

JEAN PONCE

CURRICULUM VITAE

EDUCATION

- Doctorat d'Etat, Computer Science, University of Paris Orsay (1988).
- Doctorat de Troisième Cycle, Computer Science, University of Paris Orsay (1983).
- Ecole Normale Supérieure de l'Enseignement Technique, Mathematics (1978–1982).
- Diplôme d'Etudes Approfondies, Computer Science, University of Paris Orsay (1981).
- Maîtrise, Mathematics, University of Paris Orsay (1980).

EMPLOYMENT

- Professor, Département d'Informatique, Ecole Normale Supérieure [ENS], Paris (2005–).
- Professor, Dept. of Computer Science and Beckman Institute, University of Illinois at Urbana-Champaign [UIUC] (1998–2006).
- Associate Professor, Dept. of Computer Science and Beckman Institute, UIUC (1993–1998).
- Assistant Professor, Dept. of Computer Science and Beckman Institute, UIUC (1990–1993).
- Sr. Research Associate, Robotics Laboratory, Dept. of Computer Science, Stanford University (1988–1989).
- Research Associate, Robotics Laboratory, Dept. of Computer Science, Stanford University (1985–1988).
- Visiting Scientist, MIT Artificial Intelligence Laboratory (1984–1985).
- Research Scientist, Institut National de Recherche en Informatique et Automatique (1982–1985).

RESEARCH INTERESTS

- Computer Vision, Computer Graphics, Machine Learning, Robotics.

HONORS AND AWARDS

- IEEE Fellow (2003).
- Outstanding Undergraduate Advisor award, College of Engineering, University of Illinois (2000).
- Sr. Xerox award for faculty research, College of Engineering, University of Illinois (1998).
- Beckman Associate in the Center of Advanced Study of the University of Illinois (1994–95).
- Jr. Xerox award for faculty research, College of Engineering, University of Illinois (1993).

US PATENT

- “Automated Reconfigurable Object Manipulation Device with an Array of Pins”, S. Akella, S. Blind, C. Mc Cullough, and J. Ponce, US Patent # 6,633,797 (2003).

PROFESSIONAL ACTIVITIES

- Head of the WILLOW project-team (2007–). WILLOW is part of the ENS Computer Science Laboratory (“Laboratoire d'Informatique de l'ENS”, or LIENS), a joint ENS/INRIA/CNRS research unit. Its research focuses on computer vision and machine learning. WILLOW consists of 25 researchers, including 7 permanent faculty members.

- Editorial Board Member, SIAM Journal on Imaging Sciences.
- Editor-in-Chief, International Journal of Computer Vision (2003–2008).
- Editorial Board Member, Foundation and Trends in Computer Graphics and Vision (2005–).
- Editorial Board Member, International Journal of Computer Vision (2001–2002).

- Associate Editor, IEEE Transactions on Robotics and Automation (1998-2001).
- Area Editor, Computer Vision and Image Understanding (1994-2000).
- General Chair, European Conf. on Computer Vision, Marseille, France (2008).
- General Chair, IEEE Conf. on Computer Vision and Pattern Recognition, Hilton Head Island, SC (2000).
- Program Chair, IEEE Conf. on Computer Vision and Pattern Recognition, San Juan, PR (1997).
- Chair, Third Int. Workshop on Object Recognition, Siracusa, Italy (2006).
- Chair, Second Int. Workshop on Object Recognition, Taormina, Italy (2004).
- Chair, First Int. Workshop on Object Recognition, Taormina, Italy (2003).
- Chair, DIMACS Workshop on Computer Vision and Robotics, Rutgers University (1999).
- Chair, Int. Workshop on Object Representation in Computer Vision, University of Cambridge, UK (1996).
- Chair, NSF/ARPA Workshop on Object Representation in Computer Vision, New York City, NY (1994).
- Member, Scientific Advisory Board of the ENS Institute.
- Member, Network of North American Advisors to the French Academy of Engineering (2002–2005).
- Member, Scientific Advisory Board of France Télécom (2001-2004).
- Member, Scientific Advisory Board of Electricité de France (1998-2002).
- Member, ARO Computational Geometry for Intelligent Systems Advisory Board (1996–).
- Member, ARPA/ORD RADIUS Image Understanding Advisory Committee (1994-1996).
- Recent Invited Lectures (2008–2009): Beckman Institute 20th Anniversary Symposium, University of Illinois at Urbana-Champaign; International Workshop on Shape Perception in Human and Computer Vision (ECCV'08); Ecole Polytechnique, Palaiseau; Laboratoire d'Analyse et d'Architecture des Systèmes, Toulouse; Microsoft Tech Days, Paris; Télécom ParisTech, Paris; University of California at Los Angeles; University of Southern California, Los Angeles.

