECTS). The class was a Master's level class in statistical data analysis.

Work experience

Current work experience

- **Affiliation: Project researcher in the Arctic Axis project of the Finnish National Defence University (FNDU)**

- Organisation for affiliation: Finnish National Defence University (FNDU), Finland.
- Time: as a paid project researcher 1 March, 2025 – 31 October, 2025. After this, we have kept the option for future co-operation open.
- Place: Helsinki, Finland.
- Description:
 - As a side project, I worked as a project researcher in the Arctic Axis project of the Finnish National Defence University (FNDU). The university trains officers for the Finnish Defence Forces and does military science research. The project studies the co-operation of China and Russia in the Arctic region.
 - My contribution to the project was studying the history, the current state and the prospects of the Sino-Russian military technological co-operation, especially through Chinese academic literature and Russian academic literature written in the respective language of these countries.
 - After my term as a project researcher ended, my results were published in the open access report **“Chinese-Russian Military Industrial Cooperation in the 2020s: Towards True Joint Capabilities or Merely Transactional Great Power Politics?”** by the FNDU on 2 February, 2026. The publication is available here: <https://urn.fi/URN:ISBN:978-951-25-3578-1>.

- **Job title: PhD researcher in a salaried position in the project “*The ‘invisible carriers’ on the Rhine, 1630-1810*”**

- Employer: University of Bamberg, Germany.
- Time: as a DFG-funded PhD student 15 August, 2024 – 31 October, 2026. After that, I will work on further funding on my dissertation, for example through personal grants or some paid position that allows me to fund my dissertation research.
- Place: Bamberg, Germany.
- Career phase: phase I as described by the Finnish Ministry of Education and Culture: <https://julkaisut.valtioneuvosto.fi/handle/10024/79382>.
- Description: I am doing my PhD studies as a salaried researcher in Prof. Dr. Werner Scheltjens’ project *“The ‘invisible carriers’ on the Rhine, 1630-1810”*.
 - First in 2024 and 2025, I cleaned and prepared the data in the digitized Schenkenschans customs registers for analysis.
 - In 2025, I read a lot of literature relevant for my PhD thesis.
 - In 2025, I started working on my first dissertation article on the trade institutions, tariffs and obstacles to Rhine trade in the early modern period based on supporting contemporary administrative documents of Schenkenschans. I currently work on this first dissertation article.
 - In 2026 and 2027, I finish the three journal articles on the history of early modern international trade in the Rhine region. The themes of the articles have been agreed in advance.

- For more information about my work in the project, please contact Prof. Dr. Scheltjens.

- **Affiliation: Visiting researcher**
 - Organisation for affiliation: University of Helsinki, Finland
 - Time: initially 1 August, 2024 – 31 July, 2026 with an option for extension.
 - Place: Helsinki, Finland.
 - Description: I am a visiting researcher at the University of Helsinki. In this position, I continue my research co-operation with the research team of Prof. Dr. Jari Eloranta, Professor of Economic History. The current focus of our research co-operation is the human capital involved in historical innovation. Our forthcoming article "**Independent Innovation in Late-industrializing Finland, 1890-1940**" studies the human capital of Finnish historical inventors who made patents in Finland between 1890-1940. The article will be published in the "Social Science History" journal (SSH) in 2026.

Prior work experience

- **Job title: Co-ordinator trainee**
 - Employer: City of Tampere, Finland.
 - Time: 14 August – 15 December, 2023.
 - Place: Tampere, Finland.
 - Description: I supported the creation of a new development service concept of the City by writing an extensive literature review on the components of the concept, for example on the training for employees and coaching for managers. I wrote extensive notes of meetings and events that I participated in so that the City can write a fiction book on technological development and digitalisation of the City using AI in the writing process. I also assisted in designing and execution of learning circles for employees.

- **Job title: Economist intern**
 - Employer: Bank of Finland or the Finnish central bank its Bank of Finland Institute for Emerging Economies (BOFIT).
 - Time: 16 May – 11 September, 2022.
 - Place: Helsinki, Finland.
 - Description: I followed and analysed the economies of Russia and Ukraine especially by using government sources of these countries. I wrote news articles about the Russian economy in Finnish and English for the BOFIT Weekly Review on the weeks when the Weekly Review concerned the Russian economy. I also wrote the 66 pages long policy brief report on the Ukrainian economy and how the current war affects its. The policy brief "**The effects of the war on the Ukraine economy: The situation at the end of 2022**" is available on the BOFIT website: <http://urn.fi/URN:NBN:fi-fe202301204994>.

