

## Yuan Lin

---

### CONTACT INFORMATION

Vindharpevegen 22B  
Rådal, Norway, 5237

Cell No. : +47 97438453  
E-mail: [linyuan1979@gmail.com](mailto:linyuan1979@gmail.com)  
ORCID: 0000-0002-6974-8856  
Permanent Residence Permission  
in Norway

### RESEARCH INTERESTS

My major ongoing research interests are focused on applied artificial intelligence across various domains. I have in depth knowledge in applying machine learning, deep learning, LLMs to various domains, including:

- Applied Machine Learning in Health Informatics, Digital health and Bioinformatics
- Computer Vision and Quality Assessment
- Large Language Models, AIGC
- Responsible AI, AI ethics, AI Sustainability

### PROFESSIONAL SKILLS

I have built extensive professional skills in computer science. Alongside a proficiency in advanced tech stack, I have also strong professional, management, and problem solving skills. My in depth knowledge in computer science includes following:

- Strong Python software engineering skills and knowledge of the key libraries such as NumPy, Pandas, SciPy etc.
- Proficient in using machine learning frameworks such as PyTorch, Keras and TensorFlow.
- Skilled in utilizing Jupyter notebooks for interactive coding and data analysis.
- Experienced with implementing and leveraging LLMs into different tasks such as NLP, RecSys, etc.
- Proficient in multiple programming languages such as C#, Java, JavaScript, Typescript, Python, frameworks such as React, Vue, Tailwind, databases such as MySQL, MongoDB, firebase, and DevOps tools such as Git, Docker, Kubernetes, and CD/CI.
- Expertise in full-stack development, particularly in the fintech sector, with a focus on banking system architecture and online banking solutions.
- Advanced knowledge in Web solutions, Mobile Apps, and cross-platform design with a deep understanding of cutting-edge technologies, innovative solutions and best practices.
- Solid understanding on cybersecurity field such as authentication, authorization and administration of the system.
- Extensive experience in project proposal writing, technical report writing, and research article writing.

### EDUCATION

**Doctor of Philosophy (PhD)**, 03. 2009.

Norwegian University of Science and Technology (Center for Quantifiable Quality of Service), Norway.

Advisor: [Prof. Andrew Perkis](#)

Title of Ph.D. thesis: Resource Allocation Through Encoding Algorithms for Real Time Video Communications.[\[Online\]](#)

**Master of Science in Engineering (MSc)** , 03. 2003.  
Dept. of Information Science and Electronic Engineering, Zhejiang University, China

**Bachelor of Science in Engineering (BSc)** , 06. 2000.  
Dept. of Information Science and Electronic Engineering, Zhejiang University, China

ACADEMIC  
POSITIONS

**Kristiania University College**, Bergen, Norway, 06.2021 - present  
Position: **Associate Professor**, School of Economics, Innovation, and Technology

**Xiamen University**, Xiamen, China, 07.2017 - 07.2018  
Position: **Adjunct Researcher**, School of Information Science and Technology

**Norwegian University of Science and Technology**, Trondheim, Norway, 08.2005  
- 03.2009  
Position: **PhD Research Fellow**

INDUSTRIAL  
POSITIONS

**Sparebanken Vest, Bergen**, Norway, 01. 2019 - 05. 2021  
Position: System Architect  
Department: Banking Service Section  
Responsibilities:

- Develop European PSD2 standard based Open-banking platform, and Loan & Saving applications as a major technical resource.
- Play a critical role in digital transformation of Sparebanken Vest in terms of performing system upgrade, DevOps, Continuous Deployment/Integration, Agile approaches etc. Actively participate Scrum practice in daily development.
- Work closely with business stakeholders and external vendors as an integral part of project management team.
- Carry out system architecture design, technical specification planning, and test automation.

**DNB Bank ASA, Bergen**, Norway, 05. 2013 - 12. 2018  
Position: Application Analyst  
Department: Customer Solutions Section  
Responsibilities:

- Work for E-platform architecture and develop different internet bank solutions such as BankID, BankID på Mobile, PostKasse, DNB Aksje handling, DNB Liv Forsikring as a full-stack developer.
- Be responsible for deployment, release management, and change management of several bank applications/routines and ensure the quality of operation.
- Play a key role in driving digital transformation of DNB IT section and leverage professional skills to enable the organization to deliver high-quality software solutions.
- As an integral part of project management team, work closely with business stakeholders and external vendors to ensure high-quality delivery of products.

**Nera Networks, Bergen, Norway, 12. 2008 - 04. 2013**

Position: Senior Design Engineer

Responsibilities:

- Lead research and design aiming at improving Quality of Service in wireless backhaul solutions.
- Develop embedded software to communicate with radio equipments.

**Texas Instruments, Shanghai, China, 06. 2003 - 06. 2004**

Position: Field Application Engineer

Responsibilities:

- Responsible for TI's VoIP product portfolio and provide technical support.
- Collaborate with sales teams to tailor technical solutions for customers.

