

# Sanja Fidler

## *Curriculum Vitae*

### Work address:

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University of Toronto  
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## Position

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Assistant Professor at University of Toronto  
Co-affiliated with the Vector Institute

## Research Interests

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Computer vision, biological vision, hierarchical representations, language and vision, object class recognition, detection and segmentation in both 2D and 3D, 3D scene understanding, clothing parsing and fashion, video understanding, semi-automatic annotation

## Degrees

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- 2010*            **Ph.D. in Computer Science**  
Department of Computer and Information Science, University of Ljubljana  
Thesis title: *Recognizing visual object categories with subspace methods and a learned hierarchical shape vocabulary*
- 2002*            **B.S. in Applied Mathematics**  
Department of Mathematics and Physics, University of Ljubljana  
Thesis title: *Independent Component Analysis*

## Employment

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- Jul 2016* –            **Assistant Professor (tenure-track)**  
University of Toronto
- Jan 2014* – *Jun 2016*    **Assistant Professor (non tenure-track)**  
University of Toronto
- Jul 2012* – *Jan 2014*    **Research Assistant Professor**  
Toyota Technological Institute at Chicago

- Feb 2011 – Jun 2012*    **Postdoctoral Fellow**  
 University of Toronto  
 Supervisor: Prof. Sven Dickinson
- Jan – Aug 2010*        **Visiting Scientist**  
 UC Berkeley and ICSI  
 Supervisor: Prof. Trevor Darrell
- 2008 – 2010*            **Research Assistant (Graduate)**  
 Department of Computer and Information science, University of Ljubljana  
 Supervisor: Prof. Aleš Leonardis
- 2003 – 2007*            **Teaching Assistant (full time)**  
 Department of Computer and Information Science, University of Ljubljana
- 2002*                    **Research Assistant (Undergraduate)**  
 Department of Electrical Engineering, University of Ljubljana  
 Project: Biomedical image analysis  
 Supervisor: Prof. Franjo Pernuš

## Awards

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- 2017*                    **Best paper honorable mention at CVPR'17:**  
 Annotating object instances with a polygon-RNN  
 Lluís Castrejon, Kaustav Kundu, Raquel Urtasun, **Sanja Fidler**
- 2016*                    **Amazon Academic Research Award**  
 Awarded by Amazon
- 2016*                    **NVIDIA Pioneers of AI Award**  
 Awarded by NVIDIA
- 2016*                    **Facebook Faculty Award**  
 Awarded by Facebook
- 2015*                    **Teaching award**  
 Awarded by CSSU at University of Toronto
- 2015*                    **Best reviewer award**  
 Computer Vision and Pattern Recognition (CVPR)
- 2012*                    **Best reviewer award**  
 Computer Vision and Pattern Recognition (CVPR)
- 2012*                    **Best reviewer award**  
 European Conference on Computer Vision (ECCV)
- 2008*                    **Best reviewer award**  
 European Conference on Computer Vision (ECCV)
- 2007*                    **Best teaching assistant award**  
 Department of Computer and Information Science, University of Ljubljana
- 2007*                    **Best Ph.D. student presentation**  
 Student competition at EU Cognition project meeting  
[http://www.vernon.eu/euCognition/six\\_monthly\\_meeting\\_2.htm](http://www.vernon.eu/euCognition/six_monthly_meeting_2.htm)  
 Presentation title: *Learning Hierarchical Representations of Object Categories*

- 2006*            **Award for the postgraduate studies**  
Department of Computer and Information Science, University of Ljubljana
- 2003*            **Best paper award**  
Austrian Association for Pattern Recognition (OAGM/AAPR) conference
- 2002*            **Award for the Diploma thesis**  
Department of Mathematics and Physics, University of Ljubljana
- 1992 – 2002*    **National scholarship for exceptional students**
- 1991 – 1995*    **First, second and two third places** at the national competitions in mathematics

## Professional Service

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### Co-founded

The Vector Institute, <http://vectorinstitute.ai/>

### Program Chair

International Conference on 3D Vision

### Area Chair

#### Computer Vision:

IEEE Computer Vision and Pattern Recognition (CVPR): 2016, 2017, 2018

International Conference on Computer Vision (ICCV): 2017

Asian Conference on Computer Vision (ACCV): 2016

#### Machine Learning:

Neural Information Processing Systems (NIPS): 2017

International Conference on Learning Representations (ICLR): 2017, 2018

#### Natural Language Processing:

Empirical Methods on Natural Language Processing (EMNLP): 2016, 2017

#### Artificial Intelligence:

Association for the Advancement of Artificial Intelligence (AAAI): 2018

### Chair

Workshop chair for CVPR'19

Tutorial co-chair for CVPR'16

Publication co-chair for ICCV 2015

Publication co-chair for CVPR 2015

Publication co-chair for CVPR 2014

Publication co-chair for CVPR 2013

Presentations chair for CVPR 2010

Multimedia chair for International Mathematical Olympiad 2006

### **Committees (at UofT)**

Grad Visit Day (2016/2017)

Grad Visit Day (2015/2016)

DCS Grad Recruiting Committee (2014)

Grad Research Skills Committee (2014, 2015)

DCS Professional Master's Admissions Committee (2014)

DCS Undergraduate Summer Research Program (2014, 2015)

### **Journal Reviewing**

IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE TPAMI)

International Journal of Computer Vision (IJCV)

Computer Vision and Image Understanding (CVIU)

Robotics and Autonomous Systems (RAS)

Pattern Recognition (PR)

Image and Vision Computing (IMAVIS)

### **Program Committees**

*2009 – 2015* IEEE Computer Vision and Pattern Recognition (CVPR)

*2009 – 2015* IEEE International Conference on Computer Vision (ICCV)

*2008 – 2016* European Conference on Computer Vision (ECCV)

*2013 – 2016* Neural Information Processing Systems (NIPS)

*2015* International Conference on Robotics and Automation (ICRA)

*2015* International Conference on Intelligent Robots and Systems (IROS)

*2009* Asian Conference on Computer Vision (ACCV)

## **Tutorials and Workshops**

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*2017* Role of Simulation in Computer Vision  
Workshop at ICCV'17  
<https://www.microsoft.com/en-us/research/event/iccv-2017-role-of-simulation-in-computer-vision/>

*2017* Geometry Meets Deep Learning  
Workshop at ICCV'17  
<https://sites.google.com/site/deepgeometry2017/>

