

Seyed Amir Hossein Tabatabaei, Assistant Prof., PhD

Computer Science | Machine Learning | Secure & Privacy-Preserving AI | Computer Vision

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Google Scholar link :

https://scholar.google.com/citations?hl=en&user=HEBT11YAAAAJ&view_op=list_works&sortby=pubdate

ACADEMIC & RESEARCH EXPERIENCE

- **University of Guilan, Rasht, Iran Assistant Professor of Computer Science** | 2021–Present
- **Justus Liebig University Giessen, Germany: Researcher / Research and Development, Institute of Medical Informatics** | 2018–2022
- **University of Siegen, Germany: Research Fellow / Postdoctoral Researcher, Pattern Recognition and Data Communication** | 2010–2018
- **University of Manitoba, Canada: Research Fellow, Department of Mathematics** | 2009–2010
- **Sadra Institute of Higher Education, Tehran, Iran: Faculty/Research Fellow** | 2001–2009

SELECTED INVOLVED RESEARCH PROJECTS (LAST 10 YEARS)

MIRACUM – Medical Informatics in Research and Care in University Medicine | Germany | DFG-funded | 2018-2022

MyAHA – EU International Project | 2015–2018

Automatic Detection of Cracks in Railway Sleepers | Germany | ZIM-funded | 2015-2017

CURRENT INTERNAL FUNDED RESEARCH AND DEVELOPMENT PROJECTS

- Explainable AI and risk assessment in breast-cancer risk models, collaboration with University of Oregon, USA, funded by MSRT, Iran
- Designing a platform for non-functional requirement in autonomous systems based on RL (in collaboration with University of Siegen, Germany, funded by MSRT, Iran
- Using AI for cyber security of generative AI systems (course materials), funded by INSF, Iran

EDUCATION

PhD, Digital Communication Systems, University of Siegen, Germany | 2010–2015

Thesis: *Approximate Message Authentication and Robust Image Hashing*

MSc, Applied Mathematics, University of Tarbiat Modares, Iran | 1997–2000

Thesis: *Numerical Solutions of Nonlinear Eigenvalue Problems at Bifurcation Points*

BSc, Applied Mathematics with Applications in Operations Research, University of Tehran, Iran | 1992–1997

INTERESTS AND SKILLS

Programming & scientific computing, Computer vision, Development of Privacy & security frameworks

RESEARCH OUTPUTS (RECENT SELECTED PUBLICATIONS)

Five selected most recent peer-reviewed journal publications:

1. Christ, M., Tabatabaei, S.A.H., Ostwald, N. *et al.* A low-cost "plant-scanner" platform for automated detection of *Ustilago maydis* infection in maize using deep learning. *Sci Rep* 16, 21644 (2026). <https://doi.org/10.1038/s41598-026-60714-4>
2. Mehdipour, S., Mirroshandel, S.A. & Tabatabaei, S.A. A novel lightweight hybrid CNN–ViT for maize leaf disease classification. *Sci Rep* **16**, 10468 (2026). <https://doi.org/10.1038/s41598-026-41190-2> (<https://www.nature.com/articles/s41598-026-41190-2#citeas>)
3. Mehdipour, S., Mirroshandel, SAM., Tabatabaei, SAH., Vision transformers in precision agriculture: A comprehensive survey, *Intelligent Systems with Applications*, Volume 29, 2026, 200617, ISSN 2667 3053, <https://doi.org/10.1016/j.iswa.2025.200617>.<https://www.sciencedirect.com/science/article/pii/S2667305325001437>
4. Abdolbaghi, M., Tabatabaei, S.A.H. & Keyanpour, M. Neural operator for observer gains and output-feedback control of coupled PDE–ODE systems. *Sci Rep* 15, 29479 (2025). <https://doi.org/10.1038/s41598-025-14090-0>, (<https://www.nature.com/articles/s41598-025-14090-0>)
5. Shahin Ramazi, Seyed Amir Hossein Tabatabaei, Elham Khalili, Amirhossein Golshan Nia, Kiomars Motarjem, Analysis and review of techniques and tools based on machine learning and deep learning for prediction of lysine malonylation sites in protein sequences, *Database*, Volume 2024, 2024, baad094, <https://doi.org/10.1093/database/baad094>