

Sanja Fidler

Curriculum Vitae

Work address:

Sanja Fidler
University of Toronto
Department of Computer Science
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E-mail: fidler@cs.toronto.edu

Position

Assistant Professor at University of Toronto
Director of AI at NVIDIA
Vector Institute (co-founder)

Research Interests

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

- 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

- May 2018 – **Director of AI**
NVIDIA
- 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

2018 **Canada CIFAR AI Chair**
Awarded by CIFAR

2018 **Connaught New Researcher Award**
Awarded by University of Toronto

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
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

Co-founded

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

Program Chair

International Conference on Computer Vision (ICCV): 2021

International Conference on 3D Vision: 2016

Area Chair

Computer Vision:

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

European Conference in Computer Vision (ECCV): 2018

International Conference on Computer Vision (ICCV): 2017

Asian Conference on Computer Vision (ACCV): 2016

Machine Learning:

Neural Information Processing Systems (NIPS): 2017, 2018

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

- 2018* Tutorial on Computer Vision for Robotics and Driving
a half-day tutorial at CVPR'18, co-organized with Anelia Angelova
<https://sites.google.com/view/visionroboticsdriving>
- 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

- 2018* CSC 2548 Machine Learning in Computer Vision (graduate course)
<http://www.cs.utoronto.ca/~fidler/teaching/2018/CSC2548.html>
- 2018* CSC 420 Intro to Image Understanding (undergraduate course)
<http://www.cs.utoronto.ca/~fidler/teaching/2018/CSC420.html>
- 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:

- Feb 2018 NextAI class on Computer Vision
- 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

Postdoctoral Fellow:

Makarand Tapaswi (Sept 2016 –)

Phd Students:

Amlan Kar (Sept 2017 –)

David Acuna (Sept 2018 –)

Wenzheng Chen Co-supervised with Prof. Kyros Kutulakos
(Sept 2017 –)

Maria Shugrina Co-supervised with Prof. Karan Singh
(Sept 2017 –)

Tingwu Wang Co-supervised with Prof. Jimmy Ba
(Sept 2016 –)

Hang Chu Co-supervised with Prof. Raquel Urtasun
(Sept 2016 –)

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:

Huan Ling (Sept 2018 –)

Jun Gao (Sept 2018 –)

Xiaohui Zeng (Sept 2018 –)

Jiaman Li (Sept 2017 –)

Atef Chaudhury (Sept 2017 –)

Seung Kim (Sept 2017 –)

Kevin Shen (Sept 2017 –)

Brandon Zhao (Sept 2017 –)

Chaoqi Wang (Sep 2017 –)

Harris Chan Co-supervised with Prof. Jimmy Ba
(Sept 2017 –)

Lluis Castrejon Co-supervised with Prof. Raquel Urtasun (now PhD student 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:

Zian Wang 3rd year undergraduate at Tsinghua University (visiting student)
Date: July 2018 –

Tianshi Cao 4th year undergraduate at University of Toronto
Date: July 2018 –

Huan Ling 4th year undergraduate at University of Toronto
Date: Oct 2016 –

Yuhao Zhou 3rd year undergraduate at University of Toronto
Date: Jan 2017 –

Ching-Yao Chuang 3rd year undergraduate at National Tsing Hua University (visiting student)
Date: Aug 2017 – Dec 2017

Liren Chen 3rd year undergraduate at Tsinghua University (visiting student)
Date: June 2017 – Sept 2017

Tiantian (Ailsa) Fang 4th year undergraduate at University of Toronto
Date: Sept 2017 – Dec 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 – May 2018
Capstone project

Wenjia Liu 4th year undergraduate at University of Toronto
Date: June 2017 – May 2018
Capstone project

Jienan Yao 4th year undergraduate at University of Toronto
Date: Sept 2017 – May 2018
CSC494 (project course)

Zheng Wu 3rd year undergraduate at Shanghai Jiao Tong University (visiting student)
Date: May 2017 – Sept 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: *Labeling 3D CAD Scenes with 3D CNNs*
 Date: Sept 2016 - April 2016

Yiming Kang Thesis title: *Matching Houses in Streetview*
 Date: Sept 2015 - May 2016

Zexuang Wang Co-supervised with Prof. Raquel Urtasun
 Thesis title: *Analyzing Table Tennis Games*
 Date: Sept 2015 - May 2016

