

## Serkan Sarıtaş

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CONTACT INFORMATION	Post-Doctoral Researcher Division of Information Science and Engineering School of Electrical Engineering and Computer Science KTH Royal Institute of Technology SE-100 44 Stockholm Sweden	<i>E-mail:</i> saritas@kth.se <i>WWW:</i> people.kth.se/~saritas/ ssaritas.bilkent.edu.tr/
RESEARCH INTERESTS	Information security, networked control, systems and control, information theory, game theory, communication theory, detection and estimation theory, signal processing, cryptography	
ACADEMIC EXPERIENCE	<b>KTH Royal Institute of Technology</b> , Stockholm, Sweden  Post-Doctoral Researcher, Division of Information Science and Engineering, School of Electrical Engineering and Computer Science, January 2020 to present Advisors: Prof. Ragnar Thobaben, Prof. Tobias Oechtering, Prof. Mikael Skoglund  Post-Doctoral Researcher, Division of Network and Systems Engineering, School of Electrical Engineering and Computer Science, May 2019 to December 2019 Advisor: Prof. György Dán  Post-Doctoral Researcher, Division of Decision and Control Systems, School of Electrical Engineering and Computer Science, September 2018 to April 2019 Advisor: Prof. Henrik Sandberg	
EDUCATION	<b>Bilkent University</b> , Ankara, Turkey  Ph.D., Department of Electrical and Electronics Engineering, September 2013 to August 2018 <ul style="list-style-type: none"><li>• Thesis Topic: <i>Signaling Games in Networked System</i></li><li>• Advisors: Prof. Dr. Sinan Gezici, Assoc. Prof. Dr. Serdar Yüksel</li><li>• Area of Study: Control and Game Theory</li><li>• CGPA: 3.91/4.00</li></ul> M.Sc., Department of Computer Engineering, September 2010 to May 2013 <ul style="list-style-type: none"><li>• Thesis Topic: <i>Analysis of Android Random Number Generator</i></li><li>• Advisor: Prof. Dr. Ali Aydın Selçuk</li><li>• Area of Study: Cryptography</li><li>• CGPA: 3.49/4.00</li></ul> B.Sc., Department of Electrical and Electronics Engineering, September 2005 to June 2010 <ul style="list-style-type: none"><li>• CGPA: 3.77/4.00</li></ul> <b>Queen's University</b> , Kingston, Ontario, Canada  Visiting Research Student, Department of Mathematics and Statistics, January 2015 to May 2015	
CHAPTERS IN EDITED VOLUMES	[Ch1] <b>S. Sarıtaş</b> , E. Shereen, H. Sandberg, and G. Dán, Continuous authentication security games. In C. A. Kamhoua, C. D. Kiekintveld, F. Fang, Q. Zhu, Eds., <i>Game Theory and Machine Learning for Cyber Security</i> , Wiley-IEEE Press, to appear.	
REFEREED JOURNAL PUBLICATIONS	[J1] <b>S. Sarıtaş</b> , S. Yüksel, and S. Gezici, Dynamic signaling games with quadratic criteria under Nash and Stackelberg equilibria. <i>Automatica</i> , vol. 115, art. no 108883, May 2020. doi:10.1016/j.automatica.2020.108883  [J2] <b>S. Sarıtaş</b> , S. Gezici, and S. Yüksel, Hypothesis testing under subjective priors and costs as a signaling game. <i>IEEE Transactions on Signal Processing</i> , vol. 67, no. 19, pp. 5169-5183, October 2019. doi:10.1109/TSP.2019.2935908	

- [J3] **S. Sarıtaş**, B. Dülek, A. D. Sezer, S. Gezici, and S. Yüksel, Optimal power allocation for average detection probability criterion over flat fading channels. *IEEE Transactions on Signal Processing*, vol. 65, no. 6, pp. 1383-1398, March 2017. doi:10.1109/TSP.2016.2634552
- [J4] **S. Sarıtaş**, S. Yüksel, and S. Gezici, Quadratic multi-dimensional signaling games and affine equilibria. *IEEE Transactions on Automatic Control*, vol. 62, no. 2, pp. 605-619, February 2017. doi:10.1109/TAC.2016.2578843

