Radu Timofte

List of Publications by Year
in descending order

211 papers	17,425 citations	218677 26 h-index	138484 58 g-index
213 all docs	213 docs citations	213 times ranked	7194 citing authors

#	Article	IF	Citations
1	Normalizing Flow as a Flexible Fidelity Objective for Photo-Realistic Super-resolution. , 2022, , .		4
2	Using artificial intelligence to determine the influence of dental aesthetics on facial attractiveness in comparison to other facial modifications. European Journal of Orthodontics, 2022, 44, 445-451.	2.4	4
3	Video super-resolution based on deep learning: a comprehensive survey. Artificial Intelligence Review, 2022, 55, 5981-6035.	15.7	60
4	Adversarial feature distribution alignment for semi-supervised learning. Computer Vision and Image Understanding, 2021, 202, 103109.	4.7	6
5	Zero-Pair Image to Image Translation using Domain Conditional Normalization. , 2021, , .		0
6	DeepSEE: Deep Disentangled Semantic Explorative Extreme Super-Resolution. Lecture Notes in Computer Science, 2021, , 624-642.	1.3	4
7	A Weakly Supervised Convolutional Network for Change Segmentation and Classification. Lecture Notes in Computer Science, 2021, , 103-119.	1.3	2
8	Unsupervised Multimodal Video-to-Video Translation via Self-Supervised Learning. , 2021, , .		4
9	Learning for Video Compression With Recurrent Auto-Encoder and Recurrent Probability Model. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 388-401.	10.8	61
10	Editorial: Introduction to the Issue on Deep Learning for Image/Video Restoration and Compression. IEEE Journal on Selected Topics in Signal Processing, 2021, 15, 157-161.	10.8	4
11	Fast and Accurate Single-Image Depth Estimation on Mobile Devices, Mobile AI 2021 Challenge: Report. , 2021, , .		18
12	NTIRE 2021 Challenge on Quality Enhancement of Compressed Video: Dataset and Study. , 2021, , .		12
13	NTIRE 2021 Depth Guided Image Relighting Challenge. , 2021, , .		10
14	Shadow Removal with Paired and Unpaired Learning. , 2021, , .		12
15	Real-Time Video Super-Resolution on Smartphones with Deep Learning, Mobile AI 2021 Challenge: Report. , 2021, , .		27
16	Real-Time Quantized Image Super-Resolution on Mobile NPUs, Mobile AI 2021 Challenge: Report. , 2021, , .		43
17	NTIRE 2021 Challenge on Quality Enhancement of Compressed Video: Methods and Results. , 2021, , .		9
18	Fast Camera Image Denoising on Mobile GPUs with Deep Learning, Mobile AI 2021 Challenge: Report. , 2021, , .		15

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19	NTIRE 2021 NonHomogeneous Dehazing Challenge Report. , 2021, , .		20
20	NTIRE 2021 Learning the Super-Resolution Space Challenge. , 2021, , .		12
21	NTIRE 2021 Challenge on High Dynamic Range Imaging: Dataset, Methods and Results. , 2021, , .		20
22	NTIRE 2021 Challenge on Burst Super-Resolution: Methods and Results. , 2021, , .		10
23	Fast and Accurate Camera Scene Detection on Smartphones. , 2021, , .		2
24	Towards closing the gap in weakly supervised semantic segmentation with DCNNs: Combining local and global models. Computer Vision and Image Understanding, 2021, 208-209, 103209.	4.7	1
25	Single-Image super-resolution - When model adaptation matters. Pattern Recognition, 2021, 116, 107931.	8.1	15
26	Fast Few-Shot Classification by Few-Iteration Meta-Learning. , 2021, , .		4
27	MS-RANAS: Multi-Scale Resource-Aware Neural Architecture Search. , 2021, , .		0
28	Deep Learning for Visual Data Compression. , 2021, , .		4
29	Unsupervised Real-world Image Super Resolution via Domain-distance Aware Training. , 2021, , .		52
30	Deep Homography for Efficient Stereo Image Compression. , 2021, , .		19
31	DeFlow: Learning Complex Image Degradations from Unpaired Data with Conditional Flows. , 2021, , .		22
32	Deep Burst Super-Resolution. , 2021, , .		64
33	Learning Accurate Dense Correspondences and When to Trust Them. , 2021, , .		54
34	Flow-based Kernel Prior with Application to Blind Super-Resolution. , 2021, , .		72
35	The Heterogeneity Hypothesis: Finding Layer-Wise Differentiated Network Architectures. , 2021, , .		11
36	SMILE: Semantically-guided Multi-attribute Image and Layout Editing. , 2021, , .		1