- 2017 The Joint Video and Language Understanding Workshop: MovieQA and The Large Scale Movie Description Challenge  
Workshop at ICCV'17  
<https://sites.google.com/site/describingmovies/workshop-at-iccv-17>
- 2017 PASCAL in Detail Workshop Challenge  
Workshop at CVPR'17  
<https://sites.google.com/view/pasd>
- 2016 Geometry Meets Deep Learning  
Workshop at ECCV'16  
<https://sites.google.com/site/deepgeometry/>
- 2015 Tutorial on 3D Indoor Scene Understanding  
a half-day tutorial at CVPR'15, co-organized with Raquel Urtasun  
<http://www.cs.utoronto.ca/~fidler/3DsceneTutorialCVPR15.html>
- 2014 Reconstruction Meets Recognition Challenge  
Workshop at ECCV'14  
<http://cs.nyu.edu/~silberman/rmrc2014/index.php>
- 2013 Reconstruction Meets Recognition Challenge  
Workshop at ICCV'13  
<http://ttic.uchicago.edu/~rurtasun/rmrc/index.php>

## Teaching

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- 2017 CSC 2539 Visual Recognition with Text (graduate course)  
<http://www.cs.utoronto.ca/~fidler/teaching/2017/CSC2539.html>
- 2017 CSC 420 Intro to Image Understanding (undergraduate course)  
<http://www.cs.utoronto.ca/~fidler/teaching/2017/CSC420.html>
- 2016 CSC 2523 Object Modeling and Recognition: Deep Learning in Computer Vision (graduate course)  
<http://www.cs.utoronto.ca/~fidler/teaching/2015/CSC2523.html>
- 2015 CSC 420 Intro to Image Understanding (undergraduate course)  
<http://www.cs.utoronto.ca/~fidler/teaching/2015/CSC420.html>
- 2015 CSC 2523 Object Modeling and Recognition: Visual Recognition with Text (graduate course)  
<http://www.cs.utoronto.ca/~fidler/CSC2523.html>
- 2014 CSC 420 Intro to Image Understanding (undergraduate course)  
<http://www.cs.utoronto.ca/~fidler/CSC420.html>  
(Awarded **Professor of the Year** by Computer Science Student Union at University of Toronto)
- 2013 2 lectures for the graduate course Computer Vision (taught by Prof. Raquel Urtasun at TTI-C)

### **Invited lectures:**

- Jan, May, 2017* NextAI class on Computer Vision
- Mar 17, 2017* CogSci Academic Seminar at University of Toronto, Invited lecture on Perceptual machines that see, communicate and reason
- Mar 3, 2017* MBA statistics course at business school at University of Toronto, Invited lecture on Machine Learning
- Nov 30, 2016* CSC2503: Foundations of Computer Vision (graduate course in CS) at University of Toronto, Invited lecture on Neural Networks
- Oct 5, 2016* ESC 301: Engineering Science Robotics Option seminar series (undergraduate course in ECE) at University of Toronto, Invited lecture on Computer Vision

### **As Teaching Assistant:**

- Courses* (all undergraduate):
- 2003 – 2007* Calculus I and II
- 2003 – 2007* Discrete Mathematics
- 2003 – 2004* Probability Theory
- 2004 – 2007* Introduction to Statistics
- 2003 – 2007* Programming (c, Java, Mathematica)
- 2003* Optimization

## **Supervision**

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### **Postdoctoral Fellow:**

Makarand Tapaswi (Sept 2016 – )

### **Phd Students:**

- Amlan Kar (Sept 2017 – )
- Wenzheng Chen Co-supervised with Prof. Kyros Kutulakos (Sept 2017 – )
- Paul Vicol (Sept 2016 – )
- Hang Chu Co-supervised with Prof. Raquel Urtasun (Sept 2016 – )
- Namdar Homayounfar Co-supervised with Prof. Raquel Urtasun (Sept 2015 – )
- Kaustav Kundu Co-supervised with Prof. Raquel Urtasun (Sept 2013 – )

Tom Sie Ho Lee            Co-supervised with Prof. Sven Dickinson  
Graduated in 2016

**Msc Students:**

Jiaman Li                    (Sept 2017 – )  
Atef Chaudhury            (Sept 2017 – )  
Seung Kim                    (Sept 2017 – )  
Kevin Shen                    (Sept 2017 – )  
Brandon Zhao                (Sept 2017 – )  
Chaoqi Wang                Co-supervised with Prof. Raquel Urtasun  
(Sept 2017 – )  
Harris Chan                 Co-supervised with Prof. Jimmy Ba  
(Sept 2017 – )  
Tingwu Wang                (Sept 2016 – )  
Lluís Castrejón            Co-supervised with Prof. Raquel Urtasun (now PhD in University of Montreal)  
(Sept 2015 – May 2017)  
Yukun Zhu                    Co-supervised with Prof. Raquel Urtasun and Prof. Ruslan Salakhutdinov  
(Sept 2014 – Jan 2016), now at Google  
Ziyu Zhang                    Co-supervised with Prof. Raquel Urtasun  
(Sept 2014 – May 2016)  
Ivan Vendrov                Co-supervised with Prof. Raquel Urtasun  
(Sept 2014 – Jan 2016), now at Google  
Abhishek Sen                Co-supervised with Prof. Raquel Urtasun  
Graduated in 2013.  
Thesis Title: *Contextual Object Detection for Autonomous Driving*

**Undergraduate Students:**

Huan Ling                    3rd year undergraduate at University of Toronto  
Date: Oct 2016 –  
Ching-Yao Chuang            3rd year undergraduate at National Tsing Hua University (visiting student)  
Date: Aug 2017 –  
Liren Chen                    3rd year undergraduate at Tsinghua University (visiting student)  
Date: June 2017 –  
Tiantian (Ailsa) Fang        4th year undergraduate at University of Toronto  
Date: Sept 2017 –  
Kefan (Arthur) Chen         4th year undergraduate at University of Toronto  
Date: June 2017 –  
Capstone project

