Nicolai Häni

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EDUCATION

University of Minnesota — Minneapolis, USA
Ph.D. Candidate in Computer Science, Advisor: Volkan Isler — 2017 –Present
  – Research on visual prospection
  – Research on classification and 3D reconstruction in precision agriculture

Zurich University of Applied Sciences — Zurich, Switzerland
Masters of Science in Engineering — 2013 –2015
  – Semester abroad at the University of Minnesota

Zurich University of Applied Sciences — Zurich, Switzerland
Bachelor of Science in System Engineering — 2009 –2012

PUBLICATIONS

N. Häni, P. Roy, and V. Isler, "MinneApple: A Benchmark Dataset for Apple Detection and Segmentation", *IEEE Robotics and Automation Letters*, vol. 5, no. 2, pp. 852–858, Apr. 2020, ISSN: 2377-3766, 2377-3774.

N. Häni, P. Roy, and V. Isler, "A comparative study of fruit detection and counting methods for yield mapping in apple orchards", en, *Journal of Field Robotics*, Aug. 2019, ISSN: 1556-4959, 1556-4967.

N. Häni, P. Roy, and V. Isler, "Apple Counting using Convolutional Neural Networks", in *2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Madrid, Spain: IEEE, Oct. 2018, pp. 2559–2565, ISBN: 978-1-5386-8094-0.

C. Becker, **N. Häni**, E. Rosinskaya, E. d'Angelo, and C. Strecha, "Classification of aerial photogrammetric 3D point clouds", en, *ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences*, vol. IV-1/W1, pp. 3–10, May 2017, ISSN: 2194-9050.

A. Devreker, P. T. Tran, B. Rosa, H. De Praetere, **N. Häni**, N. Famaey, D. Šeatović, P. Herijgers, J. V. Sloten, D. Reynaerts, and E. V. Poorten, "Intuitive Control Strategies for Teleoperation of Active Catheters in Endovascular Surgery", en, *Journal of Medical Robotics Research*, vol. 01, no. 03, p. 1 640 012, Sep. 2016, ISSN: 2424-905X, 2424-9068.

N. Häni and V. Isler, "Visual servoing in orchard settings", in *2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, Daejeon, South Korea: IEEE, Oct. 2016, pp. 2946–2953, ISBN: 978-1-5090-3762-9.

E. Vander Poorten, P. Tran, A. Devreker, C. Gruijthuijsen, S. Portoles-Diez, G. Smoljkic, V. Strbac, N. Famaey, D. Reynaerts, J. Vander Sloten, A. Tibebu, B. Yu, C. Rauch, F. Bernard, Y. Kassahun, J. H. Metzen, S. Giannarou, L. Zhao, S. Lee, G. Yang, E. Mazomenos, P. Chang, D. Stoyanov, M. Kvasnytsia, J. Van Deun, E. Verhoelst, M. Sette, A. Di Iasio, G. Leo, F. Hertner, D. Scherly, L. Chelini, **N. Häni**, D. Seatovic, B. Rosa, H. De Praetere, and P. Herijgers, "Cognitive AutonomouS CAtheters Operating in Dynamic Environments", en, *Journal of Medical Robotics Research*, vol. 01, no. 03, p. 1 640 011, Sep. 2016, ISSN: 2424-905X, 2424-9068.

NON-REFEREED PUBLICATIONS

N. Häni, S. Engin, J.-J. Chao, and V. Isler, "Unsupervised Continuous Object Representation Networks for Novel View Synthesis", *arXiv preprint arXiv:2007.15627*, 2020.

P. Roy, **N. Häni**, and V. Isler, "Semantics-Aware Image to Image Translation and Domain Transfer", *arXiv preprint arXiv:1904.02203*, 2019.

Experience

Robotic Sensor Network Laboratory   Minneapolis, USA
Research Assistant   2017 –Present

Pix4D   Lausanne, Switzerland
Software Engineer   2016 –2017

Institute of Mechatronic Systems   Zurich, Switzerland
Research Assistant   2012 –2015

Awards and Scholarships

MnDrive PhD Graduate Assistantship Award   2020

ASPRS Talbart Abrams Award   2019
For paper "Classification of aerial photogrammetric 3D point clouds"

University of Minnesota CSE Fellowship   2017

Swiss Society of Advanced Control - Best Master Thesis Award   2016
For thesis "Design and Implementation of an Eye-in-Hand Vision System for Orchard Inspection"