Nikolaos Pappas
Associate Professor and Docent
Linköping University, Sweden

1. PERSONAL INFORMATION

Date of Birth: 18/09/1982, Marital Status: Married, one child
Research profiles: - ORCID: 0000-0003-4416-7702, E-mail: nikolaos.pappas@liu.se
Website: https://pappas-nikolaos.github.io/   Google Scholar Profile

2. ACADEMIC POSITIONS

Linköping University, Sweden   6/2022 - onward
Associate Professor at the Department of Computer and Information Science
Head of Communications for Networked Intelligent Systems Group

Linköping University, Sweden   10/2016 - 5/2022
Associate Professor at the Department of Science and Technology

Linköping University, Sweden   04/2016 - 10/2016
Assistant Professor at the Department of Science and Technology

Linköping University, Sweden   03/2014 - 03/2016
Marie Curie Fellow (IAPP) at the Department of Science and Technology

SUTD, Singapore   06/2015 - 07/2015,10/2015
Visiting Professor at the Wireless Networks and Decision Systems (WNDS) Group

Supélec, Paris, France   09/2012 - 3/2014
Postdoctoral Researcher at the Department of Telecommunications

University of Maryland, USA   09/2008 - 12/2008, 09/2010 - 03/2011
Visiting Scholar at Institute of Systems Research

3. EDUCATION

- 2012 - PhD in Computer Science, University of Crete, Greece
- 2012 - BSc in Mathematics, University of Crete, Greece
- 2007 - MSc in Computer Science, University of Crete, Greece
- 2005 - BSc in Computer Science, University of Crete, Greece

4. LIST OF CURRENT PhD STUDENTS

- Ali Nikkhah (funded by VR)
- Mehrdad Salimnejad (funded by ELLIIT)
- Antonia Arvanitaki (funded by CUGS, IDA)
- Georgios Smpokos (Industrial PhD with Vodafone)

In the past, he has supervised/co-supervised four PhD students and several MSc students.

5. LIST OF ONGOING PROJECTS AS PRINCIPAL INVESTIGATOR

- "Semantics-Empowered Communication for Networked Intelligent Systems", Swedish Research Council (VR), (3 800 000 SEK) (2022-2025)
- "Information Handling in Industrial IoT", ELLIIT, (5 000 000 SEK) (2021-2025)
- "Low Latency Communications for Wireless Networks: Exploiting Traffic Characteristics", CENIIT, (2 700 000 SEK) (2018-2023)
- "Physical Layer Secrecy for IoT Networks with Heterogeneous Traffic", Swedish Research Council (VR), (700 000 SEK) (2020-2022)
- "Network Architecture for the Tactile Internet", StandICT.EU (80 000 SEK)

6. SERVICE TO THE SCIENTIFIC COMMUNITY

- Currently **Associate Editor** in **IEEE Transactions on Machine Learning in Communications and Networking, IEEE Transactions on Communications, IEEE Open Journal of Communications Society, IEEE/KICS Journal of Com-**

munications and Networks, IEEE Communications Letters (2013-2018). Currently **Expert editor for invited papers** in IEEE Communications Letters.

○ Guest Editor for the IEEE Internet of Things SI on "Age of Information and Data Semantics for Sensing, Communication and Control Co-Design in IoT" and Leading Guest Editor for the Frontiers in Communications and Networks SI on "Age of Information".

○ **Tutorial speaker** on Age of Information and Semantics in IEEE GLOBECOM 2020, IEEE SPAWC 2021, IEEE ICC 2022.

○ **Tutorial speaker** on Semantics Communications for Future Wireless Communications in Spring School 2022: Emerging and future communication networks: technologies, architectures, and tools, Paris, France.

○ **Chair** of workshops on **low-latency communications, age of information** in IEEE SPAWC 2018, IEEE INFOCOM 2019, IEEE GLOBECOM 2020, IEEE ICC 2023, 13th IEEE WiMob 2017 Workshops Co-chair.