- **Job title: Embassy intern**
 - Employer: Finnish embassy in Moscow, Russia

- Time: 1 September, 2021 – 28 February, 2022.
 - Place: Moscow, Russia.
 - Description: I wrote reports and background materials for the political and economic teams of the embassy. I helped to design and organise stakeholder events. A public and therefore shareable example of my reporting at the embassy is the Finnish-language article about Russian research and development (RD) efforts that I co-authored for the parliamentary committee of the Finnish parliament on research and development (RD). The article titled “Venäjän TKI-toimissa panostetaan perustutkimukseen” (literally: “Russia invests in basic research in its RDI efforts”) is available here: <https://vnk.fi/-/venajan-tki-toimissa-panostetaan-perustutkimukseen>.
- **Job title: Research assistant in the “Nordic Fiscal States from the 16th to the 21st Centuries” project**
 - Employer: University of Helsinki.
 - Time: 1 October, 2020 – 30 June, 2021.
 - Place: Helsinki, Finland.
 - Description: I gave presentations on research literature. I wrote an extensive annotated bibliography on almost one hundred publications relevant for the project. I collected statistical data for the project. The most extensive single data set covered over 150 pages or over 40 000 observations of data on Finnish history from the 17th century until the 20th century. I entered the data in electronic form in Excel.
- **Job title: Research assistant in the “The Finnish Patent Database (1842-1940): towards new histories of patenting, innovation and human capital” project**
 - Employer: University of Helsinki.
 - Time: 18 March – 30 June, 2019 and 15 October, 2019 – 30 September, 2020.
 - Place: Helsinki, Finland.
 - Description:
 - I digitised over 25 000 pages of materials of the Finnish Patent and Registry Office (Finnish: Patentti- ja rekisterihallitus, abbreviated PRH). I was responsible for the project with another research assistant. We digitised over 40 000 pages of materials of PRH in total. The digitised materials are available on this page: https://astia.narc.fi/uusiastia/kortti_aineisto.html?id=1724774004.
 - I entered the data on over 15 000 patents in the patent database and prepared the data for research purposes. I developed the Excel based patent database based on requirements by my supervisors. I worked on materials of the Finnish National Archive in its researcher reading room.
- **Job title: Research assistant in the “Työ, tasa-arvo ja julkisen vallan politiikka (Work, Inequality and Public Policy, WIP)” project**
 - Employer: University of Helsinki.
 - Time: 28 November – 31 December, 2017 and 5 February – 2 June, 2018.
 - Place: Helsinki, Finland.
 - Description: I collected data on income and wealth distributions in Finland in historical publications of Statistics Finland and income and wealth taxation in Finland. I analysed the Finnish income and wealth taxation legislation from the 1920s to 2004 using printed law books and the Finlex online law database on Finnish law. I helped my supervisor to finish a research article, for example by going through the footnotes and bibliography of the article.

Research funding and grants

- I received a **5000 euro grant at Emil Aaltonen foundation in Finland in May 2024**. I applied for the grant in February 2024 as a first funding for my original PhD thesis project idea.
 - I planned to write my PhD thesis at the University of Helsinki on the history of innovation and human capital related to it in Finland but received a position as a PhD researcher at the University of Bamberg, Germany, in the beginning of May 2024.
 - Instead, I used the 5000 grant to write the co-authored article "**Independent Innovation in Late-industrializing Finland, 1890-1940**" that would have been the first article of my PhD thesis if I had stayed in Finland. Additionally, I used the grant for the costs of my part-time relocation to Germany.

Research output

Upcoming

- **My first dissertation article on the institutions, tariffs and trade obstacles on the Rhine in the early modern period (ready for publication in 2026)**
 - I use contemporary, supporting administrative documents of Schenkenschans to study the institutions, tariffs and trade barriers on the Rhine from the 17th until the early 19th century to give the historical and social context of the quantitative data that I use in the other articles of my dissertation.
 - When the article is finished in summer 2026, I will look for a journal where I could publish my first dissertation article.
- **Article on the textile trade of Dutch cities in the 18th century based on Schenkenschans customs registers from 1737-1810 for the EAUH 2026 (European Association for Urban History) conference in Barcelona, Spain on 2-5 September, 2026**
 - I use the Schenkenschans customs registers for 1737-1810 to study the textile trade of Dutch cities in the 18th century.
 - Based on my preliminary findings, I can perhaps challenge views in existing literature like de Vries and van der Woude (1997) about the decline of Dutch textile industry in the 18th century and the claims of literature that considers oversea goods like coffee and sugar to be very prominent in Rhine trade and European early modern trade more generally (e.g. Combrink 2021, 2022). My initial analysis suggests that a third of the Rhine trade in the 18th century consisted of construction materials like iron and wood, a third of textiles and the last third of consumption goods like salt and tobacco.
 - The conference will take place on 2-5 September, 2026 in Barcelona, Spain. I will present my work in the session 23 called "**Quayside and Custom House: Customs Accounts as a Source for Medieval and Early Modern Urban History**".