Daiqing Li	4th year undergraduate at University of Toronto Date: June 2017 – Capstone project
Wenjia Liu	4th year undergraduate at University of Toronto Date: June 2017 – Capstone project
Jienan Yao	4th year undergraduate at University of Toronto Date: Sept 2017 – CSC494 (project course)
Yuhao Zhou	3rd year undergraduate at University of Toronto Date: Jan 2017 –
Zheng Wu	3rd year undergraduate at Shanghai Jiao Tong University (visiting student) Date: May 2017 –
Haokun Liu	3rd year undergraduate at Peking University (visiting student) Date: Feb 2017 – June 2017
Xavier Puig Fernandez	4th year undergraduate at UPC, Spain (now a PhD student at MIT) Co-supervised with Prof. Antonio Torralba Date: Jan 2016 –
Olga (Ge Ya) Xu	3rd year undergraduate at UofT USRA'16 Date: June 2016 – Dec 2016
Kevin Kyunghwan Ra	4th year undergraduate at UofT (now a PhD student at McMaster University) Date: Jan 2016 – May 2017
Amlan Kar	3rd year undergraduate at IIT Kanpur, India (now PhD student with me at UofT) Co-supervised with Prof. Raquel Urtasun Date: June 2016 – Aug 2016
Vasu Sharma	3rd year undergraduate at IIT Kanpur, India (visiting student) Co-supervised with Prof. Raquel Urtasun Date: June 2016 – Aug 2016
Erin Grant	4th year undergraduate at UofT (now a PhD student at UC Berkeley) Date: Jan 2016 – May 2016
Seung Kim	4th year undergraduate at UofT (now a MSc student with me at UofT) Date: Jan 2016 – May 2016
Jurgen Aliaj	2nd year undergraduate at UofT (now a MSc student at UofT) USRA'15, CSC494 (project course) Date: June 2015 – Dec 2015
David Madras	4th year undergraduate at UofT (now a MSc student at UofT) CSC494 (project course) Date: Sept 2015 – Dec 2015
Nick Frosst	4th year undergraduate at UofT (now at Google) CSC494 (project course) Date: Sept 2015 – Dec 2015



Andrew Berneshawi 4th year undergraduate at UofT (now at Amazon)  
 CSC494 (project course): Road estimation with deep networks  
 Date: Jan 2015 – May 2015

Stanislav Ivashkevich 4th year undergraduate at UofT  
 CSC494 (project course): 3D object detection with branch and bound  
 Date: Jan 2015 – April 2015

Taher Jafferjee 4th year undergraduate at UofT  
 CSC494 (project course): Solving jigsaw puzzles  
 Date: Sept 2014 – Dec 2014

Chenxi Liu 4th year undergraduate at Tsinghua University (now a PhD student at John Hopkins)  
 Co-supervised with Prof. Raquel Urtasun.  
 Date: June 2014 – Nov 2014

Yinan Zhao 4th year undergraduate at Tsinghua University (now a PhD student at UT Austin)  
 Co-supervised with Prof. Raquel Urtasun.  
 Date: June 2014 – Dec 2014

Jialiang Wang 4th year undergraduate at UofT (now a PhD student at Harvard University)  
 USRA'14, co-supervised with Prof. Sven Dickinson  
 Date: June 2014 – Aug 2014

Uri Priel 3rd year undergraduate at UofT  
 USRA'14, co-supervised with Prof. Sven Dickinson  
 Date: June 2014 – Aug 2014

Kamyar Ghasemipour 2nd year undergraduate at UofT (now a MSc student at UofT)  
 USRA'14, co-supervised with Prof. Suzanne Stevenson and Prof. Sven Dickinson  
 Date: June 2014 – Aug 2014

Chen Kong 4th year undergraduate at Tsinghua University, (now a PhD student at CMU)  
 Co-supervised with Prof. Raquel Urtasun.  
 Date: June 2013 – March 2014

Ziyu Zhang 4th year undergraduate at Tsinghua University (now a Msc student at UofT)  
 Co-supervised with Prof. Raquel Urtasun  
 Date: August 2013 – June 2014

Meng Ye 4th year undergraduate at Beihang University  
 Co-supervised with Prof. Raquel Urtasun  
 Date: June 2013 – Nov 2013

### **Undergraduate Thesis Supervision:**

Wesley Huang 4th year undergraduate at University of Toronto  
 Thesis title: *Indoor navigation with visual targets*  
 Date: Sept 2017 –

Juan Morales Vega 4th year undergraduate at UPC  
 Thesis title: *Object instance segmentation using recurrent models*  
 Date: Feb 2017 – June 2017

Daniel Son	Thesis title: <i>Labeling 3D CAD Scenes with 3D CNNs</i> Date: Sept 2016 - April 2016
Yiming Kang	Thesis title: <i>Matching Houses in Streetview</i> Date: Sept 2015 - May 2016
Zexuang Wang	Co-supervised with Prof. Raquel Urtasun Thesis title: <i>Analyzing Table Tennis Games</i> Date: Sept 2015 - May 2016
Annie Ngai	Co-supervised with Prof. Sven Dickinson Thesis title: <i>Efficient Fine-grained Object Recognition and Pose Estimation</i> Date: Sept 2014 - April 2015
Sung Baik	Co-supervised with Prof. Raquel Urtasun Thesis title: <i>Efficient Tracking by Detection</i> Date: Sept 2014 - April 2015

**Visiting Msc/PhD Students:**

Bo Dai	Phd student at CUHK Date: Sept 2017 –
Enric Corona	Msc student at UPC Date: May 2017 –
Ruiyu Li	Phd student at CUHK Co-supervised with Prof. Raquel Urtasun Date: May 2016 – Mar 2017
Shu Liu	Phd student at CUHK Co-supervised with Prof. Raquel Urtasun Date: May 2016 – Mar 2017
Zhi Luo	Msc student at Columbia University Date: June 2016 – Dec 2016
Urban Jezernik	Phd student at University of Ljubljana Co-supervised with Prof. Raquel Urtasun Date: Jan 2016 – Apr 2016
Makarand Tapaswi	Phd student at Karlsruhe Institute of Technology (KIT) Co-supervised with Prof. Raquel Urtasun Date: Sept 2015 – Dec 2015
Roosbeh Mottaghi	Phd student at UCLA, now a postdoc at Stanford University Co-supervised with Prof. Raquel Urtasun Date: June 2012 – Nov 2013
Abhishek Sharma	PhD student at University of Maryland Co-supervised with Prof. Raquel Urtasun. Date: June 2012 – Nov 2012
Edgar Simo-Serra	PhD student at Institut de Robotica i Informatica Industrial Co-supervised with Prof. Raquel Urtasun Date: June 2013 –Nov 2013, June 2014 – Nov 2014

Liang-Chieh Chen      PhD student at UCLA  
Co-supervised with Prof. Raquel Urtasun.  
Date: August 2013 – Nov 2013

## Press Coverage

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### June-July, 2015 *Neuroaesthetics in Fashion: Modeling the Perception of Beauty*

Our CVPR'15 paper on fashion received a lot of attention from the media. It has been featured in a number of News websites, Fashion magazines and International news. We received numerous requests for interviews.