#	Article	IF	Citations
37	SwinIR: Image Restoration Using Swin Transformer. , 2021, , .		1,069
38	Local Memory Attention for Fast Video Semantic Segmentation. , 2021, , .		13
39	Generalized Real-World Super-Resolution through Adversarial Robustness. , 2021, , .		5
40	Outdoor Plant Segmentation With Deep Learning for High-Throughput Field Phenotyping on a Diverse Wheat Dataset. Frontiers in Plant Science, 2021, 12, 774068.	3.6	20
41	Towards Efficient Graph Convolutional Networks for Point Cloud Handling. , 2021, , .		11
42	Mutual Affine Network for Spatially Variant Kernel Estimation in Blind Image Super-Resolution. , 2021, , .		45
43	Deep Reparametrization of Multi-Frame Super-Resolution and Denoising. , 2021, , .		28
44	Fourier Space Losses for Efficient Perceptual Image Super-Resolution. , 2021, , .		55
45	Towards Flexible Blind JPEG Artifacts Removal. , 2021, , .		43
46	Hierarchical Conditional Flow: A Unified Framework for Image Super-Resolution and Image Rescaling. , 2021, , .		41
47	Generating Masks from Boxes by Mining Spatio-Temporal Consistencies in Videos. , 2021, , .		4
48	Designing a Practical Degradation Model for Deep Blind Image Super-Resolution. , 2021, , .		191
49	NTIRE 2020 Challenge on Video Quality Mapping: Methods and Results. , 2020, , .		11
50	NTIRE 2020 Challenge on Real Image Denoising: Dataset, Methods and Results. , 2020, , .		34
51	Same Same but Different: Augmentation of Tiny Industrial Datasets using Generative Adversarial Networks. , 2020, , .		3
52	NTIRE 2020 Challenge on Perceptual Extreme Super-Resolution: Methods and Results. , 2020, , .		27
53	NTIRE 2020 Challenge on Real-World Image Super-Resolution: Methods and Results. , 2020, , .		84
54	NTIRE 2020 Challenge on NonHomogeneous Dehazing. , 2020, , .		41

#	Article	IF	Citations
55	NTIRE 2020 Challenge on Image and Video Deblurring. , 2020, , .		20
56	Rendering Natural Camera Bokeh Effect with Deep Learning. , 2020, , .		50
57	NH-HAZE: An Image Dehazing Benchmark with Non-Homogeneous Hazy and Haze-Free Images. , 2020, , .		168
58	NTIRE 2020 Challenge on Spectral Reconstruction from an RGB Image. , 2020, , .		64
59	NTIRE 2020 Challenge on Image Demoireing: Methods and Results. , 2020, , .		15
60	Replacing Mobile Camera ISP with a Single Deep Learning Model. , 2020, , .		111
61	Deep Unfolding Network for Image Super-Resolution. , 2020, , .		302
62	GLU-Net: Global-Local Universal Network for Dense Flow and Correspondences. , 2020, , .		88
63	Learning for Video Compression With Hierarchical Quality and Recurrent Enhancement. , 2020, , .		109
64	Probabilistic Regression for Visual Tracking. , 2020, , .		360
65	Group Sparsity: The Hinge Between Filter Pruning and Decomposition for Network Compression. , 2020, , .		114
66	Efficient Video Semantic Segmentation with Labels Propagation and Refinement. , 2020, , .		19
67	Adversarial Sampling for Active Learning. , 2020, , .		48
68	Learned Dynamic Guidance for Depth Image Reconstruction. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, 42, 2437-2452.	13.9	12
69	SESAME: Semantic Editing of Scenes by Adding, Manipulating or Erasing Objects. Lecture Notes in Computer Science, 2020, , 394-411.	1.3	35
70	SRFlow: Learning the Super-Resolution Space with Normalizing Flow. Lecture Notes in Computer Science, 2020, , 715-732.	1.3	115
71	Know Your Surroundings: Exploiting Scene Information for Object Tracking. Lecture Notes in Computer Science, 2020, , 205-221.	1.3	151
72	DHP: Differentiable Meta Pruning via HyperNetworks. Lecture Notes in Computer Science, 2020, , 608-624.	1.3	50