- **Article “Women in Business on the Rhine in the 18th Century: Comparison of Business Patterns and Quality Control of Identification after AI-Supported Named Entity Recognition (NER)” for the post-conference proceedings of the DHNB 2026 conference (Digital Humanities in the Nordic and Baltic Countries), held at the University of Aarhus, Denmark, on 11-13 March, 2026**
 - In the research paper, I studied how female shipmasters and other professionals can be identified in the Schenkenschans customs registers between 1737 and 1810. I compare the business patterns or the number of ships with certain products and ports of departure between the widowed female entrepreneurs and their deceased husbands.
 - My article makes an important contribution to the study of female work and entrepreneurship in the early modern period. According to earlier research, this is an understudied theme in the economic and business history literature (Gelderblom and Trivellato (2018), Banken and Ressel (2024), Wilson et al. (2022)).
 - The article will be published in the post-conference proceedings of the DHNB 2026 (Digital Humanities in the Nordic and Baltic Countries) conference, most likely in early 2027.

- **Article "Independent Innovation in Late-industrializing Finland, 1890-1940" in the Social Science History (SSH) journal in 2026**
 - We study the relevance of independent innovation in Finland in the period 1890-1940 and human capital factors explaining the quality of innovations by Finnish patentees in the period.
 - Our findings suggest that over 50% of Finnish innovators were independent in the end of the 1930s.
 - The analysis of human capital factors suggests that working in a university or a firm owned by other people had a positive impact on the patent quality when measured as the duration of the patent protection. International study and work experience by innovators in Sweden, Germany or USA improved the quality of patents. Innovations made by patentees residing in Helsinki or having international experience elsewhere than Sweden, Germany or USA had a worse quality than patents made by other innovators. Social background factors of inventors did not affect the quality of their innovation.
 - I co-author the article with Prof. Dr. Jari Eloranta, Professor of Economic History at the University of Helsinki, Finland, and Dr. Matti La Mela, University Lecturer of Digital Humanities at the University of Uppsala, Sweden.
 - The article will be published in a special issue of the SSH focusing on history of innovation and patents. The article has been twice in double-blinded peer review. Now we are revising the article to give it back to the journal for publishing.
 - The article was made possible by the 5000 euro grant I got from Emil Aaltonen foundation in May 2024.

Published

- **Abstract “Women in Business on the Rhine in the 18th Century: Comparison of Business Patterns and Quality Control of Identification after AI-Supported Named Entity Recognition (NER)” for the DHNB 2026 conference (Digital Humanities in the Nordic and Baltic Countries) at the University of Aarhus, Denmark, on 11-13 March, 2026**