#### News websites:

New Scientist	Quartz	Tech Times
Wired (UK)	Mashable	AOL News
Huffington Post UK	Huffington Post Canada	MSN (Canada)
Protein	Yahoo (Canada)	Science Daily
Daily Mail (UK)	PSFK	Toronto Star
Gizmag	TheRecord.com	iDigitalTimes

#### Fashion websites / news:

Harper's Bazaar	Glamour	Elle
Cosmopolitan (UK)	Marie Claire	Fashion Magazine
Yahoo style	Red Magazine (UK)	The Pool (UK)
FashionNotes	Styleite	Health Beauty Life

#### International news:

Vogue (Spain)	Woman (Spain)	Stylebook (Germany)
Wired (Germany)	Jetzt (Germany)	Ansa (Italy)
La Gazzetta (Italy)	CenarioMT (Brazil)	Amsterdam Fashion (NL)
Marie Claire (France)	Fashion Police (Nigeria)	Nauka (Poland)
Pluska (Slovakia)	Presstext (Austria)	PopSugar (Australia)
SinEmbargo (Mexico)		

#### Television and radio:

RTVE (Spain)

**Dec, 2015**      Our paper on MovieQA has been featured in MIT Technological Review.

**March, 2016**      A comment for Globe an Mail about Microsoft's bot Tay  
[www.theglobeandmail.com](http://www.theglobeandmail.com) link

**Dec, 2016**      H. Chu, R. Urtasun, S. Fidler, *Song From PI: A Musically Plausible Network for Pop Music Generation*

#### News and tech websites:

The Register  
The Star  
GeekWire

The Guardian  
MailOnline  
Yahoo style!

New York Post  
University of Toronto news  
The Huffington Post

**Television and radio:**

BBC  
NPR

CTV News

radioEins

**Mar, 2017** UofT DCS News: Vector opening: [link 1](#), [link 2](#)

**July, 2017** UofT DCS News: Best paper honorable mention at CVPR'17: [link](#)

**July, 2017** Featured article in CVPR Daily News: <http://www.rsipvision.com/CVPR2017-Tuesday/>  
Best of CVPR: <http://www.rsipvision.com/ComputerVisionNews-2017August/#10>

**Sept, 2017** UofT article about the Elevate AI event: [UofT news](#)

## Open-Source Projects

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Below is the list of the open-source projects:

1. **SceneParsing**: <http://sceneparsing.csail.mit.edu/>  
B. Zhou, H. Zhao, X. Puig, **S. Fidler**, A. Barriuso and A. Torralba. Scene Parsing through ADE20K Dataset. In Computer Vision and Pattern Recognition (CVPR), 2017
2. **MovieQA**: <http://movieqa.cs.toronto.edu/home/>  
M. Tapaswi, Y. Zhu, R. Stiefelhagen, A. Torralba, R. Urtasun, **S. Fidler**. MovieQA: Understanding Stories in Movies through Question-Answering. In Computer Vision and Pattern Recognition (CVPR), 2016
3. **Skipthought sentence embedding**: <https://github.com/ryankiros/skip-thoughts>  
R. Kiros, Y. Zhu, R. Salakhutdinov, R. Zemel, A. Torralba, R. Urtasun, **S. Fidler**. Skip-Thought Vectors. Neural Information Processing Systems (NIPS), 2015.
4. **Aligning Movie-books**: <http://yknzhu.wixsite.com/mbweb>  
Y. Zhu, R. Kiros, R. Zemel, R. Salakhutdinov, R. Urtasun, A. Torralba, **S. Fidler**. Aligning Books and Movies: Towards Story-like Visual Explanations by Watching Movies and Reading Books. In *International Conference on Computer Vision (ICCV)*, 2015
5. **Order-embeddings**: <https://github.com/ivendrov/order-embedding>  
I. Vendrov, R. Kiros, **S. Fidler**, R. Urtasun. Order-Embeddings of Images and Language. In International Conference on Learning Representations (ICLR), 2016
6. **Object instance segmentation**: <http://www.cs.utoronto.ca/kitti-instance/>  
Z. Zhang, **S. Fidler**, R. Urtasun. Instance-Level Segmentation for Autonomous Driving with Deep Densely Connected MRFs. In Computer Vision and Pattern Recognition (CVPR), 2016
7. **3D reconstruction and localization of houses**: <http://www.cs.toronto.edu/housecraft/>  
H. Chu, S. Wang, R. Urtasun, **S. Fidler**. HouseCraft: Building Houses from Rental Ads and Street Views. In European Conference on Computer Vision (ECCV), 2016.