TEACHING

UIUC:

- CS257: Numerical Methods (sophomores).
- CS318: Introduction to Computer Graphics (seniors).
- CS319: Advanced Computer Graphics (seniors).
- CS348: Introduction to Artificial Intelligence (seniors).
- CS397: Geometric and Symbolic Computation (seniors).
- CS397: Geometric Modeling (seniors).
- ECE449/CS443: Computer Vision (graduate students).
- ECE450: Advanced Robotic Planning (graduate students).
- CS497: Geometric Methods in Computer Vision (graduate students).

ENS:

- Introduction to Scientific Computing and its Applications.
- Geometric bases of computer science.
- Geometry and Computer Vision.
- Object recognition.

STUDENT SUPERVISION

Current PhD Students:

- Louise Benoît.
- Y-Lan Boureau.
- Olivier Duchenne.
- Julien Mairal.
- Oliver Whyte.

Past PhD Students:

- Yakup Genc. Siemens SCR.
- Tanuja Joshi. Microsoft.
- Yasutaka Furukawa. Post-Doctoral Research Associate, Dept. of Computer Science, University of Washington.
- Akash Kushal. Two Sigma Investments.
- Svetlana Lazebnik. Assistant Professor, Dept. of Computer Science, University of Northern Carolina.
- Kenton McHenry. National Center for Supercomputing Applications.
- Frederick Rothganger. Sandia Laboratories.
- Ilan Shimshoni. Professor, Dept. of Management Information Systems, University of Haifa, Israel.
- Attawith Sudsang. Assistant Professor, Dept. of Computer Engineering, Chulalongkorn University, Thailand.
- Steven Sullivan. Head of R&D at Industrial, Light & Magic.

Past MS Students:

- Sébastien Blind.
- Sung-il Pae.
- Zeynep Kantarcioglu (de juré advisor).
- Valérie Lehner (de juré advisor).
- Troy Thomas.
- Sylvain Petitjean.
- Darrell Stam.
- Anthony Hoogs.

GRANTS

UIUC:

- National Science Foundation: *Toward Category-Level Object Recognition*, J. Ponce (PI) and Y. LeCun, IIS-0535152/0535166, 2005-2008, \$600,000 (\$345,000 for UIUC).
- France Telecom R&D: *UIUC-France Telecom Collaboration: Learning Part-Based Models of Articulated Objects*, J. Ponce (PI), 2006-2007, \$93,368.
- National Science Foundation: *Collaborative Research: Toward Category-Level Object Recognition*, J. Ponce (PI) and Y. LeCun, IIS-0535152/0535166, 2005-2008, \$600,000.
- Toyota Motor Corporation: *UIUC-Toyota Collaboration: Scene Segmentation and Recognition*, J. Ponce (PI), 2005-2006, \$101,438.
- National Science Foundation: *Toward 3D Object Recognition*, J. Ponce (PI), IIS-0308087, 2003-2006, \$240,000.
- National Science Foundation: *ITR: An Integrated Approach to 3D Photography Using Shape, Texture, and Motion Cues*, J. Ponce (PI), IIS-0312438, 2003-2006, \$381,485.
- Toyota Motor Corporation: *UIUC-Toyota Collaboration: 3D Object Modeling, Recognition and Classification from Photographs*, J. Ponce (PI), 2004-2005, \$73,000.
- National Science Foundation: *Designing Tomorrow's Category-Level Object Recognition Systems*, J. Ponce (PI), IIS-0335780, 2003, \$20,000.
- National Science Foundation: *Capture Regions for Grasping, Manipulating, and Re-Orienting Parts*,