- The abstract has been published in the DHNB 2026 Book of Abstracts: <https://dhnbeu/wp-content/uploads/2026/03/Book-of-abstracts.pdf>
 - I presented my research paper called **“Women in Business on the Rhine in the 18th Century: Comparison of Business Patterns and Quality Control of Identification after AI-Supported Named Entity Recognition (NER)”** on which the abstract is based in the panel 5A at 10.10-10.30 hrs on Friday, 13 March, 2026.
 - My article makes an important contribution to the study of female work and entrepreneurship in the early modern period. According to earlier research, this is an understudied theme in the economic and business history literature (Gelderblom and Trivellato (2018), Banken and Ressel (2024), Wilson et al. (2022)).
 - I will finish the short article based on the abstract for the post-conference proceedings of the DHNB 2026 conference that has its deadline on 15 May, 2026.
- **My report “Chinese-Russian Military Industrial Cooperation in the 2020s: Towards True Joint Capabilities or Merely Transactional Great Power Politics?” for the Arctic Axis project of the Finnish National Defence University (FNDU)**
 - I did research as a project researcher in the Arctic Axis project of the FNDU. The project studies the co-operation of China and Russia in the Arctic region.
 - My open access report on the Sino-Russian military technological co-operation based on Chinese and Russian academic literature called **“Chinese-Russian Military Industrial Cooperation in the 2020s: Towards True Joint Capabilities or Merely Transactional Great Power Politics?”** was published by the FNDU on 2 February 2026.
 - Here is a link to the publication: <https://urn.fi/URN:ISBN:978-951-25-3578-1>.
- **Abstract “Automating the recognition of semi-structured tax data: Insights from applying HTR to the Schenkenschans customs registers (1630-1810)” for DHNB 2025 conference (Digital Humanities in the Nordic and Baltic Countries) at the Estonian National Museum in Tartu, Estonia, 3-4 March and 5-7 March, 2025**
 - The abstract has been published in the DHNB 2025 Book of Abstracts: https://dhnbeu/wp-content/uploads/2025/03/DHNB-2025_abstracts.pdf.
 - I presented my poster on which the abstract is based in the poster session in Jakob Hurt’s Hall in the Estonian National Museum in Tartu, Estonia, at 16.00-16.40 on Thursday, 6 March 2025.
 - I presented the poster but did not write an article based on it to the post-conference proceedings of the DHNB 2025 conference.
- **Master’s thesis at the University of Helsinki: “Independent innovation from 1880 to 1940 in Finland: Evidence from Patent Data and Inventor Biographies”**
 - My Master’s thesis is available in the Helda thesis database of the University of Helsinki here: <https://helda.helsinki.fi/items/28fd70da-e1dc-43a2-b1fd-8bae068dce2f>.
 - I received a full mark of 5/5.
 - The assessor wrote in the assessment that my Master’s thesis is a major contribution to the study of Finnish economic history and the study of innovation during the Second Industrial Revolution in general.
 - Published online on 28 October, 2023.
- **Bank of Finland, BOFIT Policy Brief 1/2023: “The effects of the war on the Ukraine economy: The situation at the end of 2022”**

- The report is available in the Kaisu publishing system of the Bank of Finland here: <http://urn.fi/URN:NBN:fi-fe202301204994>.
 - Published online on 20 January, 2023.
- **Bachelor's thesis at the University of Helsinki: "Finnish Interwar Tax Data and Economic Inequality: Evidence against Involvement of Interest Groups"**
 - I received a full mark of 5/5 for my Bachelor's thesis.
 - The assessor wrote in the assessment that my Bachelor's thesis had results of scientific interest which, according to him, is rare for Bachelor's theses.
 - The thesis was accepted in July 2019 but never published online.

Unpublished

- **Research infrastructure: Finnish Patent Database (1842-1940)**
 - As a research assistant for the University of Helsinki in 2019 and 2019-2020, I digitised the historical patent ledgers of the Finnish patent authority from the 19th century until the year 1940 with another research assistant. After that, I entered all the relevant data from the ledgers on over 15 000 patents of the total 18 000 patents into the Excel-based Finnish Patent Database (1842-1940) and developed the database, e.g. by designing variables that we could take from the ledgers.
 - The Finnish Patent Database has not yet been published online but has been used in Finnish research contributions such La Mela, Turunen & Eloranta (2022), Heinonen (2023), Varjo (2023) and Heinonen, La Mela & Eloranta (upcoming).

Teaching merits

Pedagogical training

Zertifikat Hochschulelehre der Bayerischen Universitäten - Grundstufe (60 Arbeitseinheiten (AE) oder 45 Stunden)

- Literal translation: Certificate of University Teaching at Bavarian Universities - Basic Level (60 Arbeitseinheiten (AE) or 45 hours)
- The Bavarian universities have a shared, three stage programme for training of university pedagogy (Grundstufe, Aufbaustufe and Vertiefungsstufe or basic, advanced and specialization level). I have completed the first level of this training.
- For more information about the Bavarian university pedagogy certificates, please see the website of the ProfiLehre Plus or the organisation governing the certificate
 - The website is available here: <https://profilehreplus.de/en/certificate/certificate>.
- I have not officially applied for the certificate, but I have all the coursework done and registered in ProfiLehre Plus for this.
- Time of completing the coursework: from September 2024 to February 2025, including an intensive week, online meetings and the Teaching Analysis Poll (TAP) assessment of my teaching.

Teaching experience

Upcoming classes that I will teach

- I do not currently have upcoming classes to teach.

Classes taught so far

Assistant teacher at the class “Introduction to Historical Data Analysis” at the University of Bamberg in the winter semester 2024-2025 (WS 2024-2025).

