

Raquel Urtasun

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Education

Ph.D. in Computer Vision

September 2001 - June 2006

Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.

Motion Models for Robust 3D Human Body Tracking.

Advisor: Pascal Fua.

Postgraduate School in Computer Science

Sept 2000 - Sept 2001

Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.

M.S. Thesis

Sept 1999 - April 2000

Corporate Communications Department, Institut EURECOM, Sophia Antipolis, France.

M.S. and B.S in Telecommunication Engineering

April 2000.

Rank #3 in class of 125, University of Navarra (UPNA), Pamplona, Spain.

Research Interests

- **Machine Learning:** Structured Prediction, Gaussian Processes, Latent Variable Models, Multi-view Learning.
- **Computer Vision:** Learning for Vision, Semantic 3D Scene Understanding, Holistic Scene Understanding, Tracking, Object Recognition, Pose Estimation.
- **Computer Graphics:** Character Animation and Modeling.

Research Experience

Assistant Professor

September 2009 - Present

Toyota Technological Institute at Chicago (TTI-C)

Visiting Professor

February 2010 - June 2010

ETH Zurich

Postdoctoral Research Scientist

January 2008 - September 2009

UC Berkeley EECS & ICSI

Postdoctoral Associate

October 2006 - August 2008

MIT Computer Science and Artificial Intelligence Laboratory

Supervisor: Prof. Trevor Darrell

Research Assistant

Fall 2001 - Summer 2006

Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.

Research Project: Motion Models for Robust 3D Human Body Tracking

Supervisor: Prof. Pascal Fua.

Invited Visiting Scientist*Summer 2004, 2005, 2006*

Computer Science Department, University of Toronto, Canada.

Supervisor: Prof. David J. Fleet.

Research Assistant*Fall 2000 - Spring 2001*

Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.

Research Project: Constraints in shoulder movements using Motion capture and Implicit Surfaces.

Supervisor: Prof. Pascal Fua.

Research Assistant*Spring 2000 - Fall 2000*

ENST (Ecole National Supérieure de Telecommunications), Paris, France

Research projects: Automatic segmentation of a fix number of markers (apply to the cerebellum and brainstem), Segmentation of a Guinea pig using mathematical morphology.

Supervisor: Prof. Isabelle Bloch and Dr. Petr Dokladal

Research Assistant*Fall 1999 - Spring 2000*

Corporate Communications Department. Institut EURECOM, Sophia Antipolis, France.

Project: Implementation of a tool to Visualize Protocol Design and Processing

Supervisor: Prof. Ernst W. Biersack and Dr. Mathias Jung.

Research Assistant*Fall 1998 - Spring 1999*

Electrical Engineering Department, Universidad de Navarra (UPNA), Pamplona, Spain.

Project: Blind deconvolution applied to EEG.

Supervisor: Prof. Armando Malanda.

Area Chair / Senior Program Committee

- Editorial Board of International Journal in Computer Vision (IJCV) (2013-2016)
- Area Chair NIPS 2010, NIPS 2011, UAI 2012, NIPS 2012, ICML 2013, ICCV 2013, CVPR 2014
- Workshop Chair NIPS 2012, Doctoral Consortium Chair CVPR 2014, Tutorial Chair CVPR 2014, Tutorial Chair CVPR 2016

Program Committee

Computer Vision:

- ICCV 2007, 2009, 2011
- CVPR 2007, 2009, 2010, 2011, 2012, 2013
- ECCV 2008, 2010, 2012
- ACCV 2010
- BMVC 2011, 2012

Machine Learning:

- NIPS 2008, 2009, 2013
- ICML 2008, 2009, 2010, 2011, 2012
- AISTATS 2010, 2011, 2012, 2013

- UAI 2011, 2013
- IJCAI 2009

Other Professional Activities

- Reviewer for International Journals and Conferences: *Transactions on Pattern Analysis and Machine Intelligence*, *International Journal in Computer Vision*, *Journal of Machine Learning Research*, *Transactions on Graphics*, *Computer Vision and Image Understanding*, *Image and Vision Computing*, *SIGGRAPH*, *SIGGRAPH-ASIA*, etc.

Teaching Experience

Instructor

TTI Course, Computer Vision.

Winter 2013

Instructor

TTI Course, Visual Recognition.