8. **3D object proposals:** <http://www.cs.toronto.edu/objprop3d/>  
X. Chen, K. Kundu, Y. Zhu, A. Berneshawi, H. Ma, **S. Fidler**, R. Urtasun. 3D Object Proposals for Accurate Object Class Detection. *Neural Information Processing Systems (NIPS)*, 2015
9. **Monocular object proposals:** <http://3dimage.ee.tsinghua.edu.cn/cxz/mono3d>  
X. Chen, K. Kundu, Z. Zhang, H. Ma, **S. Fidler**, R. Urtasun. Monocular 3D Object Detection for Autonomous Driving. In *Computer Vision and Pattern Recognition (CVPR)*, 2016
10. **SegDeepM object detector:** <http://www.cs.toronto.edu/~yukun/segdeepm.html>  
Y. Zhu, R. Urtasun, R. Salakhutdinov, **S. Fidler**. segDeepM: Exploiting Segmentation and Context in Deep Neural Networks for Object Detection. In *Computer Vision and Pattern Recognition (CVPR)*, 2015
11. **Clothing parsing:** <http://www.iri.upc.edu/people/esimo/en/research/fashion/>  
E. Simo-Serra, **S. Fidler**, F. Moreno-Noguer, R. Urtasun. A High Performance CRF Model for Clothes Parsing. In *Asian Conference on Computer Vision (ACCV)*, 2014
12. **3D image segmentation:** [http://web.cs.ucla.edu/~lcchen/beat\\_the\\_MTurkers.html](http://web.cs.ucla.edu/~lcchen/beat_the_MTurkers.html)  
L.-C. Chen, **S. Fidler**, A. Yuille, R. Urtasun. Beat the MTurkers: Automatic Image Labeling from Weak 3D Supervision. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014
13. **Semantic parsing of RGB-D scenes:**  
<http://www.cs.utoronto.ca/~fidler/projects/scenes3D.html>  
D. Lin, **S. Fidler**, R. Urtasun. Holistic Scene Understanding for 3D Object Detection with RGBD cameras. In *International Conference on Computer Vision (ICCV)*, 2013
14. **Distributed implementation of S-SVM:**  
<http://www.alexander-schwing.de/projectsGeneralStructuredPredictionLatentVariables.php>  
A. Schwing, **S. Fidler**, M. Pollefeys, R. Urtasun. Box In the Box: Joint 3D Layout and Object Reasoning from Single Images. In *International Conference on Computer Vision (ICCV)*, 2013
15. **Real-time superpixels:** <https://bitbucket.org/mboben/spixel>  
J. Yao, M. Boben, **S. Fidler**, R. Urtasun. Real-Time Coarse-to-fine Topologically Preserving Segmentation. In *Computer Vision and Pattern Recognition (CVPR)*, 2015
16. **Holistic scene parsing:** <http://ttic.uchicago.edu/~yaojian/HolisticSceneUnderstanding.html>  
J. Yao, **S. Fidler**, R. Urtasun. Describing the Scene as a Whole: Joint Object Detection, Scene Classification and Semantic Segmentation. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2012
17. **Symmetric part detection:** <http://www.cs.toronto.edu/~tshlee/SymmetricParts/>  
T. Lee, **S. Fidler**, S. Dickinson. Detecting Curved Symmetric Parts using a Deformable Disc Model. In *International Conference on Computer Vision (ICCV)*, 2013
18. **Video captioning:** <https://engineering.purdue.edu/~qobi/mindseye/>  
A. Barbu, A. Bridge, Z. Burchill, D. Coroian, S. Dickinson, **S. Fidler**, A. Michaux, S. Mussman, S. Narayanaswamy, D. Salvi, L. Schmidt, J. Shangguan, J. Siskind, J. Waggoner, S. Wang, J. Wei, Y. Yin, and Z. Zhang. Video In Sentences Out. *Conference on Uncertainty in Artificial Intelligence (UAI)*, 2012

## Talks

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Below is the list of my talks in the past few years:

1. **Re-work Deep Learning Summit**  
*Teaching machines to see, communicate, and act*, invited talk  
Montreal, Canada, Oct 2017
2. **Facebook Faculty Summit**  
*Teaching machines to see, communicate, and act*, invited talk  
New York City, USA, Oct 2017
3. **University of Toronto**, Engineering Dept.  
*Towards machines that see, communicate, and act*, invited talk  
Toronto, Canada, Sept 2017
4. **Acivs conference**  
*Towards machines that see, communicate, and act*, invited talk  
Antwerp, Belgium, Sept 2017
5. **Elevate AI**, <http://elevatetoronto.com/event/elevate-ai/>  
*Machine Vision*, lighting talk  
Toronto, Canada, Sept 2017
6. **ACL'17 Workshop on Representation Learning for NLP**  
*Learning Joint Embeddings of Vision and Language*, keynote  
Vancouver, Canada, August 2017
7. **CVPR'17 Workshop on Deep-Vision: Deep Learning in Computer Vision**  
*Towards perceptual machines that parse, communicate, and act*, invited talk  
Honolulu, Hawaii, July 2017
8. **CVPR'17 Workshop on Visual Question Answering Challenge**  
*Teaching machines via natural language feedback*, invited talk  
Honolulu, Hawaii, July 2017
9. **CVPR'17 Workshop on Continuous and Open-Set Learning**  
*Learning Joint Embeddings of Vision and Language*, keynote  
Honolulu, Hawaii, July 2017
10. **International Computer Vision Summer School (ICVSS'17)**  
*Learning Joint Embeddings of Vision and Language*, invited lecture  
Sicily, Italy, July 2017
11. **Google faculty summit**  
*Towards perceptual machines that parse, communicate, and act*, invited talk  
Zurich, Switzerland, July 2017
12. **Women in Robotics** seminar series  
*Towards perceptual machines that see, communicate, and reason*, invited talk  
Toronto, Canada, May 2017
13. **Deep Learning Summit** by Re-Work  
*Towards understanding stories in videos*, invited talk  
Boston, USA, May 2017
14. Seminar at **MERL** (Mitsubishi Electric Research Lab)  
*Learning Joint Embeddings of Images and Language*, invited talk  
Boston, USA, May 2017

15. **NVIDIA's GPU Technology Conference (GTC'17)**  
*Towards understanding stories in videos*, invited talk  
According to GTC participant survey: Speaker rating: 5/5, content rating 4.88/5  
Palo Alto, USA, May 2017
16. **CogSci seminar** at University of Toronto  
*Towards understanding stories in videos*, invited talk  
Toronto, Canada, March 2017
17. Seminar at **Qualcomm**  
*Learning Joint Embeddings of Images and Language*, invited talk  
Markham, Canada, March 2017
18. **TedX@UofT** at University of Toronto  
*Towards understanding stories in videos*, invited talk  
Toronto, Canada, Feb 2017
19. **Robust Vision Symposium** at MPI Tuebingen  
*Learning Embeddings of Images and Language*, invited talk  
Tuebingen, Germany, Jan 2017
20. **Fields ML Seminar**  
*Learning Embeddings of Images and Language*, invited talk  
Toronto, Canada, Nov 2016
21. **AI night** at University of Toronto  
*Towards understanding stories in videos*, invited talk  
Toronto, Canada, Nov 2016
22. **Workshop on Storytelling with Images and Videos** at ECCV'16  
*Learning Embeddings of Images and Language*, invited talk  
Amsterdam, Netherlands, October 2016
23. **Joint Imagenet and MS Coco Visual Recognition Challenge Workshop** at ECCV'16  
*Learning Embeddings of Images and Language*, keynote  
Amsterdam, Netherlands, October 2016
24. **CogSci graduate orientation day** at University of Toronto  
*The Gee-Whiz of A.I.*, invited talk  
Toronto, Canada, Sep 2016
25. **ACCV'16 Area Chair meeting**  
*Towards Understanding Stories from Videos*, talk  
Taipei, Taiwan, August 2016
26. **Deep Learning Workshop at ICML'16**  
*Towards Understanding Stories from Videos*, invited talk  
New York City, US, June 2016
27. **Carnegie Mellon University**  
*Towards Understanding Stories from Videos*, invited talk (vision seminar)  
Pittsburgh, US, April 2016
28. **University of Pittsburgh**  
*Towards Understanding Stories from Videos*, invited talk (vision seminar)  
Pittsburgh, US, April 2016