Annie Ngai Co-supervised with Prof. Sven Dickinson
 Thesis title: *Efficient Fine-grained Object Recognition and Pose Estimation*
 Date: Sept 2014 - April 2015

Sung Baik Co-supervised with Prof. Raquel Urtasun
 Thesis title: *Efficient Tracking by Detection*
 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 – Nov 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
Roozbeh 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

Nov 04, 2018	Our AI generated karaoke song appeared in the Simpsons episode
June, 2018	NVIDIA: NVIDIA blog
Nov, 2017	UofT interview: UofT news
Sept, 2017	UofT article about the Elevate AI event: UofT news
July, 2017	Featured article in CVPR Daily News: http://www.rsipvision.com/CVPR2017-Tuesday/ Best of CVPR: http://www.rsipvision.com/ComputerVisionNews-2017August/#10

- July, 2017** UofT DCS News: Best paper honorable mention at CVPR'17: [link](#)
- Mar, 2017** UofT DCS News: Vector opening: [link 1](#), [link 2](#)
- 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 Guardian | New York Post |
| The Star | MailOnline | University of Toronto news |
| GeekWire | Yahoo style! | The Huffington Post |
- Television and radio:**
- | | | |
|-----|----------|-----------|
| BBC | CTV News | radioEins |
| NPR | | |
- March, 2016** A comment for Globe an Mail about Microsoft's bot Tay
www.theglobeandmail.com [link](#)
- Dec, 2015** Our paper on MovieQA has been featured in MIT Technological Review.
- 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:**

Open-Source Projects

Below is the list of the open-source projects:

1. **Polygon-RNN++**: <http://www.cs.toronto.edu/polyrnn/>
D. Acuna, H. Ling, A. Kar, **S. Fidler**. Efficient Interactive Annotation of Segmentation Datasets with Polygon-RNN++. In Computer Vision and Pattern Recognition (CVPR), 2018
2. **Pose Estimation for Objects with Symmetry**:
http://www.cs.utoronto.ca/ecorona/symmetry_pose_estimation/index.html
E. Corona, K. Kundu, **S. Fidler**. Pose Estimation for Objects with Rotational Symmetry. In International Conference on Intelligent Robots (IROS), 2018
3. **Learning2Act**: <http://www.cs.utoronto.ca/cychuang/learning2act/>
C. -Y. Chuang, J. Li, A. Torralba, **S. Fidler**. Learning to Act Properly: Predicting and Explaining Affordances from Images. In Computer Vision and Pattern Recognition (CVPR), 2018
4. **SurfConv**: <https://github.com/chuhang/SurfConv>
H. Chu, W. -C. Ma, K. Kundu, R. Urtasun, **S. Fidler**. SurfConv: Bridging 3D and 2D Convolution for RGBD Images. In Computer Vision and Pattern Recognition (CVPR), 2018
5. **Nervenet**: <http://www.cs.toronto.edu/tingwuwang/nervenet.html>
T. Wang, R. Liao, J. Ba, **S. Fidler**. NerveNet: Learning Structured Policy with Graph Neural Networks. In International Conference on Learning Representations (ICLR), 2018
6. **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
7. **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
8. **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.
9. **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
10. **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

11. **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
12. **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.
13. **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
14. **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
15. **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
16. **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
17. **3D image segmentation:** http://http://web.cs.ucla.edu/~lchen/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
18. **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
19. **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
20. **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
21. **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
22. **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

23. **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

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

1. **AI World Forum**
A.I. Data Factory for A.I., keynote
Toronto, Canada, March 2019
2. **a2-dlearn 2019**
A.I. Data Factory for A.I., invited talk
Ann Arbor, USA, Feb 2019
3. **MIE 324** guest lecture at UofT
Teaching machines to see, communicate, and act
Toronto, Canada, Oct 2018
4. **POCV** workshop, co-located with ECCV'18
Teaching machines to see, communicate, and act, invited talk
Munich, Germany, Sept 2018
5. **Visual Learning and Embodied Agents in Simulation Environments** workshop, co-located with ECCV'18
VirtualHome: Representing Activities via Programs, invited talk
Munich, Germany, Sept 2018
6. Talk for interns at **NVIDIA**
Teaching Machines with Humans in the Loop
Santa Clara, USA, Aug 2018
7. **Medical Imaging Summer School (MISS'18)**
Learning with Less Supervision
Favignana, Italy, July 2018
8. **Deep Learning Summer School (DLSS'18)**
Deep Learning for Computer Vision
Toronto, Canada, July 2018
9. **Amazon's Computer Vision Conference**
Fashion Synthesis and Retrieval
Seattle, USA, April 2018
10. **GTC'18 conference**
Teaching Machines with Humans in the Loop
San Jose, USA, March 2018
11. **CVPR'18 AC meeting**
Efficient Object Annotation with Polygon-RNN
Toronto, Canada, Feb 2018