Winter 2012

Instructor

TTI Course, Learning and Inference in Graphical Models.

Spring 2011

Instructor

ETH Zurich Course, Human Motion Analysis.

Spring 2010

Co-Instructor

TTI Course, Statistical Learning in Artificial Intelligence.

Fall 2009

Co-Instructor

MIT Course 6.976, Seminar on Human Motion Tracking

Fall 2007

Teaching Assistant

Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.

Introduction to Computer Vision

Spring 2002, 2003, 2004, 2005, 2006

Supervised Students

Ph.D. Students

- Vikas Garg, *from Toyota Technological Institute at Chicago.*
(expected 2017)
- Kaustav Kundu, *from Toyota Technological Institute at Chicago.*
(expected 2017)
- Wenji Luo, *from Toyota Technological Institute at Chicago.*
(expected 2017)
- Abhishek Sen, *from Toyota Technological Institute at Chicago.*
(expected 2017)
- Jian Yao, *from Toyota Technological Institute at Chicago.*
(expected 2015)

- Alexander Schwing, *from ETH Zurich*
(Co-supervised with Marc Pollefeys and Tamir Hazan, expected 2013)
- Andreas Geiger, *from Karlsruhe Institute of Technology*
(Co-supervised with Christoph Stiller, graduated June 2013)
- Alex Shyr, *from UC Berkeley*.
(Co-supervised with Michael Jordan and Trevor Darrell, graduated 2011).
- C. Mario Chirstoudias, *from MIT*.
Probabilistic Models for Multi-View Semi-Supervised Learning and Coding.
(Co-supervised with Trevor Darrell, graduated June 2009).

M.S. Students

- Taehwan Kim, *from Toyota Technological Institute at Chicago*.
(Co-supervised with Greg Shakhnarovich)
- Andreas Geiger, *from Karlsruhe Institute of Technology while at MIT*.
Rank Priors for Continuous Non-Linear Dimensionality Reduction.
- Sandra Pralong, *from EPFL*.
3D Implicit Surface Human Body Editor in Maya.
- Mathieu Salzmann, *from EPFL*.
3D Morphing of triangulated meshes.
- Mattia Bizini, *from EPFL*.
3D Human Body Tracking using Motion Prediction.
- Reza EteMad-Sajadi, *from EPFL*.
Temporal Models of Human Motion.

Academic Awards and Honors

Best Paper Runner Up Award at CVPR

2013

Lost! Leveraging the Crowd for Probabilistic Visual Self-Localization, M. Brubaker, A. Geiger and R. Urtasun

Best reviewer award CVPR

2011

Postgraduate Fellowship

Sept 2000

School of Computer and Communication Sciences, Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland.

Graduate Fellowship

Sept 1999

Institut EURECOM, Sophia Antipolis, France. Project: Implementation of a tool to Visualize Protocol Design and Processing

Research Fellowship

June 1998

Spanish Ministry of Education and Culture. In collaboration with Department of Electrical Engineering, University of Navarra (UPNA), Pamplona, Spain. Project: Blind deconvolution applied to EEG using Principal Component Analysis and Neural Networks.

Award for academic excellency

June 95, June 97, June 98, June 99

University of Navarra (UPNA), Pamplona, Spain

Publications

Tutorials

- **R. Urtasun** and N. Lawrence, 'All you want to know about Gaussian Process', *Full-day tutorial at Conference in Computer Vision and Pattern Recognition (CVPR)*, Providence, USA, June 2012.

Journal Papers

- A. Geiger, P. Lenz, C. Stiller and **R. Urtasun**, 'Vision meets Robotics: The KITTI Dataset', *In International Journal of Robotics Research*, (**IJRR**) 2013.
- A. Kapoor, K. Graumann, **R. Urtasun**, T. Darrell, 'Gaussian Processes for Object Categorization', *In International Journal in Computer Vision*, (**IJCV**) 2010.
- **R. Urtasun**, D. J. Fleet and P. Fua, 'Temporal Motion Models for Monocular and Multiview 3D Human Body Tracking', *Computer Vision and Image Understanding*, (**CVIU**) 2006.
- L. Herda, **R. Urtasun** and P. Fua, 'Hierarchical Implicit Surface Joint Limits for Human Body Tracking', *Computer Vision and Image Understanding*, (**CVIU**) 2005.
- **R. Urtasun**, P. Glardon, R. Boulic, D. Thalmann and P. Fua, 'Style-based Motion Synthesis', *In Computer Graphics Forum (CGF)*, Vol. 23, number 4 pp 799-812. December 2004.
- L. Herda, **R. Urtasun**, P. Fua, A. Hanson, 'Automatic Determination of Shoulder Joint Limits using Quaternion Field Boundaries', *International Journal of Robotics Research (IJRR)*, 22(6): 419 - 436, 2003.
- P. Dokladal, I. Bloch, M. Couprie, D. Ruijters, **R. Urtasun** and L. Garnero, 'Topologically Controlled Segmentation of 3D Magnetic Resonance Images of the Head by using Morphological Operators', *Pattern Recognition*, 36(10):2463 - 2478, 2003.