○ **Organizer** for the **Special Session on Age of Information**, 17th ISWCS 2021 and the **IEEE SPAWC 2021 Special session on Information Freshness in Real-Time Communication Networks**.

○ **Symposium Chair** for the IEEE ICC 2022, IEEE WCNC 2022.

○ **TPC Chair** for the **IEEE INFOCOM 2021 - 4th Age of Information Workshop**.

○ **Workshops Chair** for the **IEEE International Conference on Sensing, Communication, and Networking (SECON) 2022**.

○ Member of the technical program committee of more than 20 IEEE Conferences/Workshops including IEEE GLOBE-COM, IEEE ICC.

○ Secretary for the IEEE Tactile Internet Technical Committee

○ Co-chair for the Special Interest Group on IoT in Tactile Internet (IEEE Technical Committees)

7. SELECTED RECENT PUBLICATIONS

○ **N. Pappas**, M. A. Abd-Elmagid, B. Zhou, W. Saad, H. S. Dhillon, "Age of Information: Foundations and Applications", *Cambridge University Press, in press. Dec. 2022.*

○ G. Stamatakis, **N. Pappas**, A. Fragkiadakis, A. Traganitis, "Semantics-Aware Active Fault Detection in IoT", *20th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), Sep. 2022.*

○ P. Popovski, F. Chiariotti, K. Huang, A. Kalor, M. Kountouris, **N. Pappas**, B. Soret, "A Perspective on Time toward Wireless 6G", *Proceedings of the IEEE, vol. 110, no. 8, Aug. 2022.*

○ P. Agheli, **N. Pappas**, M. Kountouris, "Semantics-Aware Source Coding in Status Update Systems", *IEEE ICC Workshop on Semantic Communications, May 2022.*

○ **N. Pappas**, M. Kountouris, "Goal-Oriented Communication for Real-Time Tracking in Autonomous Systems", *IEEE International Conference on Autonomous Systems (ICAS), Aug. 2021.*

○ M. Kountouris, **N. Pappas**, "Semantics-Empowered Communication for Networked Intelligent Systems", *IEEE Communications Magazine, vol. 59, no. 6, June 2021.*

○ A. Kosta, **N. Pappas**, A. Ephremides, V. Angelakis, "The Age of Information in a Discrete Time Queue: Stationary Distribution and Non-linear Age Mean Analysis", *IEEE Journal on Selected Areas in Communications, vol. 39, no. 5, May 2021.*

○ G. Stamatakis, **N. Pappas**, A. Fragkiadakis, A. Traganitis, "Autonomous Maintenance in IoT Networks via AoI-driven Deep Reinforcement Learning", *IEEE INFOCOM - 4th Age of Information Workshop, May 2021.*

○ M. A. Abd-Elmagid, H. S. Dhillon, **N. Pappas**, "A Reinforcement Learning Framework for Optimizing Age-of-Information in RF-powered Communication Systems", *IEEE Transactions on Communications, vol. 68, no. 8, Aug. 2020.*

○ A. Kosta, **N. Pappas**, A. Ephremides, V. Angelakis, "The Cost of Delay in Status Updates and their Value: Non-linear Ageing", *IEEE Transactions on Communications, vol. 68, no. 8, Aug. 2020.* **[Best Student Journal Paper Award in Swe-CTW 2021]**

○ G. Stamatakis, **N. Pappas**, A. Traganitis, "Optimal Policies for Status Update Generation in an IoT Device with Heterogeneous Traffic", *IEEE Internet of Things Journal, vol. 7, no. 6, June 2020.*

○ M. A. Abd-Elmagid, **N. Pappas**, H. S. Dhillon, "On the Role of Age of Information in Internet of Things", *IEEE Communications Magazine, Dec. 2019.*

○ **N. Pappas**, M. Kountouris, "Delay Violation Probability and Age-of-information Interplay in the Two-user Multiple Access Channel", *IEEE 20th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), July 2019.*

○ A. Kosta, **N. Pappas**, V. Angelakis, "Age of Information: Metric of Timeliness", *Foundations and Trends in Networking, 2017.*