J. Ponce (PI), IIS-9907009, 1999-2002, \$300,000.

• National Science Foundation: *Algorithms for Constructing Immobilizing Fixtures and Grasps of Three-Dimensional Objects*, J. Ponce (PI), IRI-9634393, 1996-1999, \$154,355.

• National Science Foundation: *Generalized Cylinders Revisited*, J. Ponce (PI), IRI-9634312, 1996-1999, \$154,355.

• National Science Foundation: *Modeling and Recognition of Arbitrary Curved Objects from Image Contours*, Jean Ponce (PI) and David J. Kriegman, IRI-9224815, 1993-1997, \$330,000.

• National Science Foundation: *Practical Algebraic Techniques for Robotics and Computer Vision*, Jean Ponce (PI), Seth Hutchinson, and David J. Kriegman, NSF CISE Instrumentation, CDA 91-21899 EQ, 1992, \$146,624.

• National Science Foundation: *Representations and Algorithms for Recognizing and Locating 3D curved Objects from Monocular Images*, Jean Ponce (PI) and David J. Kriegman, IRI-9015749, 1991-1993, \$280,000.

ENS:

• MSR-INRIA Laboratory: *Image and Video Mining for the Sciences and Humanities*, Jean Ponce, PI (2008-2010). Joint project with the INRIA VISTA and LEAR teams, MSR, and INA.

• Agence Nationale de la Recherche (ANR): *Graphical models and applications*, Francis Bach, PI (2008-2010). Joint project between Ecole Nationale Supérieure des Mines de Paris, Ecole Nationale Supérieure des Télécommunications, and INRIA.

• Agence Nationale de la Recherche: *High-fidelity image-based modeling and rendering*, Josef Sivic, PI (2008-2010). Joint project between the WILLOW and ARTIS INRIA teams, and the COMSEE team of LASMEA in Clermont-Ferrand.

• Agence Nationale de la Recherche: *Triangles*, O. Devillers, PI (2008-2010). Joint project between the GEOMETRICA and WILLOW INRIA teams, and Université de Lyon.

• Délégation Générale pour l'Armement (DGA): *Development and evaluation of new algorithms for automated target recognition* (2008-2010). Joint project with BERTIN, the University of Caen and the VISTA INRIA team.

• Délégation Générale pour l'Armement: *Projet ITISECURE : sécurisation d'itinéraires contre les IED par analyse optique*, Jean Ponce (PI), 2008. Joint project between the EVITECH company and WILLOW. • Getty Conservation Institute: *Stereo methods for the quantitative evaluation of stone deterioration on the Copan hieroglyphic stairway*, Jean Ponce (PI), 2007.

PUBLICATIONS

BOOK

1. David Forsyth and Jean Ponce, **Computer Vision: A Modern Approach**, Prentice-Hall, 2003. (This textbook is used in over 40 universities worldwide, including MIT, UC Berkeley, Carnegie-Mellon University, Oxford University. Chinese, Japanese, and Russian translations are available.)

EDITED BOOKS

1. Jean Ponce, Martial Hebert, Cordelia Schmid, and Andrew Zisserman (eds.), **Toward Category-Level Object Recognition**, Springer-Verlag, Lecture Notes in Computer Science, Vol. 4170, 2007.
2. J. Ponce, A. Zisserman and M. Hebert (eds.), **Object Representation in Computer Vision II**, Springer-Verlag, Lecture Notes in Computer Science 1144, October 1996.
3. M. Hebert, J. Ponce, T.E. Boult, and A. Gross (eds.), **Object Representation in Computer Vision**, Springer-Verlag, Lecture Notes in Computer Science 994, 1995.