12. **New Deep Learning Techniques (DLT'18)**, Institute for Pure and Applied Mathematics
Teaching Machines with Humans in the Loop, invited talk
Los Angeles, USA, Feb 2018
13. **University of Toronto**, Mechanical Engineering Dept.
Towards machines that see, communicate, and act, invited talk
Toronto, Canada, Dec 2017
14. **VIGIL** workshop, co-located with NIPS'17
Teaching machines to see, communicate, and act, invited talk
Long Beach, USA, Dec 2017
15. **CIFAR** workshop, co-located with NIPS'17
Interactive Annotation with Polygon-RNN, invited talk
Long Beach, USA, Dec 2017
16. **NVIDIA at UofT** event
Teaching machines to see, communicate, and act, invited talk
Toronto, Canada, Nov 2017
17. **Re-work Deep Learning Summit**
Teaching machines to see, communicate, and act, invited talk
Montreal, Canada, Oct 2017
18. **Facebook Faculty Summit**
Teaching machines to see, communicate, and act, invited talk
New York City, USA, Oct 2017
19. **University of Toronto**, Engineering Dept.
Towards machines that see, communicate, and act, invited talk
Toronto, Canada, Sept 2017
20. **Acivs conference**
Towards machines that see, communicate, and act, invited talk
Antwerp, Belgium, Sept 2017
21. **Elevate AI**, <http://elevatetoronto.com/event/elevate-ai/>
Machine Vision, lighting talk
Toronto, Canada, Sept 2017
22. **ACL'17 Workshop on Representation Learning for NLP**
Learning Joint Embeddings of Vision and Language, keynote
Vancouver, Canada, August 2017
23. **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
24. **CVPR'17 Workshop on Visual Question Answering Challenge**
Teaching machines via natural language feedback, invited talk
Honolulu, Hawaii, July 2017
25. **CVPR'17 Workshop on Continuous and Open-Set Learning**
Learning Joint Embeddings of Vision and Language, keynote
Honolulu, Hawaii, July 2017

26. **International Computer Vision Summer School (ICVSS'17)**
Learning Joint Embeddings of Vision and Language, invited lecture
Sicily, Italy, July 2017
27. **Google faculty summit**
Towards perceptual machines that parse, communicate, and act, invited talk
Zurich, Switzerland, July 2017
28. **Women in Robotics** seminar series
Towards perceptual machines that see, communicate, and reason, invited talk
Toronto, Canada, May 2017
29. **Deep Learning Summit** by Re-Work
Towards understanding stories in videos, invited talk
Boston, USA, May 2017
30. Seminar at **MERL** (Mitsubishi Electric Research Lab)
Learning Joint Embeddings of Images and Language, invited talk
Boston, USA, May 2017
31. **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
32. **CogSci seminar** at University of Toronto
Towards understanding stories in videos, invited talk
Toronto, Canada, March 2017
33. Seminar at **Qualcomm**
Learning Joint Embeddings of Images and Language, invited talk
Markham, Canada, March 2017
34. **TedX@UofT** at University of Toronto
Towards understanding stories in videos, invited talk
Toronto, Canada, Feb 2017
35. **Robust Vision Symposium** at MPI Tuebingen
Learning Embeddings of Images and Language, invited talk
Tuebingen, Germany, Jan 2017
36. **Fields ML Seminar**
Learning Embeddings of Images and Language, invited talk
Toronto, Canada, Nov 2016
37. **AI night** at University of Toronto
Towards understanding stories in videos, invited talk
Toronto, Canada, Nov 2016
38. **Workshop on Storytelling with Images and Videos** at ECCV'16
Learning Embeddings of Images and Language, invited talk
Amsterdam, Netherlands, October 2016
39. **Joint Imagenet and MS Coco Visual Recognition Challenge Workshop** at ECCV'16
Learning Embeddings of Images and Language, keynote
Amsterdam, Netherlands, October 2016

