Curriculum Vitae

Ciro Potena

Apr 04, 2019

Information

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Areas of Interest

Unmanned Aerial Vehicles (UAVs); Perception and State Estimation; Agriculture Robotics; Classification; UAVs Control; Vision-Based Navigation; Deep Learning;

Education

- Ph.D. Candidate in Computer Science — since 08/2015
  Sapienza University of Rome, Italy

- Visiting Researcher at ETH — 12/2017 - 5/2018
  ETH Zurich, Switzerland

- Scholarship Holder in Computer Science — 02/2015
  Sapienza University of Rome, Italy

- Master's degree in Robotics and Automation Engineering — 10/2014
  University of Pisa, Italy
  Thesis: *Visual Odometry for Multirotor Systems*

- Bachelor's degree in Mechanical Engineering — 07/2011
  University of Cassino, Italy
  Thesis: *Autonomous parking with a car-like vehicles*

Awards

- Best student paper award finalist at IEEE International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAR) with C. Potena, B. Della Corte, D. Nardi, G, Grisetti

and A. Pretto. **Non-Linear Model Predictive Control with Adaptive Time-Mesh Refinement**, Brisbane, 2018, Australia.

- Best student paper award finalist at "International Conference on Intelligent Autonomous Systems" (IAS) with C. Potena, D. Nardi and A. Pretto. **Fast and Accurate Crop and Weed Identification with Summarized Train Sets for Precision Agriculture**, July 3-7, 2016 Shanghai, China.

Summer Schools

- "International Computer Vision Summer School (ICVSS)", 17-23 July 2016, Punta Sampieri - Scicli (RG), Italy.
- "TRADR Summer School on Autonomous Micro Aerial Vehicles", 24-28 August 2015, Birlinghoven Castle - Sankt Augustin, Germany.

Others Activities

- Investigator of the project Flourish 2015-2018, Flourish—Aerial Data Collection and Analysis, and Automated Ground Intervention for Precision Farming. http://www.flexsight.eu/
- Investigator of the project FlexSight 2016-2018, Robotic solution for the "pick&place" class of applications with rigid and deformable objects. http://flourish-project.eu/
- Participant at EUropean RObotics Challenges (EUROC). UAVs State Estimation, Control, and Path Planning for Industrial Inspections. http://www.euroc-project.eu/
- Technical Program Committee at International Workshop on Traffic and Street Surveillance for Safety and Security (T4S), August 29, 2017 Lecce, Italy. https://iwt4s.wordpress.com/

Teaching Activities

- Tecniche di Programmazione 2018/2019 (Sapienza, University of Rome)

Reviewing Activities

- Journal of Field Robotics (JFR) - 2019
- IEEE Robotics and Automation Letters (RA-L) - 2019, 2018
- IEEE International Conference on Robotics and Automation (ICRA) - 2019, 2018, 2017, 2016
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) - 2018, 2017, 2016
- European Conference on Mobile Robots (ECMR) - 2017
- IEEE Robotic Computing 2017 - 2018

Pubblication List

[1] C. Potena, R. Khanna, J. Nieto, R. Siegwart, D. Nardi and A. Pretto. **AgriColMap: Aerial-Ground Collaborative 3D Mapping for Precision Farming**, In: IEEE Robotics and Automation Letters, Vol:4, Issue: 2, April 2019, pages 1085-1092.

[2] M. Imperoli, C. Potena, D. Nardi, G. Grisetti and A. Pretto. **An Effective Multi-Cue Positioning System for Agricultural Robotics**, In: IEEE Robotics and Automation Letters, Vol: 3, Issue: 4, October 2018, pages 3685-3692.

[3] C. Potena, B. Della Corte, D. Nardi, G, Grisetti and A. Pretto. **Non-Linear Model Predictive Control with Adaptive Time-Mesh Refinement**, IEEE International Conference on Simulation, Modeling, and Programming for Autonomous Robots (SIMPAR), Brisbane, 2018.

[4] C. Potena, D. Nardi and A. Pretto. **Target Aware Optimal Visual Navigation for UAVs**, In: Proceedings of the 2017 IEEE/RSJ European Conference on Mobile Robotics (ECMR).

[5] M. Di Cicco, C. Potena, G. Grisetti and A. Pretto. **Automatic Model Based Dataset Generation for Fast and Accurate Crop and Weeds Detection**, In: Proceedings of the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

[6] C. Potena, D. Nardi and A. Pretto. **Fast and Accurate Crop and Weed Identification with Summarized Train Sets for Precision Agriculture**, In: Proceedings of the 14th International Conference on Intelligent Autonomous Systems (IAS-14), July 3-7, 2016 Shanghai, China - (**Best Student Paper Award - Finalist**).

[7] C. Potena, A. Pretto, D. D. Bloisi and D. Nardi. **Plane Extraction For Indoor Scene Recognition**, In Proceedings of Advanced Concepts for Intelligent Vision Systems, Oct. 26-29, 2015, Catania, Italy

Theses

[1] C.Potena, A. Pretto and Daniele Nardi, *Draft title* **Supporting Autonomy for Farming Robots**, the Department of Computer, Control, and Management Engineering Antonio Ruberti (DIAG) of Sapienza University of Rome, On going.

[2] C. Potena and L. Pollini, **Visual Odometry for Multirotor Systems**, Master's Degree thesis, University of Pisa, 2014.

[3] C. Potena **Autonomous parking with a car-like vehicles**, Bachelor's degree thesis, University of Cassino, 2011.