JOURNAL ARTICLES

1. Hui Kong, Jean-Yves Audibert, and Jean Ponce, *General road detection from a single image*, the IEEE Transactions on Image Processing, 2009. Accepted pending minor revisions.
2. Julien Mairal, Francis Bach, Jean Ponce, and Guillermo Sapiro, *Online Learning for Matrix Factorization and Sparse Coding*, the Journal of Machine Learning Research, 2009. In press.
3. Yasutaka Furukawa and Jean Ponce, *Accurate, Dense, and Robust Multi-View Stereopsis*, the IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009. In press.
4. Yasutaka Furukawa and Jean Ponce, *Accurate Camera Calibration from Multi-View Stereo and Bundle Adjustment*, the International Journal of Computer Vision, 84(3):257-268, 2009.
5. Yasutaka Furukawa and Jean Ponce, *Carved Visual Hulls for Image-Based Modeling*, the International Journal of Computer Vision, 81(1):53-67, 2009. Special issue dedicated to the best papers of ECCV'06.
6. Jeff Erickson, Shripad Thite, Fred Rothganger and Jean Ponce, *Capturing a Convex Object with Three Discs*, the IEEE Transaction on Robotics and Automation, 23(6):1133-1140, 2007.
7. Svetlana Lazebnik, Yasutaka Furukawa, and Jean Ponce, *Projective Visual Hulls*, the International Journal of Computer Vision, 74(2):137-165, 2007.
8. Fred Rothganger, Svetlana Lazebnik, Cordelia Schmid and Jean Ponce, *Segmenting, Modeling, and Matching Video Clips Containing Multiple Moving Objects*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 29(3):477-491, 2007.
9. Fred Rothganger, Svetlana Lazebnik, Cordelia Schmid and Jean Ponce, *3D Object Modeling and Recognition Using Local Affine-Invariant Image Descriptors and Multi-View Spatial Constraints*, International Journal of Computer Vision, 66(3):231-259, 2006.
10. Yasutaka Furukawa, Amit Sethi, Jean Ponce and David Kriegman, *Robust Structure and Motion from Outlines of Smooth Curved Surfaces*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 28(2):302-315, 2006.
11. Svetlana Lazebnik, Cordelia Schmid and Jean Ponce, *A Sparse Texture Representation Using Local Affine Regions*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 27(8):1265-1278, 2005.
12. Svetlana Lazebnik and Jean Ponce, *The Local Projective Shape of Smooth Surfaces and Their Outlines*, International Journal of Computer Vision, 63(1):65-83, 2005.
13. Amit Sethi, David Renaudie, David Kriegman and Jean Ponce, *Curve and Surface Duals and the Recognition of Curved 3D Objects from their Silhouettes*, International Journal of Computer Vision, 58(1):73-86, 2004.
14. Attawith Sudsang, Fred Rothganger and Jean Ponce, *Motion Planning for Disc-Shaped Robots Pushing a Polygonal Object in the Plane*, IEEE Transactions on Robotics and Automation, 18(4):550-562, 2002.
15. Sbastien Blind, Christopher McCullough, Srinivas Akella and Jean Ponce, *Manipulating Parts with an Array of Pins: A Method and a Machine*, International Journal of Robotics Research, 20(10):808-818, 2001.
16. Sung-il Pae and Jean Ponce, *On Computing Structural Changes in Evolving Surfaces and their Appearance*, International Journal of Computer Vision, 43(2):113-131, 2001.
17. Yakup Genc and Jean Ponce, *Image-Based Rendering Using Parameterized Image Varieties*, International Journal of Computer Vision, 41(3):143-170, 2001.