Refereed Conference Papers

- D. Lin, S. Fidler and **R. Urtasun** 'Holistic Scene Understanding for 3D Object Detection with RGBD cameras', *In International Conference in Computer Vision (ICCV)*, Sydney, Australia, December 2013 (oral presentation)
- A. Schwing, S. Fidler, M. Pollefeys and **R. Urtasun** 'Box In the Box: Joint 3D Layout and Object Reasoning from Single Images', *In International Conference in Computer Vision (ICCV)*, Sydney, Australia, December 2013
- H. Zhang, A. Geiger and **R. Urtasun** 'Understanding High-Level Semantics by Modeling Traffic Patterns', *In International Conference in Computer Vision (ICCV)*, Sydney, Australia, December 2013
- J. Zhang, K. Chen, A. Schwing and **R. Urtasun** 'Estimating the 3D Layout of Indoor Scenes and its Clutter from Depth Sensors', *In International Conference in Computer Vision (ICCV)*, Sydney, Australia, December 2013
- M. Brubaker, A. Geiger and **R. Urtasun** 'Lost! Leveraging the Crowd for Probabilistic Visual Self-Localization', *In Conference in Computer Vision and Pattern Recognition (CVPR)*, Portland, USA, June 2013 (oral presentation) (**Best Paper Runner Up**)
- K. Yamaguchi, D. McAllester and **R. Urtasun** 'Robust Monocular Epipolar Flow Estimation', *In Conference in Computer Vision and Pattern Recognition (CVPR)*, Portland, USA, June 2013 (oral presentation)

- S. Fidler, R. Mottaghi, A. Yuille and **R. Urtasun** 'Bottom-up Segmentation for Top-down Detection', *In Conference in Computer Vision and Pattern Recognition (CVPR), Portland, USA, June 2013*
- S. Fidler, A. Sharma and **R. Urtasun** 'A Sentence is Worth a Thousand Pixels', *In Conference in Computer Vision and Pattern Recognition (CVPR), Portland, USA, June 2013*
- R. Mottaghi, S. Fidler, J. Yao, **R. Urtasun** and D. Parikh 'Analyzing Semantic Segmentation Using Human-Machine Hybrid CRFs', *In Conference in Computer Vision and Pattern Recognition (CVPR), Portland, USA, June 2013*
- S. Fidler, S. Dickinson and **R. Urtasun**, '3D Object Detection and Viewpoint Estimation with a Deformable 3D Cuboid Model ', *In Neural Information Processing Systems (NIPS), Lake Tahoe, USA, December 2012* (spotlight presentation)
- A. Schwing, T. Hazan, M. Pollefeys and **R. Urtasun**, 'Globally Convergent Dual MAP LP Relaxation Solvers using Fenchel-Young Margins ', *In Neural Information Processing Systems (NIPS), Lake Tahoe, USA, December 2012*
- K. Yamaguchi, T. Hazan, D. McAllester and **R. Urtasun**, 'Continuous Markov Random Fields for Robust Stereo Estimation', *In European Conference in Computer Vision (ECCV), Florence, Italy, October 2012* (oral presentation)
- A. Schwing, T. Hazan, M. Pollefeys and **R. Urtasun**, 'Efficient Exact Inference for 3D Indoor Scene Understanding', *In European Conference in Computer Vision (ECCV), Florence, Italy, October 2012*
- M. Salzmann and **R. Urtasun**, 'Beyond Feature Points: Structured Prediction for Monocular Non-rigid 3D Reconstruction', *In European Conference in Computer Vision (ECCV), Florence, Italy, October 2012*
- A. Schwing, T. Hazan, M. Pollefeys and **R. Urtasun**, 'Efficient Structured Prediction with Latent Variables for General Graphical Models', *In International Conference on Machine Learning (ICML), Edinburgh, Scotland, June 2012* (oral presentation)
- A. Geiger, P. Lenz and **R. Urtasun**, 'Are we ready for autonomous driving?', *In Conference in Computer Vision and Pattern Recognition (CVPR), Providence, USA, June 2012* (oral presentation)
- Y. Yao, S. Fidler and **R. Urtasun**, 'Describing the Scene as a Whole: Joint Object Detection, Scene Classification and Semantic Segmentation', *In Conference in Computer Vision and Pattern Recognition (CVPR), Providence, USA, June 2012*
- A. Schwing, T. Hazan, M. Pollefeys and **R. Urtasun**, 'Efficient Structured Prediction for 3D Indoor Scene Understanding', *In Conference in Computer Vision and Pattern Recognition (CVPR), Providence, USA, June 2012*
- A. Varol, M. Salzmann, P. Fua and **R. Urtasun**, 'A Constrained Latent Variable Model', *In Conference in Computer Vision and Pattern Recognition (CVPR), Providence, USA, June 2012*
- M. Brubaker, M. Salzmann and **R. Urtasun**, 'A Family of MCMC Methods on Implicitly Defined Manifolds', *International Conference on Artificial Intelligence and Statistics (AISTATS), Gran Canaria, Spain, April 2012*
- A. Geiger, C. Wojek and **R. Urtasun**, 'Joint 3D Estimation of Objects and Scene Layout', *In Neural Information Processing Systems (NIPS), Granada, Spain, December 2011*

