

# Peter Anderson

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www.panderson.me  
peter.anderson@gatech.edu  
November 2018

<b>EDUCATION</b>	<i>PhD (under examination), Computer Science</i>	Feb 2015 – Apr 2018
	<b>Australian National University</b>	Canberra, Australia
	Supervisor: Dr Stephen Gould Thesis: <i>Vision and Language Learning: From Image Captioning and Visual Question Answering towards Embodied Agents</i>	
	<i>Bachelor of Computer Engineering</i>	Mar 2009 – Dec 2012
	<b>University of New South Wales</b>	Sydney, Australia
	1st class Honours and University Medal	
	<i>Bachelor of Commerce (Finance and Economics)</i>	Mar 2000 – Dec 2004
	<b>University of Sydney</b>	Sydney, Australia
	1st class Honours and University Medal	
<b>RESEARCH INTERESTS</b>	Computer Vision, Deep Learning, Natural Language Processing, Robotics	
<b>HONOURS AWARDS &amp; FUNDING</b>	Best/Outstanding Reviewer Award NIPS	2018
	Facebook ParlAI Research Award	2017
	ANU Three Minute Thesis (3MT) Finalist	2017
	ANU Australian Postgraduate Award (APA)	2015–2018
	ANU Research Supplementary Scholarship	2015–2018
	Best Paper Finalist, RoboCup International Symposium	2012
	1st class Honours and University Medal in Computer Engineering, UNSW	2012
	UNSW Endeavour Exchange Scholarship to University of Colorado	2011
	1st class Honours and University Medal in Finance, University of Sydney	2004
	Joye Prize for 1st in Finance Honours, University of Sydney	2004
Finance Honours Scholarship, University of Sydney	2004	
<b>POSITIONS &amp; EXPERIENCE</b>	<i>Research Scientist, with Devi Parikh and Dhruv Batra</i>	July 2018 – current
	School of Interactive Computing, Georgia Tech, Atlanta, USA	
	<i>Research Fellow, with Mark Johnson</i>	April 2018 – July 2018
	Department of Computing, Macquarie University, Sydney, Australia	
	<i>Research Intern, with Lei Zhang and Xiaodong He</i>	Apr 2017 – Jun 2017
	Deep Learning Technology Center, Microsoft Research, Seattle, USA	
	<i>Robotic Software Engineer</i>	Feb 2014 – Feb 2015
	Sabre Autonomous Solutions, Sydney, Australia	
	<i>Startup Founder</i>	Jan 2013 – Feb 2014
	FrameFish, Sydney, Australia	
	<i>Academic Tutor</i>	Jul 2009 – Nov 2011
	University of Sydney & University of New South Wales, Sydney, Australia	