18. Ilan Shimshoni and Jean Ponce, *Probabilistic 3D Object Recognition*, International Journal of Computer Vision, 36(1):51-70, 2000.
19. Attawith Sudsang, Jean Ponce and Narayan Srinivasa, *Grasping and In-Hand Manipulation: Geometry and Algorithms*, Algorithmica, 26:466-493, 2000.
20. Tanuja Joshi, Narendra Ahuja and Jean Ponce, *Structure and Motion Estimation from Dynamic Silhouettes under Perspective Projection*, International Journal of Computer Vision, 31(1):31-50, 1999.
21. B. Vijayakumar, David J. Kriegman and Jean Ponce, *Invariant-Based Recognition of Complex Curved 3D Objects from Images Contours*, Computer Vision and Image Understanding, 72(3):287-303, 1998.
22. Attawith Sudsang, Jean Ponce and Narayan Srinivasa, *Grasping and In-Hand Manipulation: Experiments with a Reconfigurable Gripper*, Advanced Robotics, 12(5):509-533, 1998.
23. Steve Sullivan and Jean Ponce, *Automatic Model Construction, Pose Estimation, and Object Recognition from Photographs Using Triangular Splines*, IEEE Transactions on Pattern Recognition and Machine Intelligence, 20(10):1091-1096, 1998.
24. Jean Ponce and Yakup Genc, *Epipolar Geometry and Linear Subspace Methods: A New Approach to Weak Calibration*, International Journal of Computer Vision, 28(3):223-243, 1998.
25. Tanuja Joshi, B. Vijayakumar, David J. Kriegman and Jean Ponce, *Hot Curves for Modelling and Recognition of Smooth Curved 3D Objects*, Image and Vision Computing, 15(7):479-498, 1997.
26. Alison Noble, Dale Wilson and Jean Ponce, *On Computing Aspect Graphs of Smooth Shapes from Volumetric Data*, Computer Vision and Image Understanding, special issue on Biomedical Image Analysis, 66(2):179-192, 1997.
27. Ilan Shimshoni and Jean Ponce, *Finite-Resolution Aspect Graphs of Polyhedral Objects*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 19(4):315-327, 1997.
28. Ilan Shimshoni and Jean Ponce, *Recovering the Shape of Polyhedra Using Line-Drawing Analysis and Complex Reflectance Models*, Computer Vision and Image Understanding, special issue on Physics-Based Vision, 65(2):296-310, 1997.
29. Jean Ponce, Steve Sullivan, Attawith Sudsang, Jean-Daniel Boissonnat, and Jean-Pierre Merlet, *On Computing Four-Finger Equilibrium and Force-Closure Grasps of Polyhedral Objects*, the International Journal of Robotics Research, 16(1):11-35, 1997.
30. Jean Ponce and Bernard Faverjon, *On Computing Three-Finger Force-Closure Grasps of Polygonal Objects*, IEEE Transactions on Robotics and Automation, 11(6):868-881, 1995.
31. Steve Sullivan, Lorraine Sandford and Jean Ponce, *Using Geometric Distance Fits for 3D Object Modelling and Recognition*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 16(12):1183-1196, 1994.
32. Gabriel Taubin, Fernando Cukierman, Steve Sullivan, Jean Ponce et David J. Kriegman, *Parameterized Families of Polynomials for Bounded Algebraic Curve And Surface Fitting*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 16(3):287-303, 1994.
33. Jean Ponce, Darrell Stam and Bernard Faverjon, *On Computing Force-Closure Grasps of Curved Two-Dimensional Objects*, International Journal of Robotics Research, 12(3):263-273, 1993.
34. Sylvain Petitjean, Jean Ponce and David J. Kriegman, *Computing Exact Aspect Graphs of Curved Objects: Algebraic Surfaces*, International Journal of Computer Vision, 9(3):231-255, 1992.
35. Jean Ponce, Anthony Hoogs and David J. Kriegman, *On Using CAD Models to Compute the Pose of Curved 3D Objects*, Computer Vision, Graphics, and Image Processing: Image Understanding, special issue on Directions in Automated CAD-Based Vision, 55(2):184-197, 1992.