- A. Yao, J. Gall, L. van Gool and **R. Urtasun**, 'Learning Probabilistic Non-Linear Latent Variable Models for Tracking Complex Activities', *In Neural Information Processing Systems (NIPS)*, Granada, Spain, December 2011
- M. Salzmann and **R. Urtasun**, 'Physically-based Motion Models for 3D Tracking: A Convex Formulation', *In International Conference in Computer Vision (ICCV)*, Barcelona, Spain, November 2011
- J. Peng, T. Hazan, D. McAllester and **R. Urtasun**, 'Convex Max-Product over Compact Sets for Protein Folding ', *In International Conference in Machine Learning (ICML)*, Bellevue, Washington, June 2011 (oral presentation)
- A. Geiger, M. Lauer and **R. Urtasun**, 'A generative model for 3D urban scene understanding from movable platforms ', *In Conference in Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, June 2011 (oral presentation)
- A. Schwing, T. Hazan, M. Pollefeys and **R. Urtasun**, 'Distributed Message Passing for Large Scale Structured Prediction', *In Conference in Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, June 2011
- A. Shyr, T. Darrell, M. Jordan and **R. Urtasun**, 'Supervised Hierarchical Pitman-Yor Process for Natural Scene Segmentation', *In Conference in Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, June 2011
- H. Hamer, J. Gall, **R. Urtasun** and L. Van Gool, 'Data-Driven Animation of Hand-Object Interaction', *In Face and Gesture Recognition (FGR)*, Santa Barbara, March 2011 (oral presentation)
- T. Hazan and **R. Urtasun**, 'A Primal-Dual Message-Passing Algorithm for Approximated Large Scale Structured Prediction', *In Neural Information Processing Systems (NIPS) Vancouver, Canada, December 2010.*
- M. Salzmann and **R. Urtasun**, 'Implicitly Constrained Gaussian Process Regression for Monocular Non-Rigid Pose Estimation', *In Neural Information Processing Systems (NIPS) Vancouver, Canada, December 2010.*
- T. Kim, G. Shakhnarovich and **R. Urtasun**, 'Sparse coding for learning interpretable spatio-temporal primitives', *In Neural Information Processing Systems (NIPS) Vancouver, Canada, December 2010.*
- A. Geiger, M. Roser and **R. Urtasun**, 'Efficient Large-Scale Stereo Matching', *In Asian Conference in Computer Vision (ACCV) Queenstown, New Zealand, November 2010.* (oral presentation)
- C. M. Christoudias, **R. Urtasun**, M. Salzmann and T. Darrell, 'Learning to Recognize Objects from Unseen Modalities', *In European Conference in Computer Vision (ECCV) Crete, Greece, September 2010.*
- M. Salzmann and **R. Urtasun** , 'Combining Discriminative and Generative Methods for 3D Deformable Surface and Articulated Pose Reconstruction', *In Conference in Computer Vision and Pattern Recognition (CVPR) San Francisco, June 2010.* (oral presentation)
- A. Shyr, **R. Urtasun** and M. I. Jordan, 'Sufficient Dimensionality Reduction for Visual Sequence Classification', *In Conference in Computer Vision and Pattern Recognition (CVPR) San Francisco, June 2010.*
- M. Salzmann, C. Ek, **R. Urtasun** and T. Darrell, 'Factorized Orthogonal Latent Spaces', *In International Conference on Artificial Intelligence and Statistics (AISTATS) Sardinia, Italy, May 2010.*