- I taught tutorials and occasionally lectures at the “**Introduction to Historical Data Analysis**” class between November 6, 2024 and February 5, 2025 in the winter semester (WS) of 2024-2025 at the unit of digital history at the University of Bamberg, Germany. The language of instruction was English.
- The class description in the class information system UniVis of University of Bamberg was the following:
 - In this course, students learn the basics of historical data analysis step by step. Through small exercises, students get acquainted with methods for processing text, image and tabular data. In the second step, these methods are also applied to historical data. Through practical engagement with the provided working materials, students learn about the opportunities and challenges of historical data analysis and develop skills to deal with these challenges effectively.
- I taught the students to do data analyses with a graphical programming tool called Orange Data Mining. Please see the website of the Orange Data Mining for details on the tool: <https://orangedatamining.com/>.
- Most classes were in-person but one or two were online meetings.
- In January 2025, we conducted a Teaching Analysis Poll (TAP) assessment of my teaching as a part of my studies of university pedagogy. The anonymous assessment with discussions with and feedback from my students without my presence was conducted an employee Zentrum für Hochschuledidaktik (ZHD, Centre for University Didactics), the organiser of my university pedagogy training at the University of Bamberg.
- While there were fewer students present than usually, only two, they gave me the second-best mark or 2/6 for my teaching.
 - My strengths as teacher according to the students:
 - The classes have a good culture for mistakes, e.g. it is okay to say you do not understand something.
 - Content is accessible and the ratio of theory and practical training is good.
 - Mr. Heinonen is very accommodating to students and their situations.
 - My points for development according to the students:
 - Mr. Heinonen could communicate more clearly about coming homework and other organisational things.

- Mr. Heinonen could prepare better for the classes to avoid small issues like technical issues with workflows that make them not work right away.

Awards and merits

- I received the **2nd place in the 2024 Master's thesis award competition of Finnish Society for History of Technology** (Tekniikan historian seura or THS). The competition was open for Master's theses published in Finnish universities in the academic year of 2022-2023 on the history of technology and science. I received the 750 euro award in the spring meeting of THS at the House of Sciences and Letters (Finnish: Tieteiden talo) in Helsinki on 29 April, 2024.

Most important other academic merits

Upcoming public expert appearances

- **Presentation at the BIGS PizzaSeminar in Berlin on 4 May, 2026, on Sino-Russian relations**
 - I will give a presentation on my research for the Finnish National Defence University (FNDU) at a PizzaSeminar of BIGS in Berlin on 4 May, 2026. BIGS (Brandenburgisches Institut für Gesellschaft und Sicherheit, Brandenburg Institute for Society and Security) is a social-scientific research center on societal resilience with extensive collaboration network with several organisations, such as University of Potsdam and major European defence industry firms like Airbus Defence & Space.
 - I will discuss Sino-Russian relations in my English-language presentation. The presentation will be streamed and the recording will be available on the homepage and Youtube channel of BIGS.

Public expert appearances so far

- **Editorial of the Finnish newspaper "Tekniikka & Talous" on 19 March 2026, citing my Master's thesis extensively**
 - A Finnish-language editorial of the Finnish newspaper "Tekniikka & Talous" that cites my Master's thesis from 2023 extensively.
 - The Finnish-language editorial discusses the innovativeness of the Finnish economy and the role of firms in the innovativeness of the Finnish economy from the 19th century until today.
 - Here is a link to the Finnish-language editorial behind a paywall:
<https://www.tekniikkatalous.fi/uutiset/a/9ac29e8a-09d8-4d97-a79b-64a3dd637efb>.
- **My interview for Iltalehti, a leading Finnish newspaper, on the Sino-Russian relations for an article published on 17 February, 2026**