29. **University of Toronto**  
*Towards perceptual machines that see, communicate, and reason*, invited talk  
Toronto, Canada, March 2016
30. **CVPR'16 Area Chair meeting**  
*Towards Understanding Stories from Videos*, talk  
Vancouver, Canada, February 2016
31. **York University**  
*Towards Understanding Stories from Videos*, invited talk  
Toronto, Canada, January 2016
32. **Scenes From Video (SFV), Workshop in conjunction with ICCV'15**  
*Towards Story-like Descriptions by Watching Movies and Reading Books*, invited talk  
Santiago, Chile, December 2015
33. **Closing the Loop Between Vision and Language, Workshop at ICCV'15**  
*Towards Story-like Descriptions by Watching Movies and Reading Books*, invited talk  
Santiago, Chile, December 2015
34. **Describing and Understanding Video & The Large Scale Movie Description Challenge (LSMDC), Workshop at ICCV'15**  
*Towards Story-like Descriptions by Watching Movies and Reading Books*, invited talk  
Santiago, Chile, December 2015
35. **3D Scene Understanding, Workshop at ICCV'15**  
*3D Indoor Scene Understanding and Localization*, invited talk  
Santiago, Chile, December 2015
36. **Women in Computer Vision, Workshop at CVPR'15**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk  
Boston, US, June 2015
37. **Symposia at CRV'15**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk  
Halifax, Canada, June 2015
38. **Deep Learning for Vision, Workshop at DALI'15**  
*Scene Understanding or How I Grew To Like Deep Learning*, invited talk  
Canary Islands, Spain, April 2015
39. **University of Pennsylvania**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk at the GRASP vision seminar  
Philadelphia, US, March 2015
40. **Daghstuhl Workshop on Holistic Scene Understanding**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk  
Daghstuhl, Germany, February 2015
41. **Karlsruhe Institute of Technology**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk  
Karlsruhe, Germany, February 2015
42. **The Hong Kong Polytechnic University**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk  
Hong Kong, December 2014



43. **AI Night, University of Toronto**  
*Understanding Complex Scenes and People That Talk About Them*, invited talk  
Toronto, Canada, November 2014
44. **University of Ljubljana**  
*Computer Vision*, invited lecture for a math summer school  
Ljubljana, Slovenia, August 2014
45. **International Conference on Computer Vision (ICCV) 2013**  
*Holistic Scene Understanding for 3D Object Detection with RGBD cameras*, oral presentation  
Sydney, Australia, December 2013
46. **MPI Tuebingen, Perceiving Systems**  
*2D and 3D object detection by exploiting segmentation and contextual information*, invited talk  
Tuebingen, Germany, September 2013
47. **Microsoft Research**  
*2D and 3D object detection by exploiting segmentation and contextual information*, invited talk  
Cambridge, UK, September 2013
48. **Midwest Vision Workshop**  
*Bottom-up Segmentation for Top-down Detection*  
Chicago, US, May 2013

# Publications

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## Journal Articles and Book Chapters

1. X. Chen, K. Kundu, Y. Zhu, H. Ma, **S. Fidler**, R. Urtasun. 3D Object Proposals using Stereo Imagery for Accurate Object Class Detection. *Trans. on Pattern Analysis and Machine Intelligence*, 2017
2. R. Mottaghi, A. Yuille, **S. Fidler**, R. Urtasun, D. Parikh. Human-Machine CRFs for Identifying Bottlenecks in Scene Understanding. *Trans. on Pattern Analysis and Machine Intelligence*, Vol. 38, Num. 1, pp 74-87, 2016.
3. T. Lee, **S. Fidler**, A. Levinstein, C. Sminchisescu, S. Dickinson, *A Framework for Symmetric Part Detection in Cluttered Scenes*, MDPI Symmetry, Vol. 7, pp 1333-1351, 2015.
4. M. Fritz, M. Andriluka, **S. Fidler**, M. Stark, A. Leonardis, B. Schiele. Categorical Perception. In: *Cognitive Systems*, Editors: H. I. Christensen, G.-J. Kruijff, A. Sloman and J. Wyatt, Springer, 2010.
5. **S. Fidler**, M. Boben, A. Leonardis. Learning Hierarchical Compositional Representations of Object Structure. In: *Object Categorization: Computer and Human Vision Perspectives*, Editors: S. Dickinson, A. Leonardis, B. Schiele and M. J. Tarr, Cambridge University Press, 2009.
6. L. Furst, **S. Fidler**, A. Leonardis. Selecting features for object detection using an AdaBoost-compatible evaluation function. *Pattern Recognition Letters (PRL)*, 2008, vol. 29, no. 11, pp. 1603 – 1612.
7. **S. Fidler**, D. Skočaj, A. Leonardis. Combining Reconstructive and Discriminative Subspace Methods for Robust Classification and Regression by Subsampling. *IEEE Transactions on Pattern Analysis and Machine Intelligence (IEEE PAMI)*, 2006, vol. 28(3), pp. 337 – 350.

## Conference Papers

1. H. Ling, **S. Fidler**. Teaching Machines to Describe Images via Natural Language Feedback. In Neural Information Processing Systems (NIPS), 2017.
2. B. Dai, **S. Fidler**, R. Urtasun, D. Lin. Towards Diverse and Natural Image Descriptions via a Conditional GAN. In International Conference on Computer Vision (ICCV), 2017, **oral presentation**.
3. X. Qi, R. Liao, J. Jia, **S. Fidler**, R. Urtasun. 3D Graph Neural Networks for RGBD Semantic Segmentation. In International Conference on Computer Vision (ICCV), 2017, **oral presentation**.
4. S. Wang, M. Bai, G. Mattyus, H. Chu, W. Luo, B. Yang, J. Liang, J. Chaverie, **S. Fidler**, R. Urtasun. TorontoCity: Seeing the World with a Million Eyes. In International Conference on Computer Vision (ICCV), 2017, **spotlight presentation**.
5. R. Li, M. Tapaswi, R. Liao, J. Jia, R. Urtasun, **S. Fidler**. Situation Recognition with Graph Neural Networks. In International Conference on Computer Vision (ICCV), 2017
6. H. Zhao, X. Puig, B. Zhou, **S. Fidler**, A. Torralba. Open Vocabulary Scene Parsing. In International Conference on Computer Vision (ICCV), 2017
7. S. Zhu, **S. Fidler**, R. Urtasun, D. Lin, C.C. Loy. Be Your Own Prada: Fashion Synthesis with Structural Coherence. In International Conference on Computer Vision (ICCV), 2017
8. S. Liu, J. Jia, **S. Fidler**, Raquel Urtasun. Sequential Grouping Networks for Instance Segmentation. In International Conference on Computer Vision (ICCV), 2017

