

# Vicent Caselles

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

68

papers

6,808

citations

29

h-index

69

g-index

69

ext. papers

7,847

ext. citations

3.1

avg. IF

5.6

L-index

#	Paper	IF	Citations
68	Qualitative behaviour for flux-saturated mechanisms: travelling waves, waiting time and smoothing effects. <i>Journal of the European Mathematical Society</i> , <b>2017</b> , 19, 441-472	1.8	12
67	Flux-saturated porous media equations and applications. <i>EMS Surveys in Mathematical Sciences</i> , <b>2015</b> , 2, 131-218	1.4	19
66	Multiscale Analysis for Images on Riemannian Manifolds. <i>SIAM Journal on Imaging Sciences</i> , <b>2014</b> , 7, 1108-1170	1.70	3
65	A Wavelet Perspective on Variational Perceptually-Inspired Color Enhancement. <i>International Journal of Computer Vision</i> , <b>2014</b> , 106, 153-171	10.6	32
64	Recovering Relative Depth from Low-Level Features Without Explicit T-junction Detection and Interpretation. <i>International Journal of Computer Vision</i> , <b>2013</b> , 104, 38-68	10.6	18
63	A Variational Model for Gradient-Based Video Editing. <i>International Journal of Computer Vision</i> , <b>2013</b> , 103, 127-162	10.6	5
62	A Contrario Selection of Optimal Partitions for Image Segmentation. <i>SIAM Journal on Imaging Sciences</i> , <b>2013</b> , 6, 1274-1317	1.9	10
61	On the Jump set of Solutions of the Total Variation Flow. <i>Rendiconti Del Seminario Matematico Dell'Universita Di Padova/Mathematical Journal of the University of Padova</i> , <b>2013</b> , 130, 155-168	0.3	8
60	High-Dimension Multilabel Problems: Convex or Nonconvex Relaxation?. <i>SIAM Journal on Imaging Sciences</i> , <b>2013</b> , 6, 2603-2639	1.9	8
59	NONLOCAL VARIATIONAL MODELS FOR INPAINTING AND INTERPOLATION. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2012</b> , 22, 1230003	3.5	5
58	An Analysis of Visual Adaptation and Contrast Perception for Tone Mapping. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2011</b> , 33, 2002-12	13.3	75
57	Regularity for solutions of the total variation denoising problem. <i>Revista Matematica Iberoamericana</i> , <b>2011</b> , 233-252	1.2	23
56	A Variational Framework for Exemplar-Based Image Inpainting. <i>International Journal of Computer Vision</i> , <b>2011</b> , 93, 319-347	10.6	135
55	An existence and uniqueness result for flux limited diffusion equations. <i>Discrete and Continuous Dynamical Systems</i> , <b>2011</b> , 31, 1151-1195	2	8
54	Temporally Consistent Gradient Domain Video Editing. <i>Lecture Notes in Computer Science</i> , <b>2011</b> , 59-73	0.9	3
53	Some Remarks on Uniqueness and Regularity of Cheeger Sets. <i>Rendiconti Del Seminario Matematico Dell'Universita Di Padova/Mathematical Journal of the University of Padova</i> , <b>2010</b> , 123, 191-201	0.3	19
52	A Narrow Band Method for the Convex Formulation of Discrete Multilabel Problems. <i>Multiscale Modeling and Simulation</i> , <b>2010</b> , 8, 2048-2078	1.8	4