- N. D. Lawrence and **R. Urtasun**, 'Non-linear Matrix Factorization with Gaussian Processes', *In International Conference in Machine Learning (ICML) Montreal, Canada, June 2009.* (oral presentation)
- A. Geiger, **R. Urtasun** and T. Darrell, 'Rank Priors for Continuous Non-Linear Dimensionality Reduction', *In Conference in Computer Vision and Pattern Recognition (CVPR) Miami, June 2009.*
- C. M. Christoudias, **R. Urtasun** and T. Darrell, 'Co-training with noisy perceptual observations', *In Conference in Computer Vision and Pattern Recognition (CVPR) Miami, June 2009.*
- C. M. Christoudias, **R. Urtasun** and T. Darrell, 'Multi-View Learning in the Presence of View Disagreement', *In Conference on Uncertainty in Artificial Intelligence (UAI) Helsinki, Finland, July 2008.* (oral presentation)
- **R. Urtasun**, D. J. Fleet, A. Geiger, J. Popović, T. Darrell and N. D. Lawrence, 'Topologically-Constrained Latent Variable Models', *In International Conference in Machine Learning (ICML) Helsinki, Finland, July 2008.* (oral presentation)
- **R. Urtasun** and T. Darrell, 'Local Probabilistic Regression for Activity-Independent Human Pose Inference', *In Conference in Computer Vision and Pattern Recognition (CVPR) Anchorage, Alaska, June 2008.*
- M. Salzmann, **R. Urtasun** and P. Fua, 'Local Deformation Models for Monocular 3D Shape Recovery', *In Conference in Computer Vision and Pattern Recognition (CVPR) Anchorage, Alaska, June 2008.* (oral presentation)
- C. M. Christoudias, **R. Urtasun** and T. Darrell, 'Unsupervised Distributed Feature Selection for Multi-view Object Recognition', *In Conference in Computer Vision and Pattern Recognition (CVPR) Anchorage, Alaska, June 2008.*
- A. Kapoor, K. Grauman, **R. Urtasun** and T. Darrell, 'Active Learning with Gaussian Processes for Object Categorization', *In International Conference on Computer Vision (ICCV) Rio de Janeiro, Brazil, October 2007.*
- **R. Urtasun**, and T. Darrell, 'Discriminative Gaussian Process Latent Variable Models for Classification', *In International Conference on Machine Learning (ICML) Corvallis, Oregon, June 2007.* (oral presentation)
- **R. Urtasun**, D. J. Fleet and P. Fua, '3D People Tracking with Gaussian Process Dynamical Models', *In Conference on Computer Vision and Pattern Recognition (CVPR) New York, June 2006.*
- **R. Urtasun**, D. J. Fleet, A. Hertzmann and P. Fua, 'Priors for People Tracking from Small Training Sets', *In International Conference on Computer Vision (ICCV) Beijing, china, October 2005.* (oral presentation)
- **R. Urtasun**, D. J. Fleet and P. Fua, 'Monocular 3D Tracking of the Golf Swing', *In Conference on Computer Vision and Pattern Recognition (CVPR) San Diego, CA, June 2005.*
- **R. Urtasun** and P. Fua, '3D Human Body Tracking using Deterministic Motion Models', *In European Conference on Computer Vision (ECCV), Prague, Czech Republic, May 2004.*
- L. Herda, **R. Urtasun** and P. Fua, 'Hierarchical Implicit Surface Joint Limits to Constrain Video-Based Motion Capture', *In European Conference on Computer Vision (ECCV), Prague, Czech Republic, May 2004.*

