

# Curriculum Vitae of Yachao Yuan

Lund University  
Ole Römers väg 3, 223 63 Lund, Sweden

yachao.yuan@eit.lth.se  
+46-7605449702

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## **Education and Work Background:**

### *Lund University, Sweden*

- **Postdoctoral** work in Networks and Security, Department of Engineering, Jan. 2022 - Now. Supervised by Prof. Christian Gehrman
- Major research directions: Network Attack Detection and Defense, Differential Privacy, Edge/Cloud Computing, Machine Learning and Deep Learning

### *Göttingen University, Germany*

- **Doctoral** study in Smart Mobility Research Group, Chair of Information Management, Nov. 2017 - Present. Supervised by Prof. Lutz M. Kolbe
- Major research directions: Object Detection and Localization, Edge/Cloud Computing, Network Communication, Real-time Image/Video Analysis, Machine Learning and Deep Learning
- Core disciplines: Machine Intelligence: Concepts and Applications, Computer Networks, Mobile communications, Advanced Practical Course Data Science, Advanced Topics in Mobile and Social Computing, Self-Organized Networks, Proseminar Network Security and Privacy, etc.

### *Tsinghua University, China*

- **Intern study** in Machine Learning and Video Processing Group, Department of Electronic Engineering, Sep. 2019 - Feb. 2020. Supervised by Prof. Shengjin Wang
- Major research directions: Object Detection and Localization, Edge/Cloud Computing, Real-time Image/Video Analysis, Machine Learning and Deep Learning

### *Chongqing University, China*

- **Graduate** study in Chongqing University, Sep. 2014 - Jun. 2017. Supervised by Prof. Dr. Wei Zhang
- Major research direction: Cloud Computing, Vision Based Object Detection and Localization
- Core disciplines: Mathematical Statistics, Information Technology in Civil Engineering, Engineering Project Management, Advanced Management Science, etc.
- Master Thesis Topic: Research on Pavement Crack Inspection and Total Quality Management Based on Deep Learning

### *Zhengzhou University of Aeronautics, China*

- **Undergraduate** study in Zhengzhou University of Aeronautics, Sep. 2010 -

Jul. 2014

- Core disciplines: Advanced Mathematics A, Advanced Mathematics B, Linear Algebra, Probability and Statistics, Database Application, Application of Mathematical Statistics, Operations Research, Statistics, Visual Basic Programming, etc

### **Selected Research Works:**

- 1) **Yachao Yuan**, Yu Huang, Yali Yuan. “PrSLoc: Sybil Attack Detection for Localization with Private Observers using Differential Privacy.” *Computers & Security* (2023). **(Impact factor: 5.105)**
- 2) **Yachao Yuan**, Yali Yuan, Parisa Memarmoshrefi, Thar Baker, Dieter Hogrefe, “LSP-EV: Load-balanced Secure and Private EV Charging Framework with Online Price Optimization”, *IEEE Internet of Things Journal*, 2022. (SCI—E, Impact factor: 10.238)
- 3) **Yachao Yuan**, Christian Gehrman, Jakob Sternby, Luis Barriga. “Insight of Anomaly Detection with NWDAF in 5G”, *International Conference on Computer, Information and Telecommunication Systems (CITS)*, 2022.
- 4) **Yachao Yuan**, Yali Yuan, Thar Baker, Lutz M. Kolbe, Dieter Hogrefe. “FedRD: Edge-cloud Federated Learning Framework for Intelligent Hazardous Road Damage Detection and Warning.” *Future Generation Computer Systems* (2021). **(Impact factor: 6.125)**
- 5) **Yachao Yuan**, Md Saiful Islam, Yali Yuan, Shengjin Wang, Thar Baker, Lutz M. Kolbe. “EcRD: Edge-cloud Computing for Smart Road Damage Detection and Warning.” *IEEE Internet of Things Journal* (2020). **(Impact factor: 9.515)**
- 6) Ruoxing Li, **Yachao Yuan**, Wei Zhang, Yali Yuan. “Unified Vision-Based Methodology for Simultaneous Concrete Defect Detection and Geolocalization.” *Computer-Aided Civil and Infrastructure Engineering* 33.7 (2018): 527-544. **(Impact factor: 6.208)**
- 7) Yang Liu, **Yachao Yuan\***, Cristhian Balta, Jing Liu. "A Light-Weight Deep-Learning Model with Multi-Scale Features for Steel Surface Defect Classification." *Materials*, no. 20: 4629 (2020)
- 8) Yang Liu, **Yachao Yuan\***, Jing Liu. “A Lightweight Deep Learning Model for Imbalanced Multi-label Surface Defect Classification”, *Measurement Science and Technology*, 2021.
- 9) Yali Yuan, Sripriya Srikant Adhatarao, Mingkai Lin, **Yachao Yuan**, Zheli Liu, Xiaoming Fu, “ADA: Adaptive Deep Log Anomaly Detector”, *IEEE Conference on Computer Communications. (CCF-A, INFOCOM 2020)*
- 10) Yuan, Yali, Christian Melching, **Yachao Yuan**, Dieter Hogrefe. “Multi-Device Fusion for Enhanced Contextual Awareness of Localization in Indoor Environments.” *Journal of IEEE Access* (2018): 7422-7431. (Impact factor: 4.098)
- 11) Yali Yuan, Robert Tasik, Sripriya Srikant Adhatarao, **Yachao Yuan**, Zheli Liu, Xiaoming Fu, “RACE: Reinforced Cooperative Autonomous Vehicle Collision Avoidance”, *IEEE Transactions on Vehicular Technology* (2020). (Impact factor: 5.339)
- 12) Yali Yuan, Liuwei Huo, **Yachao Yuan**, Zhixiao Wang. “Semi-supervised tri-Adaboost algorithm for network intrusion detection.” *International Journal of Distributed Sensor Networks* (2019).

### **Academic Activities:**

- 06.07.2020-09.07.2020 attended INFOCOM 2020, online.
- 06.23.2018-28.06.2018 attended European Conference on Information Systems 2018 in Portsmouth, UK.
- Reviewer of: IEEE Internet of Things Journal (Impact factor: 9.515), European Conference on Information Systems, ICME (IEEE International Conference on Multimedia and Expo), IEEE International Conference on Blockchain, etc.

### **Academic Skills:**

- Familiar with C, C++, Python, Matlab, R
- Familiar with Latex Programming
- Familiar with Git (a version-control system)

### **Teaching Experiences (English):**

- 2022.09-2023.01 Web Security (**Lecturer**)
- 2018.09-2019.02 Machine Learning Seminar: Crucial Topics in Information Management (**Teaching assistant**)
- 2018.09-2019.09 Exercise course of Change and Run IT (**Teaching assistant**)
- 2018.3-Present Machine Intelligence: Concepts and Applications” (**Teaching assistant**)
- 2017.11-Present Supervised more than ten students for their projects and theses

### **Awards and Honors**

- \* Sep. 2010-Jul. 2011 Awarded ‘Miyoshi’ Student
- \* Sep. 2011-Jul. 2012 Awarded ‘Miyoshi’ Student
- \* Sep. 2011-Jul. 2012 Awarded **National Motivational Scholarship**
- \* Sep. 2011-Jul. 2012 Awarded Second-Class Scholarship
- \* Sep. 2012-Jul. 2013 Awarded Second-Class Scholarship
- \* Sep. 2013-Jul. 2014 Awarded Excellent Graduates