51	An Introduction to Total Variation for Image Analysis. <i>Radon Series on Computational and Applied Mathematics</i> , <b>2010</b> ,			14
50	The Dirichlet problem associated to the relativistic heat equation. <i>Mathematische Annalen</i> , <b>2010</b> , 347, 135-199	1		22
49	Total variation and Cheeger sets in Gauss space. <i>Journal of Functional Analysis</i> , <b>2010</b> , 259, 1491-1516	1.4		15
48	Geometric Description of Images as Topographic Maps. <i>Lecture Notes in Mathematics</i> , <b>2010</b> ,	0.4		38
47	3D Edge Detection by Selection of Level Surface Patches. <i>Journal of Mathematical Imaging and Vision</i> , <b>2009</b> , 34, 1-16	1.6		16
46	Issues About Retinex Theory and Contrast Enhancement. <i>International Journal of Computer Vision</i> , <b>2009</b> , 83, 101-119	10.6		114
45	Uniqueness of the Cheeger set of a convex body. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , <b>2009</b> , 70, 32-44	1.3		43
44	The volume preserving crystalline mean curvature flow of convex sets in $\mathbb{R}^n$ . <i>Journal Des Mathematiques Pures Et Appliquees</i> , <b>2009</b> , 92, 499-527	1.7		17
43	Anisotropic Cheeger Sets and Applications. <i>SIAM Journal on Imaging Sciences</i> , <b>2009</b> , 2, 1211-1254	1.9		26
42	Irregular to Regular Sampling, Denoising, and Deconvolution. <i>Multiscale Modeling and Simulation</i> , <b>2009</b> , 7, 1574-1608	1.8		14
41	Exemplar-Based Interpolation of Sparsely Sampled Images. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 5899, 331-344	0.9		13
40	A Variational Framework for Non-local Image Inpainting. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 5899, 345-358	0.9		29
39	Constructing the Tree of Shapes of an Image by Fusion of the Trees of Connected Components of Upper and Lower Level Sets. <i>Positivity</i> , <b>2008</b> , 12, 55-73	0.6		18
38	Breast Nodule Ultrasound Segmentation Through Texture-Based Active Contours. <i>Mathematics in Industry</i> , <b>2008</b> , 858-862	0.2		1
37	A Contrast Invariant Approach to Motion Estimation: Validation and Application to Motion Estimation Improvement. <i>Mathematics in Industry</i> , <b>2008</b> , 863-867	0.2		1
36	Perceptual color correction through variational techniques. <i>IEEE Transactions on Image Processing</i> , <b>2007</b> , 16, 1058-72	8.7		104
35	Trends in Mathematical Imaging and Surface Processing. <i>Oberwolfach Reports</i> , <b>2007</b> , 139-194	0		
34	Diffusion Equations with Finite Speed of Propagation <b>2007</b> , 17-34			

33	Level Lines Selection with Variational Models for Segmentation and Encoding. <i>Journal of Mathematical Imaging and Vision</i> , <b>2007</b> , 27, 5-27	1.6	21
32	Texture-Oriented Anisotropic Filtering and Geodesic Active Contours in Breast Tumor Ultrasound Segmentation. <i>Journal of Mathematical Imaging and Vision</i> , <b>2007</b> , 28, 81-97	1.6	52
31	The Discontinuity Set of Solutions of the TV Denoising Problem and Some Extensions. <i>Multiscale Modeling and Simulation</i> , <b>2007</b> , 6, 879-894	1.8	85
30	Uniqueness of the Cheeger set of a convex body. <i>Pacific Journal of Mathematics</i> , <b>2007</b> , 232, 77-90	0.5	31
29	Crystalline Mean Curvature Flow of Convex Sets. <i>Archive for Rational Mechanics and Analysis</i> , <b>2006</b> , 179, 109-152	2.3	41
28	Finite Propagation Speed for Limited Flux Diffusion Equations. <i>Archive for Rational Mechanics and Analysis</i> , <b>2006</b> , 182, 269-297	2.3	56
27	Region Based Segmentation Using the Tree of Shapes <b>2006</b> ,		13
26	Restoration and Zoom of Irregularly Sampled, Blurred, and Noisy Images by Accurate Total Variation Minimization with Local Constraints. <i>Multiscale Modeling and Simulation</i> , <b>2006</b> , 5, 235-272	1.8	13
25	Anisotropic curvature-driven flow of convex sets. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , <b>2006</b> , 65, 1547-1577	1.3	30
24	A Variational Model for P+XS Image Fusion. <i>International Journal of Computer Vision</i> , <b>2006</b> , 69, 43-58	10.6	231
23	Visual Acuity in Day for Night. <i>International Journal of Computer Vision</i> , <b>2006</b> , 69, 109-117	10.6	9
22	Geometric Active Contours for Image Segmentation <b>2005</b> , 613-627		6
21	A Strongly Degenerate Quasilinear Equation: the Parabolic Case. <i>Archive for Rational Mechanics and Analysis</i> , <b>2005</b> , 176, 415-453	2.3	25
20	Evolution of characteristic functions of convex sets in the plane by the minimizing total variation flow. <i>Interfaces and Free Boundaries</i> , <b>2005</b> , 29-53	0.7	37
19	The Cauchy Problem for a Strongly Degenerate Quasilinear Equation. <i>Journal of the European Mathematical Society</i> , <b>2005</b> , 361-393	1.8	32
18	Explicit Solutions of the Eigenvalue Problem $\operatorname{div} \left( \frac{\operatorname{Du}}{ \operatorname{Du} } \right) = u$ in $\mathbb{R}^2$ . <i>SIAM Journal on Mathematical Analysis</i> , <b>2005</b> , 36, 1095-1129	1.7	35
17	Morse description and geometric encoding of digital elevation maps. <i>IEEE Transactions on Image Processing</i> , <b>2004</b> , 13, 1245-62	8.7	20
16	Morse Description and Morphological Encoding of Continuous Data. <i>Multiscale Modeling and Simulation</i> , <b>2004</b> , 2, 179-209	1.8	5

