

Lect. CANER ŞAHİN

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Publons / Web Of Science ResearcherID: ABS-0159-2022

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Biography

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Caner Sahin is the founder and the director of [Gemsas](#). He obtained his PhD degree from Imperial College London. He got MSc from Sabanci University and he previously received a double major degree from Yildiz Technical University. His research interests lie in the intersection of machine learning, computer vision, and robotics. He is particularly interested in object recognition, detection, and 6D pose estimation. He's been involved in the organization of 3rd and 4th IEEE workshops on recovering 6D object pose with his colleagues and leading scientists, Carsten Steger, Tae-Kyun Kim, Ales Leonardis, Vincent Lepetit, Carsten Rother, and Jiri Matas. He is a member of the Topical Advisory Panel of the Remote Sensing Journal.

Education Information

Doctorate, Imperial College of Science, Technology and Medicine, Faculty of Engineering, Department of Electrical and Electronic Engineering, England 2014 - 2019

Postgraduate, Sabanci University, Faculty Of Engineering And Natural Sciences, Department Of Mechatronics Engineering, Turkey 2011 - 2013

Undergraduate Double Major, Yildiz Technical University, Faculty Of Electrical & Electronics, Electronics And Communication Engineering, Turkey 2007 - 2012

Undergraduate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, Turkey 2006 - 2010

Research Areas

Robotics and Mechatronics Systems, Computer Vision, Database and Data Structures, Artificial Intelligence, Computer Learning and Pattern Recognition

Jury Memberships

Committee Of Expert, Committee Of Expert, TPC member at IEEE 4th Int. Workshop on Recovering 6D Object Pose, September, 2018

Committee Of Expert, Committee Of Expert, TPC member at IEEE 3rd Int. Workshop on Recovering 6D Object Pose, October, 2017

Committee Of Expert, Committee Of Expert, TPC member at IEEE 2nd Int. Workshop on Recovering 6D Object Pose, October, 2016

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **CMD-Net: Self-Supervised Category-Level 3D Shape Denoising through Canonicalization**
Şahin C.
Applied Sciences, vol.12, no.20, pp.1-17, 2022 (Peer-Reviewed Journal)
- II. **A review on object pose recovery: From 3D bounding box detectors to full 6D pose estimators**
ŞAHİN C., Garcia-Hernando G., Sock J., Kim T.
IMAGE AND VISION COMPUTING, vol.96, 2020 (Peer-Reviewed Journal)
- III. **A learning-based variable size part extraction architecture for 6D object pose recovery in depth images**
ŞAHİN C., Kouskouridas R., Kim T.
IMAGE AND VISION COMPUTING, vol.63, pp.38-50, 2017 (Peer-Reviewed Journal)

Articles Published in Other Journals

- I. **Performance improvement in vSLAM using stabilized feature points**
Şahin C., Ünel M.
Mathematical and Computational Applications, vol.18, no.3, pp.361-372, 2013 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Instance- and Category-Level 6D Object Pose Estimation**
Şahin C.
in: RGB-D Image Analysis and Processing, Paul L. Rosin, Yu-Kun Lai, Ling Shao, Yonghuai Liu, Editor, Springer, London/Berlin, London, pp.243-265, 2019

Refereed Congress / Symposium Publications in Proceedings

- I. **Category-Level 6D Object Pose Recovery in Depth Images**
Şahin C., Kim T.
15th European Conference on Computer Vision (ECCV), Munich, Germany, 8 - 14 September 2018, vol.11129, pp.665-681
- II. **Recovering 6D Object Pose: A Review and Multi-modal Analysis**
Şahin C., Kim T.
15th European Conference on Computer Vision (ECCV), Munich, Germany, 8 - 14 September 2018, vol.11134, pp.15-31
- III. **A Summary of the 4th International Workshop on Recovering 6D Object Pose**
Hodan T., Kouskouridas R., Kim T., Tombari F., Bekris K., Drost B., Groueix T., Walas K., Lepetit V., Leonardis A., et al.
15th European Conference on Computer Vision (ECCV), Munich, Germany, 8 - 14 September 2018, vol.11129,

pp.589-600

- IV. **Multi-task deep networks for depth-based 6D object pose and joint registration in crowd scenarios**
Şahin C.
29th British Machine Vision Conference, BMVC 2018, Newcastle, England, 3 - 06 September 2018
- V. **BOP: Benchmark for 6D Object Pose Estimation**
Hodan T., Michel F., Brachmann E., Kehl W., Buch A. G., Kraft D., Drost B., Vidal J., Ihrke S., Zabulis X., et al.
15th European Conference on Computer Vision (ECCV), Munich, Germany, 8 - 14 September 2018, vol.11214, pp.19-35
- VI. **Pose Guided RGBD Feature Learning for 3D Object Pose Estimation**
Balntas V., Doumanoglou A., ŞAHİN C., Sock J., Kouskouridas R., Kim T.
16th IEEE International Conference on Computer Vision (ICCV), Venice, Italy, 22 - 29 October 2017, pp.3876-3884
- VII. **Iterative Hough Forest with Histogram of Control Points for 6 DoF Object Registration from Depth Images**
ŞAHİN C., Kouskouridas R., Kim T.
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Daejeon, South Korea, 9 - 14 October 2016, pp.4113-4118
- VIII. **Tüm yönlü kamera kullanan bir mobil robot ile araç altı görüntüleme sistemi**
Şahin C.
Otomatik Kontrol Türk Milli Komitesi, Malatya, Turkey, 26 - 28 September 2013, pp.1-6
- IX. **Under Vehicle Perception for High Level Safety Measures Using A Catadioptric Camera System**
ŞAHİN C., Unel M.
39th Annual Conference of the IEEE Industrial-Electronics-Society (IECON), Vienna, Austria, 10 - 14 November 2013, pp.4306-4311
- X. **Görsel tabanlı atalet ölçüm ünitesi ile quadrotor durum tahmini ve navigasyonu**
Şahin C.
Otomatik Kontrol Türk Milli Komitesi, Niğde, Turkey, 11 - 13 October 2012, pp.1-6

Activities in Scientific Journals

Remote Sensing, Scientific Committee Membership, 2021 - Continues

Tasks In Event Organizations

Şahin C., IEEE 4th International Workshop on Recovering 6D Object Pose, Workshop Organization, Munich, Germany, Eylül 2018

Şahin C., SIXD Challenge 2017, Workshop Organization, Venice, Italy, Ekim 2017

Şahin C., IEEE 3rd International Workshop on Recovering 6D Object Pose, Workshop Organization, Venice, Italy, Ekim 2017

Metrics

Publication: 15

Citation (WoS): 152

Citation (Scopus): 254

H-Index (WoS): 4

H-Index (Scopus): 6