40. **CogSci graduate orientation day** at University of Toronto
The Gee-Whiz of A.I., invited talk
Toronto, Canada, Sep 2016
41. **ACCV'16 Area Chair meeting**
Towards Understanding Stories from Videos, talk
Taipei, Taiwan, August 2016
42. **Deep Learning Workshop at ICML'16**
Towards Understanding Stories from Videos, invited talk
New York City, US, June 2016
43. **Carnegie Mellon University**
Towards Understanding Stories from Videos, invited talk (vision seminar)
Pittsburgh, US, April 2016
44. **University of Pittsburgh**
Towards Understanding Stories from Videos, invited talk (vision seminar)
Pittsburgh, US, April 2016
45. **University of Toronto**
Towards perceptual machines that see, communicate, and reason, invited talk
Toronto, Canada, March 2016
46. **CVPR'16 Area Chair meeting**
Towards Understanding Stories from Videos, talk
Vancouver, Canada, February 2016
47. **York University**
Towards Understanding Stories from Videos, invited talk
Toronto, Canada, January 2016
48. **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
49. **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
50. **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
51. **3D Scene Understanding, Workshop at ICCV'15**
3D Indoor Scene Understanding and Localization, invited talk
Santiago, Chile, December 2015
52. **Women in Computer Vision, Workshop at CVPR'15**
Understanding Complex Scenes and People That Talk About Them, invited talk
Boston, US, June 2015
53. **Symposia at CRV'15**
Understanding Complex Scenes and People That Talk About Them, invited talk
Halifax, Canada, June 2015

54. **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
55. **University of Pennsylvania**
Understanding Complex Scenes and People That Talk About Them, invited talk at the GRASP
vision seminar
Philadelphia, US, March 2015
56. **Dagstuhl Workshop on Holistic Scene Understanding**
Understanding Complex Scenes and People That Talk About Them, invited talk
Dagstuhl, Germany, February 2015
57. **Karlsruhe Institute of Technology**
Understanding Complex Scenes and People That Talk About Them, invited talk
Karlsruhe, Germany, February 2015
58. **The Hong Kong Polytechnic University**
Understanding Complex Scenes and People That Talk About Them, invited talk
Hong Kong, December 2014
59. **AI Night, University of Toronto**
Understanding Complex Scenes and People That Talk About Them, invited talk
Toronto, Canada, November 2014
60. **University of Ljubljana**
Computer Vision, invited lecture for a math summer school
Ljubljana, Slovenia, August 2014
61. **International Conference on Computer Vision (ICCV) 2013**
Holistic Scene Understanding for 3D Object Detection with RGBD cameras, oral presentation
Sydney, Australia, December 2013
62. **MPI Tuebingen, Perceiving Systems**
2D and 3D object detection by exploiting segmentation and contextual information, invited talk
Tuebingen, Germany, September 2013
63. **Microsoft Research**
2D and 3D object detection by exploiting segmentation and contextual information, invited talk
Cambridge, UK, September 2013
64. **Midwest Vision Workshop**
Bottom-up Segmentation for Top-down Detection
Chicago, US, May 2013

