

# Xiaozhou Li, Ph.D.



✉ lixiaozhou725@gmail.com    🧑 Gender: Male  
🎂 Birthday: 25.7.1984    🇫🇮 Nationality: Finland  
📄 <https://scholar.google.com/citations?user=ubfvxGwAAAAJ>

## Education Background

- 2014 – 2022    📖 **Ph.D. in Computer Science** @Tampere University.  
Thesis title: *Data-Driven Analysis towards Monitoring Software Evolution by Continuously Understanding Changes in Users' Needs*  
Supervised by Dr. Zheyang Zhang, Prof. Konstantinos Stefanidis
- 2013 – 2017    📖 **M.Sc. in Internet and Game Studies** @University of Tampere.  
Thesis title: *Motivation-oriented Scenario-based Gamification Design Method using the User Requirements Notation Modeling*  
Supervised by Prof. Juho Hamari, Dr. Jonna Koivisto
- 2009 – 2013    📖 **M.Sc. in Software Engineering** @University of Tampere.  
Thesis title: *Research on Agile Process Models in Mobile Application Maintenance*  
Supervised by Dr. Zheyang Zhang, Prof. Jyrki Nummenmaa  
Minor Studies: Asian Studies in Business and Business Culture
- 2003 – 2007    📖 **B.Sc. in Software Engineering** @Northeastern University (China).  
Thesis title: *Research and Design of Internet Grading System - Answer Sheet Information Processing Subsystem*  
Supervised by Prof. Bin Zhang

## Employment

- 2.2025 –    📖 **Research Fellow (RTDa)**  
Faculty of Engineering, Free University of Bozen-Bolzano  
Tasks: Research work, thesis supervision, funding application, teaching
- 1.2023 – 1.2025    📖 **Post-Doc Researcher**  
Faculty of ITEE, University of Oulu  
Tasks: Research work, thesis supervision, funding application, teaching
- 4.2022 – 6.2023    📖 **Post-Doc Researcher**  
Faculty of ITC, Tampere University  
Tasks: Research work, thesis supervision, funding application, teaching assistance
- 10.2020 – 4.2022    📖 **Doctoral Researcher**  
Faculty of ITC, Tampere University  
Tasks: Research work, thesis supervision, funding application, teaching assistance
- 1.2017 – 12.2018    📖 **Researcher and Teaching Staff**  
Faculty of Natural Sciences, University of Tampere  
Tasks: Doctoral degree-based research work, master thesis supervision, funding application, exam supervision, teaching assistance
- 9.2010 – 2.2011    📖 **Project Manager**  
[Project] Input Device Testing Environment built on FPS Game @TAUCHI  
Tasks: Team management, scheduling, process optimization, documentation
- 5.2010 – 8.2010    📖 **Software Designer and Developer**  
[Project] Wearable Computing @Demola New Factory  
Tasks: Product ideas creation, prototyping, software programming

## Employment (continued)

9.2009 – 2.2010

### Software Designer and Developer

[Project] TAMBIC: Tampere Bi-lingual Corpus @Department of English Philology, University of Tampere

Tasks: Back-end programming, prototyping, UI design

## Skills

Languages    Chinese (Native), English (C1), Finnish (B1), Japanese (N4)

Coding       Python, C, C++, VB, SQL, PHP, Java, C#

Databases    MySQL, PostgreSQL

Web Dev      HTML, CSS, JavaScript, JQuery

Misc.         Scrum & Kanban, Web crawling, Data Science, Game and Gamification Design, MS Office, Photoshop, GenAI & Prompt Engineering

## Awards and Certificates

### Awards

2019    Best Paper @GamiFIN Conference

2015    Best Paper @ICSEA Conference

### Certification

2024    **Generative AI for Software Developers Specialization.** Certified by IBM via Coursera (Credential ID: HJYIBGIMAK5E)

**Generative AI Fundamentals Specialization.** Certified by IBM via Coursera (Credential ID: W44NPJXBTN4S)

2020    **Mathematics for Machine Learning Specialization.** Certified by Imperial College London via Coursera (Credential ID: QUH76XZE5AGV)