15	Parabolic Quasilinear Equations Minimizing Linear Growth Functionals <b>2004</b> ,		103
14	Disocclusion by Joint Interpolation of Vector Fields and Gray Levels. <i>Multiscale Modeling and Simulation</i> , <b>2003</b> , 2, 80-123	1.8	21
13	The tree of shapes of an image. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , <b>2003</b> , 9, 1-18	1	36
12	Geometry and Color in Natural Images. <i>Journal of Mathematical Imaging and Vision</i> , <b>2002</b> , 16, 89-105	1.6	39
11	Grain Filters. <i>Journal of Mathematical Imaging and Vision</i> , <b>2002</b> , 17, 249-270	1.6	34
10	A Parabolic Quasilinear Problem for Linear Growth Functionals. <i>Revista Matemática Iberoamericana</i> , <b>2002</b> , 135-185	1.2	13
9	Connected components of sets of finite perimeter and applications to image processing. <i>Journal of the European Mathematical Society</i> , <b>2001</b> , 3, 39-92	1.8	73
8	Diffusion of General Data on Non-Flat Manifolds via Harmonic Maps Theory: The Direction Diffusion Case. <i>International Journal of Computer Vision</i> , <b>2000</b> , 36, 149-161	10.6	132
7	Vector Median Filters, Inf-Sup Operations, and Coupled PDEs: Theoretical Connections. <i>Journal of Mathematical Imaging and Vision</i> , <b>2000</b> , 12, 109-119	1.6	31
6	Topographic Maps and Local Contrast Changes in Natural Images. <i>International Journal of Computer Vision</i> , <b>1999</b> , 33, 5-27	10.6	103
5	Geodesic Active Contours. <i>International Journal of Computer Vision</i> , <b>1997</b> , 22, 61-79	10.6	3221
4	Minimal surfaces: a geometric three dimensional segmentation approach. <i>Numerische Mathematik</i> , <b>1997</b> , 77, 423-451	2.2	75
3	Contrast Enhancement via Image Evolution Flows. <i>Graphical Models</i> , <b>1997</b> , 59, 407-416		21
2	Histogram Modification via Differential Equations. <i>Journal of Differential Equations</i> , <b>1997</b> , 135, 238-268	2.1	66
1	A geometric model for active contours in image processing. <i>Numerische Mathematik</i> , <b>1993</b> , 66, 1-31	2.2	1225