PROFESSIONAL  
MEMBERSHIP

- **IEEE Member**

THESIS/PROJECT  
SUPERVISION  
EXPERIENCE

### **Ph.D Thesis/Project**

- PhysioGuard: XAI Empowered Non-invasive IoMT Anomaly Resolution for Physiological Biomarkers Monitoring at the Edge, Kristiania (Co-supervision).

### **Master/Bachelor Thesis/Project**

- Supervised/co-supervised 10+ master thesis and 30+ bachelor thesis since 2008 including candidates from Kristiania University college, Xiamen University, University of Agder, and Norwegian University of Science and Technology.

TEACHING  
EXPERIENCE

### **Pedagogy Certificate**

Certificate of Pedagogy in Higher Education, Kristiania University College, Norway (Enrolled in 2022 - Expected to finish in May 2023)

### **Course Instructor and Pedagogical Activities**

This section will feature a list of projects, activities, or initiatives that involve collaborative efforts between colleagues in pedagogical practice.

- Program Development and Teaching: Since 2021, involved in the development and instruction of Bachelor Programs in Frontend and Mobile Development, E-business, and Cyber Security at Kristiania, focusing on web technologies, object-oriented programming, and data science.
- Curriculum Design: Design course structures, develop curriculum materials, and set learning outcomes in collaboration with internal and external experts, maintaining alignment with institutional standards.
- Pedagogical Project Management: Stay up-to-date with subject area development, teaching methods, and educational technology to improve the quality of the course..

OTHER ACADEMIC  
ACTIVITIES

**Research Funds Participation**

- Granted one-year FOU/KU- research project 2024 Høyskolen Kristiania: “ML-IoT SmartCare: An Explainable ML and IoT based Smart Care for Elderly People”. Take the job role as Primary Investigator.
- Initiate proposal “Leveraging LLM-powered Strategies to Enforce Responsible AI in Green Tourism” from two research funds: the Regionale Forskingsfond Vestland (RFF Vestland), and Innovation Norge Vestlandet.
- Participate proposal “NORPART 2024”
- Participate proposal “UiB AI Billion: Sustainable AI Future”

**Internal Research Groups**

- Applied Informatics and Innovation research group at Kristiania University College
- AI Lab at Kristiania University College

**External Research Partners/Collaborators**

- University of Aberdeen, King’s College, United Kingdom
- Norwegian Research Center(NORCE), Norway
- Department of Clinical Medicine, Centre of Excellence for Clinical Research in Neurological Disorders, University of Bergen
- School of Information Science and Technology, Xiamen University, China
- Indian Institutes of Technology

**Reviewer (Partial List)**

IEEE Transactions on Neural Networks and Learning Systems  
IEEE/ACM Transactions on Computational Biology and Bioinformatics  
IEEE Transactions on Multimedia  
ACM Multimedia  
Multimedia Modeling

LANGUAGE

English: Fluent  
Norwegian: Good  
Chinese: Mother Tongue

PUBLICATIONS

1. **Y. Lin**, S. M. Xie, D. Ghose, et al, “FishIR: Identifying Pufferfish Individual based on Deep Learning and Face Recognition,” IEEE Access 2024.
2. J. Y. You, **Y. Lin**, et al, “Gated Transformer Representing Region Importance for Image Quality Assessment,” In proceedings of 2024 IEEE World Congress on Computational Intelligence, The International Joint Conference on Neural Networks (IJCNN) 2024.
3. **Y. Lin**, D. Ghose, et al, “On the Explainable Detection of Stress Levels using Heart Rate Variability based Deep Neural Networks,” In proceedings of IEEE International Conference on E-health Networking, Application & Services (Healthcom) 2023.

