

# Hilton Bristow


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**PhD Thesis**      **Registration and Representation in Computer Vision**   
Hilton Bristow, 2015


**Publications**      **Dense Semantic Correspondence where Every Pixel is a Classifier**   
Hilton Bristow, Jack Valmadre and Simon Lucey  
arXiv preprint, 2015

**Regression-Based Image Alignment for General Object Categories**   
Hilton Bristow and Simon Lucey  
Chapter in *Dense Correspondences in Computer Vision*  
Springer SBM, 2015

**Why do Linear SVMs Trained on HOG Features Perform so Well?**   
Hilton Bristow and Simon Lucey  
arXiv preprint, 2014

**Optimization Methods for Convolutional Sparse Coding**   
Hilton Bristow and Simon Lucey  
arXiv preprint, 2014

**Fast Convolutional Sparse Coding**   
Hilton Bristow, Anders Eriksson and Simon Lucey  
International Conference on Computer Vision and Pattern Recognition (CVPR),  
2013

**V1-Inspired Features Induce a Weighted Margin in SVMs**   
Hilton Bristow and Simon Lucey  
European Conference on Computer Vision (ECCV), 2012

**Employment**      **Robotics Engineer** **Pittsburgh, USA**  
Aurora Innovation, Inc. 2017-  
Developing vision systems for self-driving cars

**Robotics Engineer** **Pittsburgh, USA**  
Uber Advanced Technologies Center (ATC) 2015-2017  
Developing vision systems for self-driving cars

**Education**      **Doctorate of Philosophy, Computer Vision** **Brisbane, Australia**  
Queensland University of Technology 2011-2015  
*“Representation and Registration in Computer Vision”*  
Supervised by Dr Simon Lucey and Dr Sridha Sridharan

**Bachelor of Engineering, Mechatronics** **Brisbane, Australia**  
 The University of Queensland 2007-2010  
 Awarded the University Medal  
 GPA 6.834/7.00  
 EPSA Dean's Excellence Medal

**Townsville Grammar School** **Townsville, Australia**  
 OP (Overall Position) 1 2002-2006  
 Dux of the School  
 Head Boy

**Scholarships** **Supervisor Scholarship** 2015  
 Queensland University of Technology (\$25,000 p.a.)

**Australian Postgraduate Award** (\$25,000 p.a.) 2011-2014

**Faculty of Engineering Scholarship** 2011-2014  
 Queensland University of Technology (\$1,5000 p.a.)

**Deputy Vice-Chancellor's Initiative Scholarship** 2011-2014  
 Queensland University of Technology (\$6,000 p.a.)

**EPSA Dean's Excellence Scholarship** 2007-2010  
 University of Queensland (\$5,000 p.a.)

**Academic Partial Scholarship** 2002-2006  
 Townsville Grammar School (\$2,500 p.a.)

**Internships** **Visiting Scholar, The Robotics Institute** **Pittsburgh, USA**  
 Carnegie Mellon University 2014-2015

**Google Summer of Code** **Brisbane, Australia**  
 Matlab code generator for the OpenCV project Summer 2013  
 Matlab mex "compiler" with automatic gateway generation

**Intern, Willow Garage** **Silicon Valley, USA**  
 Implementation of Deformable Parts Models in C++ Summer 2012  
 ROS and ECTO bindings  
 Contributed code and patches to OpenCV

**Intern, Thinking Systems** **Brisbane, Australia**  
 University of Queensland Summer 2010  
 Biologically inspired SLAM in C++ and CUDA

**Teaching** **Robotics and Mathematics Tutor** **Brisbane, Australia**  
 University of Queensland 2009-2010  
 Lab tutor for second year Mechatronics design project  
 Classroom tutor for first year Mathematics subject

**Programming** C++ (expert), Python (expert), Common Lisp (beginner)

**Frameworks** TensorFlow, Django, Cassandra, Zurb Foundation