- Iltalehti, a leading Finnish newspaper, interviewed me for their article "Kiinan ja Venäjän suhteesta paljastui yllättävä totuus" (A Surprising Truth about the Relations of China and Russia Revealed").
 - In the article, published on 17 February 2026, I commented the relations between China and Russia based on the research paper that I had written for the Finnish National Defence University (FNDU): "[*Chinese–Russian Military Industrial Cooperation in the 2020s: Towards True Joint Capabilities or Merely Transactional Great Power Politics?*](#)".
 - Here is a link to the Finnish-language article of Iltalehti: <https://www.iltalehti.fi/ulkomaat/a/1f876bdb-aaa2-49c2-b375-15d66beb85ae>.
- **My blog post for the website of the Russian Military and Security Research Group of the FNDU on 3 February, 2026**
 - I wrote a blog post called "**Chinese–Russian Military Industrial Cooperation in the 2020s**" based on my study for the website of the Russian Military and Security Research Group (Finnish: Venäjä-ryhmä) of the Finnish National Defence University.
 - The English-language blog post is available here: <https://rusmilsec.blog/2026/02/03/chinese-russian-military-industrial-cooperation-in-the-2020s/>.
- **The Day of Finnish Technology Museums, 4 December, 2024**
 - I gave a public presentation on my Master’s thesis in Finnish at the Day of Finnish Technology Museums that was organised at the Museum of Technology in Helsinki on Wednesday, 4 December, 2024.
 - I was invited to give my speech because I won the second Master’s thesis award by the Finnish Society for History of Technology in April 2024.
 - The recording of my presentation and my answers to the questions by the audience, all in Finnish without subtitles, are available on my YouTube channel here: <https://youtu.be/-nldFwGxsEM>.

Upcoming seminars and conferences that I will participate in

- **EAUH 2026 (European Association for Urban History) conference in Barcelona, Spain, on 2-5 September 2026**
 - In my presentation for the conference, I use the Schenkenschans customs registers for 1737-1810 to study the textile trade of Dutch cities in the 18th century.
 - Based on my preliminary findings, I can perhaps challenge views in existing literature like de Vries and van der Woude (1997) about the decline of Dutch textile industry in the 18th century and the claims of literature that considers oversea goods like coffee and sugar to be very prominent in Rhine trade and European early modern trade more generally (e.g. Combrink 2021, 2022). My initial analysis suggests that a third of the Rhine trade in the 18th century consisted of construction materials like iron and wood, a third of textiles and the last third of consumption goods like salt and tobacco.
 - The conference will take place on 2-5 September, 2026 in Barcelona, Spain. I will present my work in the session 23 called "**Quayside and Custom House: Customs Accounts as a Source for Medieval and Early Modern Urban History**".

- **Baltic Connections Conference 2026 at the University of Jyväskylä, Finland, 10-12 June, 2026**
 - I will give a presentation on my first dissertation article in a two-part panel called “**Early Modern Economic Information**” that I co-organise with Mr. Lauri Karvonen, a PhD student at the University of Jyväskylä. We will have six early career researchers from Germany, Italy and Finland presenting their work.
 - The conference will take place from Wednesday, 10 June, 2026, to Friday, 12 June, 2026, at the University of Jyväskylä, Finland.
- **Tag für die Promovierenden der BaGraMS at the University of Bamberg, Germany, 8 May, 2026**
 - I will give a German-language presentation on my PhD research with the title “**Institutionen des Rheinhandels im 17. und 18. Jahrhundert: Tariffe, Privilegien und Hürden zum Rheinhandel**” on a seminar day on 8 May, 2026 at the University of Bamberg for PhD students of BaGraMS, the University of Bamberg Graduate School for Medieval Studies where I am a member.

Seminars and conferences that I have participated in

- **DHNB 2026 conference (Digital Humanities in the Nordic and Baltic Countries) at the University of Aarhus, Denmark, on 11-13 March, 2026**
 - I presented my research paper called “**Women in Business on the Rhine in the 18th Century: Comparison of Business Patterns and Quality Control of Identification after AI-Supported Named Entity Recognition (NER)**” in the panel 5A at 10.10-10.30 hrs on Friday, 13 March, 2026.
 - My article makes an important contribution to the study of female work and entrepreneurship in the early modern period. According to earlier research, this is an understudied theme in the economic and business history literature (Gelderblom and Trivellato (2018), Banken and Ressel (2024), Wilson et al. (2022)).
 - The article will be published in the post-conference proceedings of the DHNB 2026 (Digital Humanities in the Nordic and Baltic Countries) conference, most likely in early 2027.
 - This time, I did not participate in the pre-conference activities on 9-10 March, 2026.
- **Baltic Connections Conference 2025 at the University of Helsinki, Finland, 21-23 May, 2025**
 - I gave a presentation on my PhD research with the title “**Quantifying early modern Rhine trade: first insights from the tax data in the Schenkenschans customs registers (1630-1810)**” in the session **Uncovering the Uncovered: New Data on Early Modern Trade and Smuggling** that took place at 10.30-12.00 hrs on Thursday, 22 May, 2025. The conference took place from Wednesday, 21 May, 2025, to Friday, 23 May, 2025, at the University of Helsinki, Finland.
- **QuILT Project Kick-Off Workshop (Quantifying Illicit and Licit Trade) at the University of Helsinki, Finland, 19-20 May, 2025**
 - I am contributing to an international project called QuILT (Quantifying Illicit and Licit Trade) with my PhD thesis project. The international project with Dr. Jeremy Land from the University of Helsinki, Finland, as its principal investigator (PI) studies smuggling in Europe and Northern America in the 18th century. The project aims to create

comparable datasets from the microdata of the customs authorities of different countries in the period and establish a method to quantitatively study smuggling and other illicit trade.