2019    **IBM Data Science Professional Certificate Specialization.** Certified by IBM via Coursera (Credential ID: UVKHBD8EYDKT)

**Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning.** Certified by DeepLearning.ai via Coursera (Credential ID: C4W2STPFKKLX)

**Finnish National Certificate of Language Proficiency, Finnish Language at Intermediate Level.** Certified by Finnish National Agency for Education

## Research Funding

        Main participant in EU Horizon funding application (HORIZON-CL4-2024-DIGITAL-EMERGING-01-22) 2024

        Main participant in EU Horizon funding application (HORIZON-CL4-2023-DATA-01-04) 2023

        Main participant in Business Finland funding application 2023

        CNESS research funding 2022

        Main participant in funding application Ulla Tuominen Funding 2020

        Doctoral student funding from Faculty of Natural Sciences at University of Tampere 2017 – 2018

        Main Participant in funding application SKR Pirkanmaa Regional Funding 2018, 2020

        Main participant in funding application to KoneenSäätiö 2017

        Main participant in funding application to Academy of Finland 2014, 2015, 2017, 2019, 2023

## Community Service

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- 2025
- **Web Chair.** The 11th European Conference On Service-Oriented And Cloud Computing (ESOCC)
  - **PC member.** The 33rd International Conference on Information Systems Development (ISD)
  - **PC member.** The 26th International Conference on Product-Focused Software Process Improvement (PROFES)
- 2024
- **PC member.** The 18th International IEEE Conference On Service-Oriented System Engineering (IEEEESOSE)
  - **PC member.** The 32nd International Conference on Information Systems Development (ISD)
  - **Track Co-Chair.** The IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)
  - **Workshop Co-Chair.** The 1st Workshop on Edge Software Architecture (ESA)
- 2023
- **Proceeding Chair.** The 24th International Conference on Product-Focused Software Process Improvement (PROFES)
  - **Proceeding Chair.** The 49th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)
  - **Proceeding Chair.** The 16th International Conference on the Quality of Information and Communications Technology (QUATIC)
  - **Web Chair & Volunteer.** The International Conference on Evaluation and Assessment in Software Engineering (EASE)
- 2021
- **Volunteer.** International Conference on Software Engineering (ICSE).

## Teaching Activities

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- 2025
- **Lecturer.** Introduction to Programming (UG). Free University of Bozen-Bolzano.
  - **Lecturer.** Software Project Management (UG). Free University of Bozen-Bolzano.
- 2024
- **Lecturer.** Databases (UG). University of Oulu/Nanjing Institute of Technology.
  - **Lecturer.** Software Development, Maintenance and Operations (Grad). University of Oulu.
- 2023
- **Lecturer.** Databases (UG). University of Oulu/Nanjing Institute of Technology.
  - **Lecturer.** Software Development, Maintenance and Operations (Grad). University of Oulu.
  - **Teaching Assistant.** Software Product and Process Management (Grad). Tampere University
- 2022
- **Teaching Assistant.** Software Product and Process Management (Grad). Tampere University
- 2021
- **Teaching Assistant.** Requirements Engineering (Grad). Tampere University.