36. Jean Ponce, *On Characterizing Ribbons and Finding Skewed Symmetries*, Computer Vision, Graphics, and Image Processing, 52(3):328-340, 1990.
37. David J. Kriegman and Jean Ponce *On Recognizing and Positioning Curved 3D Objects from Image Contours*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 12(12):1127–1137, 1990.
38. David J. Kriegman and Jean Ponce, *Computing Exact Aspect Graphs of Curved Objects: Solids of Revolution*, the International Journal of Computer Vision, 5(2):119–135, 1990.
39. Jean Ponce, *Straight Homogeneous Generalized Cylinders: Differential Geometry and Uniqueness Results*, the International Journal of Computer Vision, 4(1):79–100, 1990.
40. Jean Ponce and David J. Kriegman, *An Algebraic Approach to Computer Vision*, Revue d'Intelligence Artificielle, special issue on Geometric Reasoning, Vol. 3, No. 2, pp. 105–136, 1989.
41. Jean Ponce, David Chelberg, Wallace Mann, *Invariant Properties of Straight Homogeneous Generalized Cylinders and their Contours*, IEEE Transactions on Pattern Analysis and Machine Intelligence, 11(9):951-966, 1989.
42. Jean Ponce and David Chelberg *Finding the Limbs and Cusps of Generalized Cylinders*, the International Journal of Computer Vision, 1(3):195–210, 1987.
43. Jean Ponce and Olivier Faugeras, *An Object Centered, Hierarchical Representation for 3D Objects: the Prism Tree*, Computer Vision, Graphics, and Image Processing, 38(1):1–28, 1987.
44. Michael Brady, Jean Ponce, Alan Yuille and Haruo Asada, *Describing Surfaces*, Computer Vision, Graphics, and Image Processing, 32(1):1–28, 1985.

BOOK CHAPTERS

1. Svetlana Lazebnik, Cordelia Schmid, and Jean Ponce, *Spatial Pyramid Matching*, in **Object Categorization: Computer and Human Vision Perspectives**, S. Dickinson (ed.), Cambridge University Press, 2008.
2. Cordelia Schmid, Gyorgy Dorko, Svetlana Lazebnik, Krystian Mikolajczyk, and Jean Ponce, *Pattern Recognition with Local Invariant Features*, in **Handbook of Pattern Recognition and Computer Vision**, 3rd edition. C.H. Chen and P.S.P Wang editors, World Scientific Publishing Co., 2004.
3. Jean Ponce, Martha Cepeda, Sung-il Pae and Steve Sullivan, *Shape Models and Object Recognition*, in **Shape, Contour and Grouping in Computer Vision**, D.A. Forsyth, J.L. Mundy, V. Gesu and R. Cipolla, (eds.), Springer-Verlag, Lecture Notes in Computer Science 1681, pp. 31-55, 1999.
4. J. Ponce, *Manipulation and Grasping*, in **The MIT Encyclopedia of Cognitive Sciences**, R. Wilson and F. Keil (eds.), MIT Press, pp. 508-511, 1999.
5. A. Sudsang, J. Ponce and N. Srinivasa, *Algorithms for Constructing Immobilizing Fixtures and Grasps of Three-Dimensional Objects*, in **Algorithms for Robotics Motion and Manipulation (WAFR 1996)**, J.-P. Laumont and M. Overmars (eds.), AK Peters, Ltd., pp. 363-380, 1997.
6. J. Ponce, A. Sudsang, S. Sullivan, B. Faverjon, J.-D. Boissonnat, and J.-P. Merlet, *Algorithms for Computing Multi-Finger Force-Closure Grasps of Polyhedral Objects*, in **Algorithmic Foundations of Robotics**, K. Goldberg, D. Halperin, J.-C. Latombe, and R. Wilson (eds.), AK Peters, Ltd., pp. 167-184, 1995.