- The project might have implications for the study of how countries avoid economic sanctions these days.
- The kick-off workshop for the QuILT project took place at the University of Helsinki, Finland on Monday and Tuesday, May 19-20, 2025, or the two days preceding the Baltic Connections 2025 conference.

- **Tag für die Promovierenden der BaGraMS at the University of Bamberg, Germany, 15 May, 2025**
 - I gave a German-language presentation on my PhD research with the title *“Die Praktiken des Transports auf dem Rhein in der Frühmodernen Zeit: Einsichten aus Zolldaten von Schenkenschans (1630-1810)”* on a seminar day at the University of Bamberg for PhD students of BaGraMS, the University of Bamberg Graduate School for Medieval Studies where I am a member.

- **DHNB 2025 conference (Digital Humanities in the Nordic and Baltic Countries) at the Estonian National Museum in Tartu, Estonia, 3-4 March and 5-7 March, 2025**
 - The digital humanities conference took place at the National Museum of Estonia, Tartu, Estonia, from 5 March to 7 March, 2025, with additional workshops before the conference on 3-4 March in the same place. The conference that brought researchers, archivists, museum experts and other cultural heritage professionals from the Nordic and Baltic Countries had several sessions and keynotes.
 - I gave a poster presentation on my poster *“Automating the recognition of semi-structured tax data: Insights from applying HTR to the Schenkenschans customs registers (1630-1810)”* on the challenges of using handwritten text recognition (HTR) methods to transcribe tax columns of the Schenkenschans customs registers. I discussed how much of the process can be automated and how much manual correction is required or even desired.
 - I presented my poster on which the abstract is based in the poster session in Jakob Hurt’s Hall in the Estonian National Museum in Tartu, Estonia, at 16.00-16.40 on Thursday, 6 March 2025.
 - Besides the conference, I attended the following half-day workshops on Tuesday, 4 March, 2025:
 - From Data Cleanup to Linked Open Data: Hands-on with OpenRefine and Wikidata.
 - How to create a Linked Open Data service and semantic portal for your own Cultural Heritage data.

- **Economic and Social History Research Seminar at the University of Helsinki, Finland, 26 February, 2025**
 - I presented my PhD project in the weekly research seminar of the Economic and Social History department of the University of Helsinki, Finland, on Wednesday, 26 February, 2025. The title of my presentation was simply *“Introduction to my „Invisible Carriers of Rhine“ PhD project”*.

- **Summer School in Social Science History 2024 at the University of Jyväskylä, Finland, 17-18 June, 2024**
 - Organised in connection to the Baltic Connections 2024 conference at the University of Jyväskylä, Finland, on 17-18 June 2024. I participated all the activities of the Summer School, most important of which being method classes and research feedback sessions for PhD candidates.
 - The teaching of the summer school was given by Professor Dr. Anne McCants, MIT university, USA, and faculty of the History department of University of Jyväskylä.

- **Baltic Connections: Conference in Social Science History 2024 at the University of Jyväskylä, Finland, 12-14 June, 2024**
 - The social science history conference took place at the University of Jyväskylä, Finland, on 12-14 June 2024. The conference had several sessions with three panels each on the three conference days. The keynote speeches were given by Naomi Lamoreaux, Professor Dr. Emerita at Yale University, USA, Matthias Kipping, Professor Dr. at York University, Canada, and Hanna Kuusi, University Lecturer Dr. at University of Helsinki, Finland.
 - I gave a presentation on the coming article by me, Professor Dr. Jari Eloranta and University Lecturer Dr. Matti La Mela titled “**Independent Innovation in Late-industrializing Finland, 1890-1940**”. I gave the presentation in **Session 15 - Innovation and Industry: Exploring Technological Frontiers and Economic Challenges in Northern Europe** on Friday, 14 June 2024.