- **R. Urtasun** and P. Fua, '3D Tracking for Gait Characterization and Recognition', *In Proceeding of the 6th International Conference on Automatic Face and Gesture Recognition (FGR)*, Seoul, Korea, May 2004. *IEEE Computer Society*. (oral presentation)
- L. Herda, **R. Urtasun**, P. Fua and A. Hanson, 'An Automatic Method for Determining Quaternion Field Boundaries for Ball-and-Socket Joint Limits', *Proceeding of the 5th International Conference on Automatic Face and Gesture Recognition (FGR)*, pages 95 - 100, Washington DC, May 2002. *IEEE Computer Society*.
- P. Dokladal, **R. Urtasun**, I. Bloch and L. Garnero, 'Segmentation of 3D head MR images using Morphological reconstruction under constraints and automatic selection of markers', *International Conference on Image Processing (ICIP)*, pages 1075-1078, Thessaloniki, Greece, October 2001.

Workshops

- M. Salzmann, C. H. Ek, **R. Urtasun** and T. Darrell, 'FOLS: Factorized Orthogonal Latent Spaces', *In Learning Workshop Snowbird*. Snowbird, Utah, April 2010. (oral presentation)
- M. Salzmann and **R. Urtasun**, 'A Constrained Combination of Discriminative and Generative Methods', *In Learning Workshop Snowbird*. Snowbird, Utah, April 2010.
- C. M. Christoudias, **R. Urtasun** and T. Darrell, 'Bayesian Localized Multiple Kernel Learning', *In Learning from Multiple Sources with Applications to Robotics Workshop at NIPS*. Whistler, Canada, December 2009.
- **R. Urtasun**, 'Non-Parametric Latent Variable Models for Shape and Motion Analysis', *In MIRAGE*. Versailles, France, May 2009. (invited talk)
- N. D. Lawrence and **R. Urtasun**, 'Non-Linear Matrix Factorization', *In Learning Workshop Snowbird*. Clearwater, Florida, April 2009. (oral presentation)
- **R. Urtasun**, A. Geiger and T. Darrell, 'Rank Priors for Continuous Non-Linear Dimensionality Reduction', *In Learning Workshop Snowbird*. Clearwater, Florida, April 2009.
- C. M. Christoudias, **R. Urtasun**, A. Kapoor and T. Darrell, 'Co-training with Noisy Perceptual Observations', *In Learning Workshop Snowbird*. Clearwater, Florida, April 2009.
- **R. Urtasun** and T. Darrell, 'Local Probabilistic Regression for Activity-Independent Human Pose Inference', *In Learning Workshop Snowbird*. Snowbird, Utah, April 2008.
- **R. Urtasun**, A. Quattoni, N. D. Lawrence and T. Darrell, 'Transferring Nonlinear Representations using Gaussian Processes with a Shared Latent Space', *In Learning Workshop Snowbird*. Snowbird, Utah, April 2008.
- **R. Urtasun**, D. J. Fleet, T. Darrell and N. D. Lawrence, 'Topologically-Constrained Latent Variable Models', *In NIPS Workshop on Topology Learning*, Whistler December 2007
- **R. Urtasun**, D. J. Fleet and N. D. Lawrence, 'Modeling human locomotion with topologically constrained latent variable models', *In ICCV Workshop on Human Motion: Understanding, Modeling, Capture and Animation*. Rio de Janeiro, Brazil, October 2007. (oral presentation)
- **R. Urtasun**, 'Gaussian Processes for Monocular 3D Person tracking', *In BIRS 2006 Workshop on Mathematical Methods in Computer Vision*, Banff, Canada. October 2006 (invited talk)
- **R. Urtasun**, D. J. Fleet, A. Hertzmann and P. Fua, 'Gaussian Processes for Monocular 3D People tracking', *In Gaussian Processes in Practice Workshop*, Bletchley Park, U.K. June 2006 (invited talk)

Technical Reports

- T. Hazan and **R. Urtasun**, 'Approximated Structured Prediction for Learning Large Scale Graphical Models', *Arxiv 1006.2899* June 2010.
- **R. Urtasun**, A. Quattoni, N. D. Lawrence and T. Darrell, 'Transferring Nonlinear Representations using Gaussian Processes with a Shared Latent Space', *MIT Technical report* April 2008.
- **R. Urtasun**, M. Salzmann and P. Fua, '3D Morphing without User Interaction', *EPFL Technical report* 2004.
- **R. Urtasun**, 'Automatic segmentation of a fix number of markers (apply to the cerebellum and brainstem)', *ENST Telecom Paris Technical report* 2000.
- **R. Urtasun**, 'Segmentation of a Guinea pig using mathematical morphology ', *ENST Telecom Paris Technical report* 2000.