9. L. Castrejon, K. Kundu, R. Urtasun, **S. Fidler**. Annotating Object Instances with a Polygon-RNN. In Computer Vision and Pattern Recognition (CVPR), 2017, **best paper honorable mention**.
10. N. Homayounfar, **S. Fidler**, R. Urtasun. Sports Field Localization via Deep Structured Models. In Computer Vision and Pattern Recognition (CVPR), 2017.
11. B. Zhou, H. Zhao, X. Puig, **S. Fidler**, A. Barriuso and A. Torralba. Scene Parsing through ADE20K Dataset. In Computer Vision and Pattern Recognition (CVPR), 2017.
12. W.-C. Ma, S. Wang, M. A. Brubaker, **S. Fidler**, R. Urtasun. Find your way by observing the sun and other semantic cues. In International Conference on Robotics and Automation (ICRA), 2017.
13. S. Wang, **S. Fidler**, R. Urtasun. Proximal Deep Structured Models. In Neural Information Processing Systems (NIPS), 2016.
14. H. Chu, S. Wang, R. Urtasun, **S. Fidler**. HouseCraft: Building Houses from Rental Ads and Street Views. In European Conference on Computer Vision (ECCV), 2016.
15. M. Tapaswi, Y. Zhu, R. Stiefelhagen, A. Torralba, R. Urtasun, **S. Fidler**. MovieQA: Understanding Stories in Movies through Question-Answering. In Computer Vision and Pattern Recognition (CVPR), 2016, **spotlight presentation**.
16. Z. Zhang, **S. Fidler**, R. Urtasun. Instance-Level Segmentation for Autonomous Driving with Deep Densely Connected MRFs. In Computer Vision and Pattern Recognition (CVPR), 2016.
17. X. Chen, K. Kundu, Z. Zhang, H. Ma, **S. Fidler**, R. Urtasun. Monocular 3D Object Detection for Autonomous Driving. In Computer Vision and Pattern Recognition (CVPR), 2016.
18. G. Mattyus, S. Wang, **S. Fidler**, R. Urtasun. HD Maps: Fine-grained Road Segmentation by Parsing Ground and Aerial Images. In Computer Vision and Pattern Recognition (CVPR), 2016.
19. I. Vendrov, R. Kiros, **S. Fidler**, R. Urtasun. Order-Embeddings of Images and Language. In International Conference on Learning Representations (ICLR), 2016, **oral presentation**.
20. Y. Zhu, R. Kiros, R. Zemel, R. Salakhutdinov, R. Urtasun, A. Torralba, **S. Fidler**. Aligning Books and Movies: Towards Story-like Visual Explanations by Watching Movies and Reading Books. In International Conference on Computer Vision (ICCV), 2015, **oral presentation**.
21. S. Wang, **S. Fidler**, R. Urtasun. Lost Shopping! Monocular Localization in Large Indoor Spaces. In International Conference on Computer Vision (ICCV), 2015, **oral presentation**.
22. J. Ba, K. Swersky, **S. Fidler**, R. Salakhutdinov. Predicting Deep Zero-Shot Convolutional Neural Networks using Textual Descriptions. In International Conference on Computer Vision (ICCV), 2015.
23. Z. Zhang, A. Schwing, **S. Fidler**, R. Urtasun. Monocular Object Instance Segmentation and Depth Ordering with CNNs. In International Conference on Computer Vision (ICCV), 2015.
24. G. Matthyus, S. Wang, **S. Fidler**, Raquel Urtasun. Enhancing World Maps by Parsing Aerial Images. In International Conference on Computer Vision (ICCV), 2015.
25. T. Lee, **S. Fidler**, S. Dickinson. A Learning Framework for Generating Region Proposals with Mid-level Cues. In International Conference on Computer Vision (ICCV), 2015.
26. R. Kiros, Y. Zhu, R. Salakhutdinov, R. Zemel, A. Torralba, R. Urtasun, **S. Fidler**. Skip-Thought Vectors. Neural Information Processing Systems (NIPS), 2015.
27. X. Chen, K. Kundu, Y. Zhu, A. Berneshawi, H. Ma, **S. Fidler**, R. Urtasun. 3D Object Proposals for Accurate Object Class Detection. Neural Information Processing Systems (NIPS), 2015.