## References

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### Konstantinos Stefanidis

Professor

Tampere University, Finland

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### Andrea Janes

Associate Professor

Free University of Bozen-Bolzano, Italy

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### Tomas Cerny

Associate Professor




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## Publication List

### Journal

- 1 M. Esposito, X. Li, S. Moreschini, N. Ahmad, T. Cerny, K. Vaidhyanathan, V. Lenarduzzi, and D. Taibi, "Generative ai for software architecture. applications, trends, challenges, and future directions," *Journal of Systems and Software*, 2025.
- 2 X. Li, D. A. d'Aragona, T. Cerny, V. Lenarduzzi, D. Taibi, and A. Janes, "Exploring microservice ownership and organizational coupling in open-source projects: An empirical study," *Computing*, vol. 107, no. 4, pp. 1–35, 2025.
- 3 S. Moreschini, S. Pour, I. Lanese, D. Balouek, J. Bogner, X. Li, F. Pecorelli, J. Soldani, E. Truyen, and D. Taibi, "Ai techniques in the microservices life-cycle: A systematic mapping study," *Computing*, vol. 107, no. 4, p. 100, 2025.
- 4 S. Schneider, A. Bakhtin, X. Li, J. Soldani, A. Brogi, T. Cerny, R. Scandariato, and D. Taibi, "Comparison of static analysis architecture recovery tools for microservice applications," *Empirical Software Engineering*, vol. 30, no. 5, p. 128, 2025.
- 5 A. S. Abdelfattah, T. Cerny, J. Yero Salazar, X. Li, D. Taibi, and E. Song, "Assessing evolution of microservices using static analysis," *Applied Sciences*, vol. 14, no. 22, p. 10 725, 2024.
- 6 R. Su, X. Li, and D. Taibi, "From microservice to monolith: A multivocal literature review," *Electronics*, 2024.
- 7 A. Janes, X. Li, and V. Lenarduzzi, "Open tracing tools: Overview and critical comparison," *Journal of Systems and Software*, vol. 204, p. 111 793, 2023, ISSN: 0164-1212.  DOI: <https://doi.org/10.1016/j.jss.2023.111793>.
- 8 X. Li, S. Moreschini, Z. Zhang, F. Palomba, and D. Taibi, "The anatomy of a vulnerability database: A systematic mapping study," *Journal of Systems and Software*, vol. 201, p. 111 679, 2023, ISSN: 0164-1212.  DOI: <https://doi.org/10.1016/j.jss.2023.111679>.
- 9 X. Li, S. Moreschini, F. Pecorelli, and D. Taibi, "Ossara: Abandonment risk assessment for embedded open source components," *IEEE Software*, vol. 39, no. 04, pp. 48–53, 2022.
- 10 X. Li, S. Moreschini, Z. Zhang, and D. Taibi, "Exploring factors and metrics to select open source software components for integration: An empirical study," *Journal of Systems and Software*, vol. 188, p. 111 255, 2022, ISSN: 0164-1212.  DOI: <https://doi.org/10.1016/j.jss.2022.111255>.
- 11 S. Moreschini, F. Pecorelli, X. Li, S. Naz, D. Hästbacka, and D. Taibi, "Cloud continuum: The definition," *IEEE Access*, 2022.
- 12 X. Li, Z. Zhang, and K. Stefanidis, "A data-driven approach for video game playability analysis based on players' reviews," *Information*, vol. 12, no. 3, p. 129, 2021.
- 13 X. Li, B. Zhang, Z. Zhang, and K. Stefanidis, "A sentiment-statistical approach for identifying problematic mobile app updates based on user reviews," *Information*, vol. 11, no. 3, p. 152, 2020.

### Conference

- 1 S. Schneider, A. Bakhtin, X. Li, J. Soldani, A. Brogi, T. Cerny, R. Scandariato, and D. Taibi, "Comparison of static analysis architecture recovery tools for microservice applications," in *21st International Conference on Mining Software Repositories (MSR2024)*, 2024 (Registered Report).
- 2 X. Li, N. Ahmad, T. Cerny, A. Janes, V. Lenarduzzi, and D. Taibi, "Toward organizational decoupling in microservices through key developer allocation," in *2025 IEEE 22nd International Conference on Software Architecture Companion (ICSA-C)*, IEEE, 2025, pp. 16–20.