Publications

Journal Articles and Book Chapters

1. B. Zhou, H. Zhao, X. Puig, T. Xiao, **S. Fidler**, A. Barriuso, A. Torralba. Semantic Understanding of Scenes Through the ADE20K Dataset. *International Journal of Computer Vision*, 2018
2. 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
3. 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.
4. 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.
5. 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.
6. **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.
7. 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.
8. **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. D. Acuna, A. Kar, **S. Fidler**. Devil is in the Edges: Learning Semantic Boundaries from Noisy Annotations. In Computer Vision and Pattern Recognition (CVPR), 2019, **oral presentation**.
2. H. Ling, J. Gao, A. Kar, W. Chen, **S. Fidler**. Fast Interactive Object Annotation with Curve-GCN. In Computer Vision and Pattern Recognition (CVPR), 2019.
3. Z. Wang, D. Acuna, H. Ling, A. Kar, **S. Fidler**. Object Instance Annotation with Deep Extreme Level Set Evolution. In Computer Vision and Pattern Recognition (CVPR), 2019.
4. Y.-H. Liao, X. Puig, M. Boben, A. Torralba, **S. Fidler**. Synthesizing Environment-Aware Activities via Activity Sketches. In Computer Vision and Pattern Recognition (CVPR), 2019.
5. M. Shugrina, Z. Liang, A. Kar, J. Li, A. Singh, K. Singh, **S. Fidler**. Creative Flow+ Dataset. In Computer Vision and Pattern Recognition (CVPR), 2019.
6. D. Cheng, R. Liao, **S. Fidler**, R. Urtasun. DARNet: Deep Active Ray Network for Building Segmentation. In Computer Vision and Pattern Recognition (CVPR), 2019.
7. D. Moltisanti, **S. Fidler**, D. Damen. Action Recognition from Single Timestamp Supervision in Untrimmed Videos. In Computer Vision and Pattern Recognition (CVPR), 2019.
8. T. Wang, Y. Zhou, **S. Fidler**, J. Ba. Neural Graph Evolution: Automatic Robot Design. In International Conference on Learning Representations (ICLR), 2019.

9. S. W. Kim, M. Tapaswi, **S. Fidler**. Visual Reasoning by Progressive Module Networks. In International Conference on Learning Representations (ICLR), 2019.
10. M. Shugrina, W. Zhang, F. Chevalier, **S. Fidler**, K. Singh. Color Builder: A Direct Manipulation Interface for Versatile Color Theme Authoring. In Conference on Human Factors in Computing Systems (CHI), 2019.
11. B. Dai, **S. Fidler**, D. Lin. A Neural Compositional Paradigm for Image Captioning. In Neural Information Processing Systems (NeurIPS), 2018.
12. E. Corona, K. Kundu, **S. Fidler**. Pose Estimation for Objects with Rotational Symmetry. In International Conference on Intelligent Robots (IROS), 2018.
13. F. Faghri, J. Kiros, D. Fleet, **S. Fidler**. VSE++: Improving Visual-Semantic Embeddings with Hard Negatives. In British Machine Vision Conference (BMVC), 2018, **spotlight presentation**.
14. X. Puig, K. Ra, M. Boben, J. Li, T. Wang, **S. Fidler**, A. Torralba. VirtualHome: Simulating Household Activities via Programs. In Computer Vision and Pattern Recognition (CVPR), 2018, **oral presentation**.
15. P. Vicol, M. Tapaswi, L. Castrejon, **S. Fidler**. MovieGraphs: Towards Understanding Human-Centric Situations from Videos. In Computer Vision and Pattern Recognition (CVPR), 2018, **spotlight presentation**.
16. Y. Zhou, M. Tapaswi, **S. Fidler**. Now You Shake Me: Towards Automatic 4D Cinema. In Computer Vision and Pattern Recognition (CVPR), 2018, **spotlight presentation**.
17. D. Acuna, H. Ling, A. Kar, **S. Fidler**. Efficient Interactive Annotation of Segmentation Datasets with Polygon-RNN++. In Computer Vision and Pattern Recognition (CVPR), 2018.
18. C. -Y. Chuang, J. Li, A. Torralba, **S. Fidler**. Learning to Act Properly: Predicting and Explaining Affordances from Images. In Computer Vision and Pattern Recognition (CVPR), 2018.
19. H. Chu, **S. Fidler**. A Face to Face Neural Conversation Model. In Computer Vision and Pattern Recognition (CVPR), 2018.
20. H. Chu, W. -C. Ma, K. Kundu, R. Urtasun, **S. Fidler**. SurfConv: Bridging 3D and 2D Convolution for RGBD Images. In Computer Vision and Pattern Recognition (CVPR), 2018.
21. T. Wang, R. Liao, J. Ba, **S. Fidler**. NerveNet: Learning Structured Policy with Graph Neural Networks. In International Conference on Learning Representations (ICLR), 2018.
22. H. Ling, **S. Fidler**. Teaching Machines to Describe Images via Natural Language Feedback. In Neural Information Processing Systems (NIPS), 2017.
23. 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**.
24. 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**.
25. S. Wang, M. Bai, G. Mattyus, H. Chu, W. Luo, B. Yang, J. Liang, J. Cheverie, **S. Fidler**, R. Urtasun. TorontoCity: Seeing the World with a Million Eyes. In International Conference on Computer Vision (ICCV), 2017, **spotlight presentation**.
26. 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
27. H. Zhao, X. Puig, B. Zhou, **S. Fidler**, A. Torralba. Open Vocabulary Scene Parsing. In International Conference on Computer Vision (ICCV), 2017