4. J. R. Våge, **Y. Lin**, D. Ghose, et al, "Predictive Modeling for Heart Rate: A Comparative Analysis of LSTM, XGBoost, and LightGBM," In proceedings of the IEEE 26th International Conference on Computer and Information Technology (ICCIT) 2023.
5. **S. T. Jin**, **Y. Lin**, et al, "A general hypergraph learning algorithm for drug multi-task predictions in micro-to-macro biomedical networks," PLOS Computational Biology Nov 2023. DOI:<https://doi.org/10.1371/journal.pcbi.1011597>.
6. J. Y. You, **Y. Lin**, et al, "Half of an Image is Enough for Quality Assessment," In proceedings of The 30th IEEE International Conference on Image Processing (IEEE ICIP) 2023.
7. S. R. Vamsidhar, **Y. Lin**, et al, "Automatic Modulation Classification in RIS-Assisted Wireless Communication Systems using Ensemble Learning Techniques," IEEE Vehicular Technology Conference (VTC) Fall 2023.
8. X. R. Ruan, **Y. Lin**, et al, "MSGCL: Inferring miRNA-disease associations based on multi-view self-supervised graph structure contrastive learning," Briefings in bioinformatics Feb 2023. DOI:<https://doi.org/10.1093/bib/bbac623>.
9. **Y. Lin**, J. Korhonen, et al, "Fast Accurate Fish Recognition with Deep Learning based on a Domain-Specific Large-Scale Fish Dataset," In proceedings of The 29th International Conference on Multimedia Modeling (MMM) 2023.
10. J. You, and **Y. Lin**, "Efficient Transformer with Locally Shared Attention for Video Quality Assessment," In proceedings of The 29th IEEE International Conference on Image Processing (IEEE ICIP) 2022. DOI: [10.1109/ICIP46576.2022.9898025](https://doi.org/10.1109/ICIP46576.2022.9898025).
11. **Y. Lin**, J. Korhonen, et al, "Identifying Pufferfish Specie Using Deep Neural Networks And Face Embedding Method," Norwegian Informatics Conference (NIK) 2022.
12. M. T. Niu, **Y. Lin** et al, "SgRNACNN: identifying sgRNA on-target activity in four crops using ensembles of convolutional neural networks," Plant Molecular Biology, vol.105, pp. 483-495, 2021. DOI:[10.1007/s11103-020-01102-y](https://doi.org/10.1007/s11103-020-01102-y).
13. Z. J. Shen, **Y. Lin** et al, "Transcription factors-DNA interactions in rice: identification and verification," Briefings in bioinformatics, 2020. DOI: <https://doi.org/10.1093/bib/bbz045>.
14. C. Y. Ao, **Y. Lin** et al, "Review of Progress in Predicting Protein Methylation Sites," Current organic chemistry, 2019. DOI:[10.2174/1385272823666190723141347](https://doi.org/10.2174/1385272823666190723141347).
15. **Y. Lin**, Y. Y. Cai et al, "An advanced approach to identify antimicrobial peptides and their function types for *Penaeus* through machine learning strategies," BMC Informatics, 2019. DOI:[10.1186/s12859-019-2766-9](https://doi.org/10.1186/s12859-019-2766-9).
16. K. Y. Qu, **Y. Lin** et al, "Application of Machine Learning in Microbiology," Frontiers in Microbiology, 2019. DOI: <https://doi.org/10.3389/fmicb.2019.00827>.
17. X. R. Liu, **Y. Lin** et al, "Computational methods for identifying the critical nodes in biological networks," Briefings in bioinformatics, 2019. DOI: <https://doi.org/10.1093/bib/bbz011>.
18. J. Liu, **Y. Lin** et al, "Integrated peak detection algorithm of surface-enhanced Raman spectrum based on selective ensemble learning," Journal of GuangZhou university (Natural Science), 2019.
19. E. Gurses, **Y. Lin** et al, "Distributed Quality-Lifetime Maximization in Wireless Video Sensor Networks," In proceedings of IEEE International Conference on Communications (ICC) 2009.

20. **Y. Lin**, E. Gurses et al, "Optimal Joint Power-Rate Adaptation for Error Resilient Video Coding," In proceedings of IS&T/SPIE Visual Communication and Image Processing Conference (VCIP) 2008.
21. **Y. Lin**, E. Gurses et al, "Concealment Aware Mode Selection for Power-Rate-Distortion Optimized H.264/AVC Encoder," In Proceedings of IEEE International Conference on multimedia & Expo (ICME) 2008.
22. **Y. Lin**, E. Gurses et al, "Rate-Distortion Optimized I-Slice Selection for Low Delay Video Transmission," In Proceedings of IEEE International Workshop on Multimedia Signal Processing (MMSP) 2007.
23. **Y. Lin**, E. Gurses et al, "On the Error Resilience of Rate Smoothing Using Explicit Slice-based Mode Selection," In proceedings of IEEE International Conference on Multimedia & Expo (ICME) 2007.
24. A. Undheim, **Y. Lin** et al, "Characterization of Slice-Based H.264/AVC Encoded Video Traffic," In Proceedings of the 4th European Conference on Universal Multiservice Networks (ECUMN) 2007.
25. M. Fidler, **Y. Lin** et al, "Efficient Smoothing of VBR Video Traffic by Explicit Slice-based Mode Type Selection," In Proceedings of the 4th IEEE Consumer Communications and networking Conference (CCNC) 2007.

PUBLICATIONS - IN  
REVIEW

1. J. Korhonen, **Y. Lin** et al, "Qualitative blind image quality assessment," IEEE International Conference on Multimedia & Expo (ICME) 2024.

REFERENCES

[Andrew Perkis](#), Professor, Department of Electronic Systems, Faculty of Information Technology and Electrical Engineering, NTNU, Norway. Telephone: +47 73592383 +47 91897483, E-mail: [andrew.perkis@ntnu.no](mailto:andrew.perkis@ntnu.no).  
[Debasish Ghose](#), Associate Professor, School of Economics, Innovation and Technology, Kristiania University College, Norway. Telephone: +47 97373368, E-mail: [debasish.ghose@kristiania.no](mailto:debasish.ghose@kristiania.no).  
[Jari Korhonen](#), Senior Lecturer, University of Aberdeen, King's College, UK. E-mail: [jari.korhonen@abdn.ac.uk](mailto:jari.korhonen@abdn.ac.uk).