- 3 A. Righi, A. Aneggi, X. Li, and A. Janes, "Demonstration paper: Avoiding wrong microservice cuts via git metadata analysis," in *2025 IEEE International Conference on Service-Oriented System Engineering (SOSE)*, IEEE, 2025, pp. 51–55.
- 4 M. A. Akbar, M. Esposito, S. Hyrynsalmi, K. D. Kumar, V. Lenarduzzi, X. Li, A. Mehraj, T. Mikkonen, S. Moreschini, N. Mäkitalo, et al., "6gsoft: Software for edge-to-cloud continuum," in *2024 50th Euromicro Conference on Software Engineering and Advanced Applications (SEAA)*, IEEE, 2024, pp. 499–506.
- 5 A. Bakhtin, X. Li, and D. Taibi, "Temporal community detection in developer collaboration networks of microservice projects," in *18th European Conference on Software Architecture (ECSA2024)*, 2024.
- 6 D. A. d'Aragona, A. Bakhtin, X. Li, R. Su, L. Adams, E. Aponte, F. Boyle, P. Boyle, R. Koerner, J. Lee, F. Tian, Y. Wang, J. Nyssölä, E. Quevedo, S. Md Rahaman, A. S. Abdelfattah, M. Mäntylä, T. Cerny, and D. Taibi, "A dataset of microservices-based open-source projects," in *21st International Conference on Mining Software Repositories (MSR2024)*, 2024.
- 7 D. A. d'Aragona, X. Li, and A. Janes, "Understanding the causes of microservice logical coupling: An exploratory study," in *The 1st International Workshop New Trends in Software Architecture (SATrends2024)*, 2024.
- 8 X. Li and M. Albano, "A framework for microservice organizational structure optimization," in *The 1st International Workshop New Trends in Software Architecture (SATrends2024)*, 2024.
- 9 X. Li, F. Calefato, V. Lenarduzzi, and D. Taibi, "Toward a collaboration optimization in microservice projects based on developer personalities," in *The 21st International Conference on Software Architecture (ICSA 2024)*, 2024.
- 10 X. Li, V. Lenarduzzi, and D. Taibi, "A data-driven analysis of player personalities for different game genres," in *1st Foundations of Applied Software Engineering for Games Workshop (FaSE4Games'24)*, 2024.
- 11 R. Su and X. Li, "Modular monolith: Is this the trend in software architecture?" In *The 1st International Workshop New Trends in Software Architecture (SATrends2024)*, 2024.
- 12 S. Zhao, X. Xia, B. Fitzgerald, X. Li, V. Lenarduzzi, D. Taibi, R. Wang, W. Wang, and C. Tian, "Motivating open source collaborations through social network evaluation: A gamification practice from alibaba," in *the 46th International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP)*, 2024.
- 13 C. Allen, X. Li, A. Elsayed, T. Cerny, and D. Taibi, "Comparing cost and performance of microservices and serverless in aws: Ec2 vs lambda," in *The Southwest Data Science Conference (SDSC 2023)*, 2023.
- 14 D. Amoroso d'Aragona, X. Li, T. Cerny, A. Janes, V. Lenarduzzi, and D. Taibi, "One microservice per developer: Is this the trend in oss?" In *European Conference on Service-Oriented and Cloud Computing*, Springer, 2023, pp. 19–34.
- 15 A. Huizinga, G. Parker, A. Elsayed, X. Li, T. Cerny, and D. Taibi, "Detecting microservice anti-patterns using interactive service call graphs: Effort assessment," in *The Southwest Data Science Conference (SDSC 2023)*, 2023.
- 16 X. Li, D. A. d'Aragona, and D. Taibi, "Evaluating microservice organizational coupling based on cross-service contribution," in *International Conference on Product-Focused Software Process Improvement*, Springer, 2023, pp. 435–450.
- 17 X. Li, A. Elsayed, R. Su, J. Lee, E. Aponte, R. Koerner, T. Cerny, and D. Taibi, "Metrics and models for developer collaboration analysis in microservice-based systems. a review," in *the 17th International Conference on Software Process and Product Measurement (MENSURA)*, 2023.