Research Intern  
CSIRO Wireless Networking Lab, Sydney, Australia

Nov 2011 – Feb 2012

Equities Research Associate  
Credit Suisse, Sydney, Australia

Jan 2005 – Mar 2009

**SELECTED  
PUBLICATIONS**  
[Google Scholar](#)

- [ 1 ] **Peter Anderson**, Stephen Gould and Mark Johnson. *Partially-Supervised Image Captioning*, in Advances in Neural Information Processing Systems (NIPS), 2018
- [ 2 ] Paria Jamshid Lou, **Peter Anderson** and Mark Johnson. *Disfluency Detection using Auto-Correlational Neural Networks*, in Conference on Empirical Methods in Natural Language Processing (EMNLP), 2018
- [ 3 ] Mark Johnson, **Peter Anderson**, Mark Dras and Mark Steedman. *Predicting accuracy on large datasets from smaller pilot data*, in Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL), 2018
- [ 4 ] **Peter Anderson**, Qi Wu, Damien Teney, Jake Bruce, Mark Johnson, Niko Sünderhauf, Ian Reid, Stephen Gould and Anton van den Hengel. *Vision-and-Language Navigation: Interpreting visually-grounded navigation instructions in real environments*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 (**Spotlight Presentation**)
- [ 5 ] **Peter Anderson**, Xiaodong He, Chris Buehler, Damien Teney, Mark Johnson, Stephen Gould and Lei Zhang. *Bottom-Up and Top-Down Attention for Image Captioning and Visual Question Answering*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 (**Oral Presentation**)
- [ 6 ] Damien Teney, **Peter Anderson**, Xiaodong He and Anton van den Hengel. *Tips and Tricks for Visual Question Answering: Learnings from the 2017 Challenge*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018
- [ 7 ] **Peter Anderson**, Basura Fernando, Mark Johnson and Stephen Gould. *Guided Open Vocabulary Image Captioning with Constrained Beam Search*, in Conference on Empirical Methods in Natural Language Processing (EMNLP), 2017
- [ 8 ] **Peter Anderson**, Basura Fernando, Mark Johnson and Stephen Gould. *SPICE: Semantic Propositional Image Caption Evaluation*, in Proceedings of the European Conference on Computer Vision (ECCV), 2016
- [ 9 ] Basura Fernando, **Peter Anderson**, Marcus Hutter and Stephen Gould. *Discriminative Hierarchical Rank Pooling for Activity Recognition*, in Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016
- [ 10 ] **Peter Anderson**, Youssef Hunter and Bernhard Hengst. *An ICP Inspired Inverse Sensor Model with Unknown Data Association*, in Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), 2013
- [ 11 ] **Peter Anderson** and Bernhard Hengst. *Fast Monocular Visual Compass for a Computationally Limited Robot*, in Proceedings of the RoboCup International Symposium, 2013 (Oral Presentation)
- [ 12 ] **Peter Anderson**, Yongki Yusmanthia, Bernhard Hengst, and Arcot Sowmya. *Robot Localisation using Natural Landmarks*, in Proceedings of the RoboCup International Symposium, 2012 (**Oral Presentation, Best Paper Finalist**)

- [ 13 ] Sean Harris, **Peter Anderson**, Belinda Teh, Youssef Hunter, Roger Liu, Bernhard Hengst, Ritwik Roy, Sam Li and Carl Chatfield. *RoboCup Standard Platform League – rUNSWift 2012 Innovations*, in Proceedings of the Australasian Conference on Robotics and Automation (ACRA), 2012

**INVITED  
TALKS**

*Vision and language: attention, navigation, and making it work ‘in the wild’*, VQA Challenge Workshop, CVPR 2018

*Visual Understanding in Natural Language*, presented at Georgia Tech, University of Toronto and Microsoft Research (Seattle), Nov–Dec 2017

*Challenge Winner Talk*, Visual Question Answering Challenge Workshop, CVPR 2017

*Guided Open Vocabulary Image Captioning with Constrained Beam Search*, Australian Centre for Visual Technologies (ACVT), University of Adelaide, Nov 2016

*SPICE: Semantic Propositional Image Caption Evaluation*, Australian Centre for Robotic Vision (ACRV) Science Day, Queensland University of Technology, Aug 2016

*A Practical Introduction to Deep Learning with Caffe*, Deep Learning Workshop at AI / ACRA, Dec 2015

**PROFESSIONAL  
ACTIVITIES** Teaching:

- Guest Lecturer, CS 4476 Introduction to Computer Vision (Georgia Tech), Fall 2018
- Guest Lecturer, CS 7643 Deep Learning (Georgia Tech), Fall 2018

Tutorials:

- *Connecting Language and Vision to Actions* (ACL 2018)

Workshop organization:

- *Visually-Grounded Interaction and Language (ViGIL)* (NIPS 2019)
- *Visual Learning and Embodied Agents in Simulation Environments* (ECCV 2018)
- *New Benchmarks, Metrics, and Competitions for Robotic Learning* (RSS 2018)

Reviewer for ICML 2019, ICLR 2019, NIPS 2018, CVPR 2018-19, ECCV 2018