

Research Experience

- **Post-doctoral Research Fellow** Oct 2013 - Dec 2015
School of Informatics, University of Edinburgh
 - PostDoc with Vittorio Ferrari in collaboration with Rahul Sukthankar (Google Research)
 - Unsupervised discovery of the behaviors of articulated objects (e.g. animals) from video.
 - Automatic discovery of physical parts of highly articulated object classes from video.
- **P.h.D student, advised by Kobus Barnard** Aug 2009 - Jul 2013
Department of Computer Science, University of Arizona
 - **Thesis:** Top-down Bayesian modeling and inference for indoor scenes
 - 3D scene understanding and reconstruction from a single image using Bayesian geometric modeling.
 - Tracking of multiple people from monocular video using Bayesian modeling and 3D reasoning.

Industry

- **Computer Vision Research Engineer** Jan 2016 - present
Blippar, London
 - Real time 3D pose estimation on embedded system
 - Large scale image retrieval
 - Deep learning for regression and image classification
- **Software engineer** Mar 2008 - Aug 2009
GFI Informatique, Sophia Antipolis (contractor at Amadeus)
 - Implementation and design of ticket availability systems for major airlines (e.g. Continental, American Airlines). Focus on response time optimization on server side (C++, SQL).

Education

- **Master of Science, *Cum Laude*** Sep 2005 - Jan 2008
Computer Engineering, Politecnico di Torino,
 - **Thesis:** Exploiting spatial context for image region labeling
- **Bachelor of Science, Department of Computer Engineering** Sep 2002 - Jul 2005
Computer Engineering, Politecnico di Torino

Summary of publications

- 8 papers in major international conferences or journals in Computer Vision (5 CVPR, 1 ICCV, 1 IJCV) and Multimedia (1 ACM Multimedia), 7 as first author. The acceptance rate for all these conferences is around 25%.

Awards

- Outstanding Computer Science Graduate Student, University of Arizona, Spring 2011
- Galileo Scholar, University of Arizona College of Science, Spring 2012. <http://cos.arizona.edu/content/galileo-circle-scholars>
- Graduate Fellowship Award, Department of Computer Science, University of Arizona, Summer 2013

Strengths

- **Expertise:** Computer Vision, Machine Learning, 3D scene understanding and reconstruction, unsupervised learning from video, motion segmentation, motion analysis, MCMC sampling methods, Bayesian modeling, 3D real-time pose estimation on embedded systems, large scale image retrieval, deep learning for regression and classification
- **Programming languages:** C++ (7 years, 3 of which in industry), MATLAB (4 years), C, JAVA, Python, SQL, Lua
- **Misc:** OpenGL, HTML, LaTeX, Unix, Torch, Caffe, iOS and Android programming, GitHub, svn, academic writing

Languages

- Native Italian speaker. Fluent English and French, written and spoken. Basic Spanish and German.
- Cambridge Certificate of Proficiency in English, 2006
- DALF C1 (Certificate of Advanced French Language study), 2009

Outreach and research with undergraduate students

- Mentored five different undergraduate research projects during my PhD
- Co-organizer of the 2011 Integration of Science and Computing Camp for middle school students (<http://kobus.ca/ISC-11/>).

References are available on request

List of peer-reviewed publications

- Del Pero L., Ricco S., Sukthankar R., and Ferrari V., Behavior Discovery and Alignment of Articulated Object Classes from Unstructured Video, IJCV 2016
- Del Pero L., Ricco S., Sukthankar R., and Ferrari V., Discovering the physical parts of an articulated object class from multiple videos , CVPR 2016
- Papazoglou A., Del Pero L., and Ferrari V., Temporal alignment of videos based on object viewpoint, ACCV 2016
- Papazoglou A., Del Pero L., and Ferrari V., Discovering object aspects from video, IMAVIS 2016
- Del Pero L., Ricco S., Sukthankar R., and Ferrari V., Articulated Motion Discovery using Pairs of Trajectories , CVPR 2015
- Brau E., Guan J., Simek K., Del Pero L., Dawson C. and Barnard K., Bayesian 3D tracking from monocular video, ICCV 2013
- Del Pero L., Bowdish J., Kermgard B., Hartley E. and Barnard K., Understanding Bayesian rooms using composite 3D object models, CVPR 2013
- Del Pero L., Bowdish J., Fried D., Kermgard B., Hartley E. and Barnard K., Bayesian geometric modeling of indoor scenes, CVPR 2012
- Del Pero L., Guan J., Brau E., Schlecht J. and Barnard K., Sampling bedrooms, CVPR 2011
- Del Pero L., Lee P., Magahern J., Hartley E, Barnard K., Wang P., Kanaujia A., and Haering N., Fusing object detection and region appearance for image-text alignment, ACM Multimedia 2011

Book chapters

- Del Pero L. and Barnard K., Top-down Bayesian inference of indoor scenes, invited book chapter in "Advanced topics in Computer Vision" by Farinella G. M., Battiato S. and Cipolla R., Springer, Advances in Computer Vision and Pattern Recognition Series, 2013

Workshops

- Del Pero L. and Barnard K., Bayesian inference of indoor scenes using composite 3D object models, Scene Understanding Workshop (Sunw) at IEEE CVPR, June, 2013.
- Dawson C., Del Pero L., Morrison C., Surdeanu M., Hahn-Powell M., Chapman Z. and Barnard K. Bayesian modeling of scenes and captions, Workshop on Vision and Language at NAACL HLT, June, 2013.

Reviewing

- I reviewed for several editions of major international conferences (CVPR, ICCV, ECCV and NIPS) and journals (PAMI, IJCV and CVIU).