- 18 X. Li, A. Elsayed, J. Yero, D. A. d'Aragona, T. Cerny, and D. Taibi, "Analyzing organizational structure of microservice projects based on contributor collaboration," in *The 17th IEEE International Conference on Service-Oriented System Engineering (IEEE SOSE)*, IEEE, 2023.
- 19 R. Su, X. Li, and D. Taibi, "Back to the future: From microservice to monolith," in *5th International Conference on Microservices*, 2023.
- 20 X. Li, S. Moreschini, A. Filatova, and D. Taibi, "Knowledge management challenges for ai quality," in *2022 IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)*, IEEE, 2022, pp. 1295–1296.
- 21 F. Lomio, S. Moreschini, X. Li, and V. Lenarduzzi, "Anomaly detection in cloud-native systems," in *48th Euromicro Conference on Software Engineering and Advanced Applications (SEAA 2022)*, 2022.
- 22 S. Moreschini, F. Pecorelli, X. Li, S. Naz, M. Albano, D. Hästbacka, and D. Taibi, "Cognitive cloud: The definition," in *19th International Conference on Distributed Computing and Artificial Intelligence*, Springer, 2022.
- 23 X. Li and S. Moreschini, "Oss pesto: An open source software project evaluation and selection tool," in *IFIP International Conference on Open Source Systems*, Springer, 2021, pp. 42–50.
- 24 X. Li, "Towards factor-oriented understanding of video game genres using exploratory factor analysis on steam game tags," in *2020 IEEE International Conference on Progress in Informatics and Computing (PIC)*, IEEE, 2020, pp. 207–213.
- 25 X. Li and B. Zhang, "A preliminary network analysis on steam game tags: Another way of understanding game genres," in *Proceedings of the 23rd International Conference on Academic Mindtrek*, 2020, pp. 65–73.
- 26 C. Lu, X. Li, T. Nummenmaa, Z. Zhang, and J. Peltonen, "Patches and player community perceptions: Analysis of no man's sky steam reviews," in *DiGRA'20-Proceedings of the 2020 DiGRA International Conference*, DiGRA, 2020.
- 27 C. Lu, J. Peltonen, T. Nummenmaa, X. Li, and Z. Zhang, "What makes a trophy hunter? an empirical analysis of reddit discussions," in *4th International GamiFIN Conference, GamiFIN 2020*, 2020.
- 28 B. Zhang and X. Li, "Bibliography-based social network analysis and geo-location map of gamification," in *European Conference on Games Based Learning*, Academic Conferences International Limited, 2020, p. 684.
- 29 X. Li, "Research on software project developer behaviors with k-means clustering analysis," in *SSSME 2019: Joint Proceedings of the Summer School on Software Maintenance and Evolution*, CEUR-WS, 2019.
- 30 X. Li, C. Lu, J. Peltonen, and Z. Zhang, "A statistical analysis of steam user profiles towards personalized gamification," in *3rd International GamiFIN Conference, GamiFIN 2019*, CEUR-WS, 2019.
- 31 M. Stratigi, X. Li, K. Stefanidis, and Z. Zhang, "Ratings vs. reviews in recommender systems: A case study on the amazon movies dataset," in *European conference on advances in databases and information systems*, Springer, 2019, pp. 68–76.
- 32 X. Li, "A method to support gamification design practice with motivation analysis and goal modeling," in *Proceedings of the 2nd International GamiFIN Conference, GamiFIN 2018*, CEUR-WS, 2018.
- 33 X. Li, Z. Zhang, and T. Poranen, "Scenario-driven continuous mobility requirements analysis in mobile app maintenance," in *4th Workshop on Continuous Requirements Engineering. CRE Workshop*, CEUR-WS, 2018.
- 34 X. Li, Z. Zhang, and K. Stefanidis, "Mobile app evolution analysis based on user reviews," in *New Trends in Intelligent Software Methodologies, Tools and Techniques*, IOS Press, 2018, pp. 773–786.
- 35 X. Li, Z. Zhang, and K. Stefanidis, "Sentiment-aware analysis of mobile apps user reviews regarding particular updates," 2018, p. 109.



- 36 X. Li, B. Upreti, and Z. Zhang, "Mobility requirements engineering tool (more)," in *2016 IEEE 24th International Requirements Engineering Conference (RE)*, IEEE, 2016, pp. 409–410.
- 37 X. Li and Z. Zhang, "A user-app interaction reference model for mobility requirements analysis," in *ICSEA 2015: The Tenth International Conference on Software Engineering Advances*, 2015, pp. 170–177.
- 38 X. Li, Z. Zhang, and J. Nummenmaa, "Models for mobile application maintenance based on update history," in *2014 9th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE)*, IEEE, 2014, pp. 1–6.

## Thesis

- 1 X. Li, "Data-driven analysis towards monitoring software evolution by continuously understanding changes in users' needs," Doctoral Thesis, Tampere University, 2022.
- 2 X. Li, "Motivation-oriented scenario-based gamification design method using the user requirements notation modeling," Master Thesis, University of Tampere, 2017.
- 3 X. Li, "Research on agile process models in mobile application maintenance," Master Thesis, University of Tampere, 2013.