Talks

- **CVPR Workshop on Structured Prediction - Tractability, Learning and Inference, invited talk**
Efficient learning and inference for holistic scene understanding, June 2013.
- **I-Robot**
Holistic Models for Visual Perception in Autonomous Systems, May 2013
- **MERL**
Holistic Models for Visual Perception in Autonomous Systems, May 2013
- **Harvard**
Holistic Models for Visual Perception in Autonomous Systems, May 2013
- **MIT**
Holistic Models for Visual Perception in Autonomous Systems, May 2013
- **University of Toronto**
Holistic Models for Visual Perception in Autonomous Systems, Feb 2013
- **UC Berkeley**
Holistic Models for Visual Perception in Autonomous Systems, Feb 2013
- **Johns Hopkins University**
Holistic Models for Visual Perception in Autonomous Systems, Feb 2013
- **UPenn**
Efficient Algorithms for Semantic Scene Parsing, January 2013
- **Georgia Tech**
Efficient Algorithms for Semantic Scene Parsing, January 2013
- **NICTA, Australia**
Efficient Algorithms for Semantic Scene Parsing, December 2012
- **ETH Zurich**
Efficient Algorithms for Semantic Scene Parsing, November 2012
- **Karlsruhe Institute of Technology**
Efficient Algorithms for Semantic Scene Parsing, November 2012

- **Microsoft Research UK**
Efficient Algorithms for Semantic Scene Parsing, November 2012
- **ECCV Workshop on Unsolved Problems in Optical Flow and Stereo Estimation, invited talk**
Are we ready for autonomous driving? The KITTI Vision Benchmark Suite, October 2012.
- **Midwest Computer Vision Workshop**
Efficient Exact Inference for 3D Indoor Scene Understanding, September 2012.
- **Spanish Journeys of Automotion**
Are we ready for autonomous driving?, September 2012.
- **Microsoft workshop: At the intersection of Vision, Graphics, Learning and Sensing — Representations and Applications Workshop, invited talk**
Are we ready for autonomous driving?, May 2012.
- **Workshop on Broadening the Participation in Data Mining, SIAM 2012, invited talk**
Generative Models for 3D Scene Understanding from Movable Platforms, April 2012.
- **University of Tokyo**
Generative Models for 3D Scene Understanding from Movable Platforms, April 2012.
- **TTI Japan**
Generative Models for 3D Scene Understanding from Movable Platforms, April 2012.
- **University of Toronto**
Generative Models for 3D Scene Understanding from Movable Platforms, March 2012.
- **Midwest Computer Vision Workshop**
Efficient Structured Prediction for 3D Indoor Scene Understanding, January 2012.
- **MPI-Saarbrücken**
Efficient learning and inference for holistic scene understanding, December 2011.
- **University of Alcalá**
Generative Models for 3D Scene Understanding, December 2011.
- **Tsinghua University**
Generative Models for 3D Scene Understanding, October 2011.
- **Peking University**
Generative Models for 3D Scene Understanding, October 2011.
- **IScIDE 2011, invited talk**
Generative Models for 3D Scene Understanding, October 2011.
- **Midwest Computer Vision Workshop**
Generative Models for 3D Scene Understanding, May 2011.
- **EFPL**
3D Urban Scene Understanding from Movable Platforms, March 2011.
- **Washington University at St Louis**
3D Urban Scene Understanding from Movable Platforms, March 2011.
- **TTI Japan**
3D Urban Scene Understanding from Movable Platforms, January 2011.