28. 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
29. S. Liu, J. Jia, **S. Fidler**, Raquel Urtasun. Sequential Grouping Networks for Instance Segmentation. In International Conference on Computer Vision (ICCV), 2017
30. 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**.
31. N. Homyounfar, **S. Fidler**, R. Urtasun. Sports Field Localization via Deep Structured Models. In Computer Vision and Pattern Recognition (CVPR), 2017.
32. 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.
33. 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.
34. S. Wang, **S. Fidler**, R. Urtasun. Proximal Deep Structured Models. In Neural Information Processing Systems (NIPS), 2016.
35. 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.
36. 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**.
37. 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.
38. 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.
39. G. Matthyus, 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.
40. I. Vendrov, R. Kiros, **S. Fidler**, R. Urtasun. Order-Embeddings of Images and Language. In International Conference on Learning Representations (ICLR), 2016, **oral presentation**.
41. 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**.
42. S. Wang, **S. Fidler**, R. Urtasun. Lost Shopping! Monocular Localization in Large Indoor Spaces. In International Conference on Computer Vision (ICCV), 2015, **oral presentation**.
43. 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.
44. 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.
45. G. Matthyus, S. Wang, **S. Fidler**, Raquel Urtasun. Enhancing World Maps by Parsing Aerial Images. In International Conference on Computer Vision (ICCV), 2015.
46. 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.

47. R. Kiros, Y. Zhu, R. Salakhutdinov, R. Zemel, A. Torralba, R. Urtasun, **S. Fidler**. Skip-Thought Vectors. *Neural Information Processing Systems (NIPS)*, 2015.
48. 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.
49. 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**.
50. 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**.
51. 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**.
52. 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.
53. 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.
54. J. Yao, M. Boben, **S. Fidler**, R. Urtasun. Real-Time Coarse-to-fine Topologically Preserving Segmentation. In *Computer Vision and Pattern Recognition (CVPR)*, 2015.
55. 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.
56. T. Lee, **S. Fidler**, Sven Dickinson. Multi-cue Mid-level Grouping. In *Asian Conference on Computer Vision (ACCV)*, 2014.
57. 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.
58. 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.
59. 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.
60. 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.
61. 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.
62. 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**.
63. 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.
64. T. Lee, **S. Fidler**, S. Dickinson. Detecting Curved Symmetric Parts using a Deformable Disc Model. In *International Conference on Computer Vision (ICCV)*, 2013.
65. 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.

66. **S. Fidler**, R. Mottaghi, A. Yuille, R. Urtasun. Bottom-up Segmentation for Top-down Detection. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2013.
67. **S. Fidler**, A. Sharma, R. Urtasun. A Sentence is Worth a Thousand Pixels. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2013.
68. **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**.
69. 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.
70. 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.
71. A. Barbu, A. Bridge, Z. Burchill, D. Coroian, S. Dickinson, **S. Fidler**, A. Michaux, S. Mussman, S. Narayanaswamy, D. Salvi, L. Schmidt, J. Shangquan, 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**.
72. 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.
73. T. Lee, **S. Fidler**, A. Levinshtein, and S. Dickinson. Learning Categorical Shape from Captioned Images. *Canadian Conference on Computer and Robot Vision (CRV)*, 2012.
74. 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.
75. **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.
76. **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.
77. **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.
78. **S. Fidler**, M. Boben, A. Leonardis. Similarity-based cross-layered hierarchical representation for object categorization. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2008.
79. **S. Fidler**, A. Leonardis. Towards scalable representations of object categories : learning a hierarchy of parts. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2007.
80. 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**.
81. **S. Fidler**, G. Berginc, A. Leonardis. Hierarchical Statistical Learning of Generic Parts of Object Structure. In *IEEE Computer Vision and Pattern Recognition (CVPR)*, 2006.
82. 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.

83. **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.
84. **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.