7. Jean Ponce, David J. Kriegman, Sylvain Petitjean, Steven Sullivan, Gabriel Taubin, B. Vijayakumar, *Representations and Algorithms for 3D Curved Object Recognition*, in **Three-Dimensional Object Recognition Systems**, P. Flynn and A. Jain (eds.), Elsevier Press, pp. 327-352, 1993.
8. Jean Ponce and David J. Kriegman, *Elimination Theory and Computer Vision: Recognition and Positioning of Curved 3D Objects from Range, Intensity, or Contours*, in **Symbolic and Numerical Computation for Artificial Intelligence**, B. Donald, D. Kapur and J. Mundy (eds.), Computational Mathematics and Applications Series, Academic Press, pp. 123-146, 1992.
9. Jean Ponce and David J. Kriegman, *Toward 3D Curved Object Recognition from Image Contours*, in **Geometric Invariance in Computer Vision**, J. Mundy and A. Zisserman (eds.), MIT Press, pp. 408-439, 1992.
10. David J. Kriegman and Jean Ponce, *A New Curve Tracing Algorithm and some Applications*, in **Curves and Surfaces**, P.J. Laurent, A. Le Méhauté and L.L. Schumaker (eds.), Academic Press, New York, pp. 267-270, 1991.
11. David J. Kriegman and Jean Ponce *On Recognizing and Positioning Curved 3D Objects from Image Contours*, in **Selected Papers on Automatic Object Recognition**, H. Nasrem (ed.), SPIE Milestones Series, SPIE Optical Engineering Series Press, pp. 213-223, 1991. (Reprinted from IEEE Transactions on Pattern Analysis and Machine Intelligence, 1990.)
12. Jean Ponce and Michael Brady, *Toward a Surface Primal Sketch*, in **Three-Dimensional Machine Vision**, T. Kanade (ed.), Kluwer Academic Publishers, pp. 195-240, 1987.
13. Michael Brady, Jean Ponce, Alan Yuille, and Haruo Asada, *Describing Surfaces*, in **Human and Machine Vision II**, A. Rosenfeld (ed.), Academic Press, pp. 58-85, 1986. (Reprinted from Computer Vision, Graphics, and Image Processing 1985.)
14. Olivier Faugeras, Jean-Daniel Boissonnat, François Germain, Martial Hebert, François Krizé, Philippe Mussi, Eric Pauchon, and Jean Ponce, *Towards a Flexible Vision System*, in **Robot Vision Book**, A. Pugh (ed.), IFS, UK, pp. 129-142, 1982.

REFEREED CONFERENCE PAPERS

1. Olivier Duchenne, Francis Bach, Inso Kweon, and Jean Ponce, *A Tensor-Based Algorithm for High-Order Graph Matching*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2009. Best Student Paper - Honorable Mention award.
2. Olivier Duchenne, Ivan Laptev, Josef Sivic, Francis Bach, and Jean Ponce, *Automatic Annotation of Human Actions in Video*, Proceedings of the IEEE International Conference on Computer Vision, 2009.
3. Yasutaka Furukawa and Jean Ponce, *Dense 3D Motion Capture for Human Faces*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2009.
4. Hui Kong, Jean-Yves Audibert, and Jean Ponce, *Vanishing Point Detection for Road Detection*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2009.
5. Julien Mairal, Francis Bach, Jean Ponce, and Guillermo Sapiro, *Online Dictionary Learning for Sparse Coding*, Proceedings of the International Conference on Machine Learning, 2009.
6. Julien Mairal, Francis Bach, Jean Ponce, Guillermo Sapiro, and Andrew Zisserman, *Non-local Sparse Models for Image Restoration*, Proceedings of the IEEE International Conference on Computer Vision, 2009.
7. Jean Ponce, *What is a camera?*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2009.