- **TCRD, Nagoya**
3D Urban Scene Understanding from Movable Platforms, January 2011.
- **NIPS workshop on New Directions in Multiple Kernel Learning**, invited talk
A Gaussian Process View on MKL, December 2010
- **Women in Machine Learning Workshop**, invited talk
3D Urban Scene Understanding from Movable Platforms, December 2010.
- **University of Toronto**
A unified framework for non-rigid reconstruction and articulated pose estimation, December 2010
- **MPI-Tubingen**
Non-parametric models for the analysis of human behavior, April 2010.
- **ETHZ Computer Science Colloquium**
Non-parametric models for the analysis of human behavior, April 2010.
- **TTI-Chicago**
Non-parametric models for the analysis of human behavior, February 2010.
- **PIXAR animation studios**
Non-parametric models for the analysis of human behavior, August 2009.
- **CMU VASC Seminar Series**
hosted by Prof. Jessica Hodgins, June 2009
- **In International Conference in Machine Learning**
Non-linear Matrix Factorization with Gaussian Processes. Montreal, Canada, June 2009.
- **ETH Zurich**
Non-parametric models for the analysis of human behavior. Hosted by Prof. Markus Gross, June 2009.
- **MIRAGE 2009**, invited talk
Non-Parametric Latent Variable Models for Shape and Motion Analysis. Hosted by Prof. Andre Gagalovic, May 2009
- **TTI-Chicago**
Non-parametric models for the analysis of human behavior. Hosted by Prof. David McAllester and Prof. Greg Shakhnarovich, April 2009.
- **USC**
Non-Parametric Latent Variable Models for Shape and Motion Analysis. Hosted by Prof. Fei Sha and Prof. Ram Nevatia, December 2008.
- **UC Berkeley Computer Graphics Seminar**
Non-Parametric Latent Variable Models for Shape and Motion Analysis. Hosted by Prof. James O'Brian, November 2008
- **UC Berkeley Computer Vision Seminar**
Non-Parametric Latent Variable Models for Shape and Motion Analysis. Hosted by Prof. Jitendra Malik, October 2008.
- **UC Berkeley TILab**
Gaussian Processes for Character Animation and Tracking. Hosted by Prof. Ruzena Bajcsy, September 2008.

- **In International Conference in Machine Learning**
Topologically-Constrained Latent Variable Models. Helsinki, Finland, July 2008.
- **University of Manchester**
Probabilistic non-parametric models for shape recovery and pose estimation. Hosted by Prof. Neil Lawrence, May 2008.
- **MIT Seminar Graphics Group**
Local Deformation Models for Monocular 3D Shape Recovery. Hosted by Prof. Jovan Popovic and Prof. Fredo Durand, March 2008
- **In ICCV Workshop on Human Motion: Understanding, Modeling, Capture and Animation**
Modeling human locomotion with topologically constrained latent variable models. Rio de Janeiro, Brazil, October 2007.
- **MIT Seminar Vision Group**
hosted by Prof. William Freeman and Prof. Antonio Torralba, October 2007.
- **In International Conference in Machine Learning**
Discriminative Gaussian Process Latent Variable Models for Classification. Corvallis, Oregon, June 2007.
- **University of Manchester**
hosted by Prof. Neil Lawrence, April 2007.
- **MIT Seminar Graphics Group**
hosted by Prof. Jovan Popovic, March 2007
- **Boston University IVC Seminar series**
hosted by Prof. Stan Sclaroff, March 2007
- **MIT Seminar Vision Interface Group**
hosted by Prof. Trevor Darrell, October 2006
- **BIRS 2006 Workshop on Mathematical Methods in Computer Vision**
Gaussian Processes for Monocular 3D Person tracking. Banff, Canada, hosted by Prof. Bill Triggs, October 2006.
- **CMU VASC Seminar Series** hosted by Sonya Allin, June 2006
- **Gaussian Processes in Practice Workshop**
Gaussian Processes for Monocular 3D People tracking. Bletchley Park, U.K., hosted by Prof. Neil Lawrence, June 2006
- **In International Conference on Computer Vision**
Priors for People Tracking from Small Training Sets. Beijing, China. October 2005.
- **CIAR summer school, University of Toronto**
Toronto, Canada, hosted by Prof. David Fleet. July 2005.
- **In International Conference on Automatic Face and Gesture Recognition**
3D Tracking for Gait Characterization and Recognition. Seoul, Korea. May 2004.
- **University of Toronto**
hosted by Prof. David Fleet, September 2003.