28. D. Lin, C. Kong, **S. Fidler**, R. Urtasun. Generating Multi-Sentence Lingual Descriptions of Indoor Scenes. In *In British Machine Vision Conference (BMVC)*, 2015, **oral presentation**.
29. C. Liu, A. Schwing, K. Kundu, R. Urtasun, **S. Fidler**. Rent3D: Floor-Plan Priors for Monocular Layout Estimation. In *Computer Vision and Pattern Recognition (CVPR)*, 2015, **oral presentation**.
30. S. Wang, S. Fidler, R. Urtasun. Holistic 3D Scene Understanding from a Single Geo-tagged Image. In *Computer Vision and Pattern Recognition (CVPR)*, 2015, **oral presentation**.
31. Y. Zhu, R. Urtasun, R. Salakhutdinov, **S. Fidler**. segDeepM: Exploiting Segmentation and Context in Deep Neural Networks for Object Detection. In *Computer Vision and Pattern Recognition (CVPR)*, 2015.
32. E. Simo-Serra, **S. Fidler**, F. Moreno-Noguer, R. Urtasun. Neuroaesthetics in Fashion: Modeling the Perception of Beauty. In *Computer Vision and Pattern Recognition (CVPR)*, 2015.
33. J. Yao, M. Boben, **S. Fidler**, R. Urtasun. Real-Time Coarse-to-fine Topologically Preserving Segmentation. In *Computer Vision and Pattern Recognition (CVPR)*, 2015.
34. E. Simo-Serra, **S. Fidler**, F. Moreno-Noguer, R. Urtasun. A High Performance CRF Model for Clothes Parsing. In *Asian Conference on Computer Vision (ACCV)*, 2014.
35. T. Lee, **S. Fidler**, Sven Dickinson. Multi-cue Mid-level Grouping. In *Asian Conference on Computer Vision (ACCV)*, 2014.
36. C. Kong, D. Lin, M. Bansal, R. Urtasun, **S. Fidler**. What are you talking about? Text-to-Image Coreference. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
37. D. Lin, **S. Fidler**, C. Kong, R. Urtasun. Visual Semantic Search: Retrieving Videos via Complex Textual Queries. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
38. L.-C. Chen, **S. Fidler**, A. Yuille, R. Urtasun. Beat the MTurkers: Automatic Image Labeling from Weak 3D Supervision. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
39. R. Mottaghi, X. Chen, X. Liu, **S. Fidler**, R. Urtasun, A. Yuille. The Role of Context for Object Detection and Semantic Segmentation in the Wild. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
40. X. Chen, R. Mottaghi, X. Liu, N.-G. Cho, **S. Fidler**, R. Urtasun, A. Yuille. Detect What You Can: Detecting and Representing Objects using Holistic Models and Body Parts. In *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
41. D. Lin, **S. Fidler**, R. Urtasun. Holistic Scene Understanding for 3D Object Detection with RGBD cameras. In *International Conference on Computer Vision (ICCV)*, 2013, **oral presentation**.
42. A. Schwing, **S. Fidler**, M. Pollefeys, R. Urtasun. Box In the Box: Joint 3D Layout and Object Reasoning from Single Images. In *International Conference on Computer Vision (ICCV)*, 2013.
43. T. Lee, **S. Fidler**, S. Dickinson. Detecting Curved Symmetric Parts using a Deformable Disc Model. In *International Conference on Computer Vision (ICCV)*, 2013.
44. R. Mottaghi, **S. Fidler**, J. Yao, R. Urtasun, D. Parikh. Analyzing Semantic Segmentation Using Human-Machine Hybrid CRFs. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2013.
45. **S. Fidler**, R. Mottaghi, A. Yuille, R. Urtasun. Bottom-up Segmentation for Top-down Detection. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2013.
46. **S. Fidler**, A. Sharma, R. Urtasun. A Sentence is Worth a Thousand Pixels. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2013.

47. **S. Fidler**, S. Dickinson, R. Urtasun. 3D Object Detection and Viewpoint Estimation with a Deformable 3D Cuboid Model. In *Neural Information Processing Systems Conference (NIPS)*, 2012, **spotlight presentation**.
48. J. Yao, **S. Fidler**, R. Urtasun. Describing the Scene as a Whole: Joint Object Detection, Scene Classification and Semantic Segmentation. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2012.
49. Z. Zhang, **S. Fidler**, J. W. Waggoner, Y. Cao, J. M. Siskind, S. Dickinson, W. Wang. Super-edge grouping for object localization by combining appearance and shape information. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2012.
50. A. Barbu, A. Bridge, Z. Burchill, D. Coroian, S. Dickinson, **S. Fidler**, A. Michaux, S. Mussman, S. Narayanaswamy, D. Salvi, L. Schmidt, J. Shangguan, J. Siskind, J. Waggoner, S. Wang, J. Wei, Y. Yin, and Z. Zhang. Video In Sentences Out. *Conference on Uncertainty in Artificial Intelligence (UAI)*, 2012, **oral presentation**.
51. W. May, **S. Fidler**, A. Fazly, S. Stevenson, and S. Dickinson. Unsupervised Disambiguation of Image Captions. *First Joint Conference on Lexical and Computational Semantics (\*SEM)*, 2012.
52. T. Lee, **S. Fidler**, A. Levinshtein, and S. Dickinson. Learning Categorical Shape from Captioned Images. *Canadian Conference on Computer and Robot Vision (CRV)*, 2012.
53. S. Karayev, M. Fritz, **S. Fidler**, T. Darrell. A Probabilistic Model for Recursive Factorized Image Features. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2011.
54. **S. Fidler**, M. Boben, A. Leonardis. A coarse-to-fine Taxonomy of Constellations for Fast Multi-class Object Detection. In *European Conference on Computer Vision (ECCV)*, 2010.
55. **S. Fidler**, M. Boben, A. Leonardis. Evaluating multi-class learning strategies in a generative hierarchical framework for object detection. In *Neural Information Processing Systems Conference (NIPS)*, 2009.
56. **S. Fidler**, M. Boben, A. Leonardis. Optimization framework for learning a hierarchical shape vocabulary for object class detection. In *British Machine Vision Conference (BMVC)*, 2009.
57. **S. Fidler**, M. Boben, A. Leonardis. Similarity-based cross-layered hierarchical representation for object categorization. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2008.
58. **S. Fidler**, A. Leonardis. Towards scalable representations of object categories : learning a hierarchy of parts. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2007.
59. A. Leonardis, **S. Fidler**. Learning hierarchical representations of object categories for robot vision. In *ISRR 2007 : 13th International Symposium of Robotics Research*, 2007, Hiroshima, Japan, pp. 125 – 136. **Invited paper**.
60. **S. Fidler**, G. Berginc, A. Leonardis. Hierarchical Statistical Learning of Generic Parts of Object Structure. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2006.
61. D. Skočaj, A. Leonardis, **S. Fidler**. Robust estimation of canonical correlation coefficients. In *Digital imaging in media and education : 28th workshop of the Austrian Association for Pattern Recognition (AAPR)*, 2004, pp. 15-22.
62. **S. Fidler**, A. Leonardis. Robust LDA classification by subsampling. In *Workshop in Statistical Analysis in Computer Vision* in conjunction with IEEE Computer Vision and Pattern Recognition, 2003.
63. **S. Fidler**, A. Leonardis. Robust LDA classification. In *Vision in a dynamic world: 27th workshop of the Austrian Association for Pattern Recognition (AAPR)*, 2003, pp. 119-126. *Best paper award*.

## **Theses**

### **PhD thesis**

*Recognizing Visual Object categories with Subspace Methods and a Learned Hierarchical Shape Vocabulary.* University of Ljubljana, 2010.

### **Diploma thesis**

*Independent Component Analysis.* University of Ljubljana, 2002.