8. Julien Mairal, Francis Bach, Jean Ponce, Guillermo Sapiro, and Andrew Zisserman, *Supervised Dictionary Learning*, Proceedings of the Conference on Neural Information Processing Systems (NIPS), 2008.
9. Julien Mairal, Marius Leordeanu, Francis Bach, Martial Hebert, and Jean Ponce, *Discriminative Sparse Image Models for Class-Specific Edge Detection and Image Interpretation*, Proceedings of the European Conference on Computer Vision, 2008.
10. Olivier Duchenne, Jean-Yves Audibert, Jean Ponce, Florent Ségonne, and Renaud Keriven, *Segmentation by transduction*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2008.
11. Yasutaka Furukawa and Jean Ponce, *Accurate Camera Calibration from Multi-View Stereo and Bundle Adjustment*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2008.
12. Yasutaka Furukawa and Jean Ponce, *Dense 3D Motion Capture from Synchronized Video Streams*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2008.
13. Julien Mairal, Francis Bach, Jean Ponce, Guillermo Sapiro, and Andrew Zisserman, *Learning Discriminative Dictionaries for Local Image Analysis*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2008.
14. Yasutaka Furukawa and Jean Ponce, *Accurate, Dense, and Robust Multi-View Stereopsis*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2007.
15. Akash Kushal, Cordelia Schmid and Jean Ponce, *Flexible Object Models for Category-Level 3D Object Recognition*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, 2007.
16. Svetlana Lazebnik, Cordelia Schmid, and Jean Ponce, *Beyond Bags of Features: Spatial Pyramid Matching for Recognizing Natural Scene Categories*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, New York City, New York, 2006, vol. 2, pp. 2169-2178.
17. Kenton McHenry and Jean Ponce, *A Geodesic Active Contour Framework for Finding Glass*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, New York City, New York, 2006, vol. 1, pp. 1038-1044.
18. Yasutaka Furukawa and Jean Ponce, *Carved Visual Hulls for Image-Based Modeling*, Proceedings of the European Conference on Computer Vision, Graz, Austria, 2006, vol. 1, pp. 564-577.
19. Akash Kushal and Jean Ponce, *A Novel Approach to Modeling 3D Objects from Stereo Views and Recognizing them in Photographs*, Proceedings of the European Conference on Computer Vision, Graz, Austria, 2006, vol. 2, pp. 563-574.
20. Svetlana Lazebnik, Cordelia Schmid, and Jean Ponce, *A Maximum Entropy Framework for Part Based Texture and Object Recognition*, Proceedings of the 2005 International Conference on Computer Vision, Beijing, China, October 2005, vol. 1, pp. 832-838.
21. Jean Ponce, Kenton McHenry, Theo Papadopoulos, Monique Teillaud, and Bill Triggs, *On the Absolute Quadratic Complex and its Application to Autocalibration*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, June 2005, vol. 1, pp. 780-787.
22. Kenton McHenry, Jean Ponce, and David A. Forsyth, *Finding Glass*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, June 2005, vol. 2, pp. 973-979.
Svetlana Lazebnik, Cordelia Schmid, and Jean Ponce, *Semi-Local Affine Parts for Object Recognition*, Proceedings of the British Machine Vision Conference, September 2004, vol. 2, pp. 959-968.

23. Fred Rothganger, Svetlana Lazebnik, Cordelia Schmid, and Jean Ponce, *Segmenting, Modeling, and Matching Video Clips Containing Multiple Moving Objects*, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition, Washington, D.C., June 2004, vol. 2, pp. 914-921.
24. Yasutaka Furukawa, Amit Sethi, Jean Ponce, and David Kriegman, *Structure and Motion from Images of Smooth Textureless Objects*, Proceedings of the European Conference on Computer Vision, Prague, Czech Republic, May 2004, vol. 2, pp. 287-298.
25. Svetlana Lazebnik, Cordelia Schmid, and Jean Ponce, *Affine-Invariant Local Descriptors and Neighborhood Statistics for Texture Recognition*, Proceedings of the IEEE International Conference on Computer Vision, Nice, France, October 2003, pp. 649-655.
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