CONFERENCE  
PUBLICATIONS

- [C1] D. Umsonst, **S. Sarıtaş**, and H. Sandberg, A Nash equilibrium-based moving target defense against stealthy sensor attacks. *IEEE Conference on Decision and Control (CDC)*, Jeju Island, Republic of Korea, Dec. 8–11, 2020, to appear.
- [C2] H. Sasahara, **S. Sarıtaş**, and H. Sandberg, Asymptotic security of control systems by covert reaction: Repeated signaling game with undisclosed belief. *IEEE Conference on Decision and Control (CDC)*, Jeju Island, Republic of Korea, Dec. 8–11, 2020, to appear. arxiv/2003.11576
- [C3] **S. Sarıtaş**, G. Dán, and H. Sandberg, Passive fault-tolerant estimation under strategic adversarial bias. *IEEE American Control Conference (ACC)*, Denver, CO, July 1–3, 2020, pp. 4644–4651. doi:10.23919/ACC45564.2020.9147994
- [C4] **S. Sarıtaş**, E. Shereen, H. Sandberg, and G. Dán, Adversarial attacks on continuous authentication security: A dynamic game approach. *International Conference on Decision and Game Theory for Security (GameSec)*, on Lecture Notes in Computer Science, T. Alpcan, Y. Vorobeychik, J. S. Baras, and G. Dán, Eds., vol. 11836, Stockholm, Sweden, Oct. 30 – Nov. 1, 2019, pp. 439–458. doi:10.1007/978-3-030-32430-8\_26
- [C5] **S. Sarıtaş**, P. Furrer, T. Linder, S. Yüksel, and S. Gezici, On the number of bins in equilibria for signaling games. *IEEE International Symposium on Information Theory (ISIT)*, Paris, France, July 7–12, 2019, pp. 972–976. doi:10.1109/ISIT.2019.8849498
- [C6] **S. Sarıtaş**, S. Gezici, and S. Yüksel, Binary signaling under subjective priors and costs as a game. *IEEE Conference on Decision and Control (CDC)*, Miami Beach, FL, Dec. 17–19, 2018, pp. 1130–1135. doi:10.1109/CDC.2018.8619612
- [C7] **S. Sarıtaş**, S. Yüksel, and S. Gezici, Nash and Stackelberg equilibria for dynamic cheap talk and signaling games. *IEEE American Control Conference (ACC)*, Seattle, WA, May 24–26, 2017, pp. 3644–3649. doi:10.23919/ACC.2017.7963511
- [C8] **S. Sarıtaş**, S. Yüksel, and S. Gezici, Dynamic signaling games under Nash and Stackelberg equilibria. *IEEE International Symposium on Information Theory (ISIT)*, Barcelona, Spain, July 10–15, 2016, pp. 1631–1635. doi:10.1109/ISIT.2016.7541575
- [C9] **S. Sarıtaş**, S. Yüksel, and S. Gezici, On multi-dimensional and noisy quadratic signaling games and affine equilibria. *IEEE American Control Conference (ACC)*, Chicago, IL, July 1–3, 2015, pp. 5390–5395. doi:10.1109/ACC.2015.7172182
- [C10] Ö. Ergül, T. Malas, S. Kılınç, **S. Sarıtaş**, and L. Gürel, Analysis of photonic-crystal problems with MLFMA and approximate Schur preconditioners. *Computational Electromagnetics International Workshop (CEM)*, İzmir, Turkey, July, 20–23, 2009, pp. 82–86. doi:10.1109/CEM.2009.5228100

AWARDS

**IEEE Turkey Section**

- IEEE Turkey PhD Thesis Award, 2020

**National Entrance Exams - Student Selection and Placement Center (ÖSYM)**

- Ranked **1st** among **410000** candidates in Selection Exam for Academic Personnel and Graduate Studies (ALES, 2014 Spring)
- Ranked **2nd** among **1.5 million** candidates in the University Entrance Examination (ÖSS, 2005)

## The Scientific and Technological Research Council of Turkey (TÜBİTAK)

- Scholarship for Ph.D. Degree, 2013–2017
- Scholarship for M.Sc. Degree, 2010–2012
- Bronze medalist in 12th National Mathematics Olympiad, 2004

## Bilkent University

- Best Oral Presentation Award, IEEE Bilkent Graduate Research Conference 2017
- Ph.D. Scholarship, 2013
- M.Sc. Scholarship, 2010
- B.Sc. Scholarship, 2005

## TEACHING EXPERIENCE

### Bilkent University, Ankara, Turkey

- Industrial Design Project I & II (EEE 493 & EEE 494)
  - 2017–2018 Fall & Spring : Teaching Assistant & Coordinator
  - 2016–2017 Fall & Spring : Teaching Assistant & Coordinator
  - 2015–2016 Fall & Spring : Teaching Assistant
- Control and Optimization of Stochastic Systems (EEE 446 & EEE 546)
  - 2017–2018 Summer : Teaching Assistant
  - 2015–2016 Summer : Teaching Assistant
- Advanced Mathematics for Signals, Systems, Control and Communications (EEE 440 & EEE 540)
  - 2016–2017 Summer : Teaching Assistant
- Random Processes (EEE 533)
  - 2014–2015 Fall : Teaching Assistant
- Digital Communications Theory (EEE 530)
  - 2013–2014 Spring : Teaching Assistant
- Detection and Estimation Theory (EEE 539)
  - 2013–2014 Fall : Teaching Assistant

## REFEREE SERVICE

- *IEEE Transactions on Automatic Control*
- *Automatica*
- *IEEE Transactions on Communications*
- *IEEE Wireless Communications Letters*
- *Journal of Communications and Networks*
- *Signal, Image and Video Processing*
- *IEEE Control Systems Letters (L-CSS)*
- *The B.E. Journal of Theoretical Economics (BEJTE)*
- *IEEE Conference on Decision and Control (CDC)*
- *American Control Conference (ACC)*
- *Conference on Decision and Game Theory for Security (GameSec)*
- *SIAM Conference on Control and Its Applications*
- *IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*
- *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*
- *International Conference on Cyber-Physical Systems (ICCPS)*
- *International Conference on Applied Cryptography and Network Security (ACNS)*
- *Signal Processing and Communication Application Conference (SIU)*

## REFERENCES AVAILABLE TO CONTACT

### Dr. Henrik Sandberg (e-mail: [hsan@kth.se](mailto:hsan@kth.se); phone: +46-8-790-7294)

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- Associate Professor, Department of Mathematics and Statistics, Queen's University
- ◇ Department of Math & Stats Jeffery Hall, 48 University Ave. Kingston, ON, Canada, K7L 3N6
- ★ *Dr. Yüksel was my Ph.D. co-supervisor.*

**Dr. Sinan Gezici** (e-mail: gezici@ee.bilkent.edu.tr; phone: +90-312-290-3139)

- Professor, Department of Electrical and Electronics Engineering, Bilkent University
- ◇ Department of Electrical and Electronics Engineering, Bilkent University, TR-06800
- ★ *Dr. Gezici was my Ph.D. co-supervisor.*