- **Finnish Economic History Association Day for Young Researchers at the House of Sciences and Letters in Helsinki, Finland, 22 January, 2024**
 - At the Finnish Economic History Association Day for Young Researchers at the House of Sciences and Letters (Finnish: Tieteiden talo) in Helsinki, Finland, I presented my ideas and plans for my PhD project that I had at that point. I changed my plans in May 2025 when I was accepted to do my PhD at the University of Bamberg in the ‘**Invisible Carriers**’ project on early modern data from the Schenkenschans customs station.

- **Interdisciplinary and Historical Perspectives on Technology online workshop organised in connection to the Baltic Connections 2021 conference, online, 19 April, 2021**
 - I gave a presentation on my Master’s thesis project in a workshop that was arranged online on 19 April, 2021 in connection to the Baltic Connections 2021 conference in social science history by the University of Helsinki. For more information on the workshop, please see my LinkedIn profile: <http://www.linkedin.com/in/lauri-m-heinonen>.

Seminars and conferences that I will organise

- **Two-part panel called “Early Modern Economic Information” at the Baltic Connections Conference 2026 at the University of Jyväskylä, Finland, 10-12 June, 2026**
 - I am organising a two-part panel called “**Early Modern Economic Information**” with Mr. Lauri Karvonen, a PhD student at the University of Jyväskylä. We will have six early career researchers from Germany, Italy and Finland presenting their work.

- In my personal presentation, I will present the newest version of my first dissertation article.
- The conference will place from Wednesday, 10 June, 2026, to Friday, 12 June, 2026, at the University of Jyväskylä, Finland.

Seminars and conferences that I have organised

- **PhD Workshop in Preindustrial Economic History 2025 at the University of Bamberg, Germany, on 10-11 November, 2025**
 - A PhD workshop that I organized for my four colleagues, one from Germany, one from Switzerland, one from Italy and one from Finland working early modern trade at the University of Bamberg, Germany, on 10-11 November, 2025.
- **ISHA Helsinki student organisation (International Students' of History Association) held an international student seminar with theme "Historical Consciousness" in Helsinki, Finland, from Monday, 24 July, 2017, to Saturday, 29 July, 2017**
 - Over 30 history students from all over Europe attended the seminar.
 - My job at the seminar:
 - **I co-ordinated the preparations of the seminar.** I prepared agendas for meetings where we planned the seminar. I delegated responsibilities to other organisers.
 - **I recruited volunteers** for preparation of the seminar.
 - **I organised a call for tenders on seminar venues and accommodation** for the participants.
 - **I invited the keynote speaker and expert panellists** to the seminar. A copy of the keynote speech by Erkki Tuomioja, the president of Historians without Borders in Finland organisation and Finland's former minister of foreign affairs, is available on my LinkedIn profile: <http://www.linkedin.com/in/lauri-m-heinonen>.
 - **I took care of communications** before the seminar and during it. I had delegated some of the communications to other organisers.
 - **I worked as a manager of the seminar when it took place.** I ensured the volunteers did their agreed work shifts and took care of the seminar volunteers being on time in agreed venues to take care of their agreed duties.
 - **Please note that ISHA Helsinki ceased its existence in spring of 2024.**

Memberships in academic expert organisations

- **EAUH Association (European Association of Urban History)**
 - Membership type: Student member.
 - Date of joining: 30 April, 2026.
 - Association website: <https://www.uantwerpen.be/en/centres/eahu/>.

- **DHNB Association (Digital Humanities in the Nordic and Baltic Countries)**
 - Membership type: Student member.
 - Date of joining: 6 March, 2026.
 - Association website: <https://dhnbeu/>.
- **Finnish Society for the History of Technology (Finnish: Tekniikan historian seura or THS)**
 - Membership type: Student member.
 - Date of joining: 22 April, 2025.
 - Association website: <https://ths.fi/>.
- **Finnish Historical Society (Finnish: Suomen Historiallinen Seura or SHS)**
 - Membership type: Student member.
 - Date of joining: 8 June, 2024.
 - Association website: <https://agricolaverkko.fi/seuran-esittely/>.
- **Finnish Society for Asian and African Studies (Finnish: Aasian ja Afrikan tutkimuksen seura)**
 - Membership type: Student member.
 - Date of joining: 10 April, 2017.
 - Association website: <https://www.suomenitamainenseura.org/>.
- **Finnish Economic History Society (Finnish: Taloushistoriallinen yhdistys)**
 - Membership type: Student member.
 - Date of joining: January, 2017.
 - Association website: <https://www.taloushistoriallinenyhdistys.fi/etusivu>.