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73	AIM 2020 Challenge on Video Temporal Super-Resolution. Lecture Notes in Computer Science, 2020, , 23-40.	1.3	16
74	AIM 2020 Challenge on Image Extreme Inpainting. Lecture Notes in Computer Science, 2020, , 716-741.	1.3	14
75	AIM 2020 Challenge on Efficient Super-Resolution: Methods and Results. Lecture Notes in Computer Science, 2020, , 5-40.	1.3	33
76	AIM 2020 Challenge on Real Image Super-Resolution: Methods and Results. Lecture Notes in Computer Science, 2020, , 392-422.	1.3	7
77	Learned image and video compression with deep neural networks. , 2020, , .		7
78	Learning to Improve Image Compression Without Changing the Standard Decoder. Lecture Notes in Computer Science, 2020, , 200-216.	1.3	6
79	AIM 2020 Challenge on Learned Image Signal Processing Pipeline. Lecture Notes in Computer Science, 2020, , 152-170.	1.3	26
80	AIM 2020: Scene Relighting and Illumination Estimation Challenge. Lecture Notes in Computer Science, 2020, , 499-518.	1.3	27
81	AIM 2020 Challenge on Rendering Realistic Bokeh. Lecture Notes in Computer Science, 2020, , 213-228.	1.3	17
82	Flexible Example-Based Image Enhancement with Task Adaptive Global Feature Self-guided Network. Lecture Notes in Computer Science, 2020, , 343-358.	1.3	4
83	AIM 2020 Challenge on Video Extreme Super-Resolution: Methods and Results. Lecture Notes in Computer Science, 2020, , 57-81.	1.3	16
84	The Eighth Visual Object Tracking VOT2020 Challenge Results. Lecture Notes in Computer Science, 2020, , 547-601.	1.3	81
85	Learning What to Learn for Video Object Segmentation. Lecture Notes in Computer Science, 2020, , 777-794.	1.3	66
86	Efficiently Detecting Plausible Locations for Object Placement Using Masked Convolutions. Lecture Notes in Computer Science, 2020, , 252-266.	1.3	7
87	Self-Supervised 2D Image to 3D Shape Translation with Disentangled Representations. , 2020, , .		5
88	Applying artificial intelligence to assess the impact of orthognathic treatment on facial attractiveness and estimated age. International Journal of Oral and Maxillofacial Surgery, 2019, 48, 77-83.	1.5	92
89	Night-to-Day Image Translation for Retrieval-based Localization. , 2019, , .		123
90	Dense-Haze: A Benchmark for Image Dehazing with Dense-Haze and Haze-Free Images. , 2019, , .		165

#	Article	IF	Citations
91	Fast Perceptual Image Enhancement. Lecture Notes in Computer Science, 2019, , 260-275.	1.3	10
92	PIRM Challenge on Perceptual Image Enhancement on Smartphones: Report. Lecture Notes in Computer Science, 2019, , 315-333.	1.3	41
93	Facial attractiveness of cleft patients: a direct comparison between artificial-intelligence-based scoring and conventional rater groups. European Journal of Orthodontics, 2019, 41, 428-433.	2.4	36
94	CARN: Convolutional Anchored Regression Network for Fast and Accurate Single Image Super-Resolution. Lecture Notes in Computer Science, 2019, , 166-181.	1.3	18
95	PIRM2018 Challenge on Spectral Image Super-Resolution: Methods and Results. Lecture Notes in Computer Science, 2019, , 356-371.	1.3	5
96	AI Benchmark: Running Deep Neural Networks on Android Smartphones. Lecture Notes in Computer Science, 2019, , 288-314.	1.3	115
97	The 2018 PIRM Challenge on Perceptual Image Super-Resolution. Lecture Notes in Computer Science, 2019, , 334-355.	1.3	184
98	NTIRE 2019 Challenge on Video Super-Resolution: Methods and Results. , 2019, , .		20
99	NTIRE 2019 Challenge on Video Deblurring and Super-Resolution: Dataset and Study. , 2019, , .		219
100	Exemplar Guided Face Image Super-Resolution Without Facial Landmarks. , 2019, , .		39
101	NTIRE 2019 Challenge on Video Deblurring: Methods and Results. , 2019, , .		23
102	Towards Spectral Estimation from a Single RGB Image in the Wild. , 2019, , .		23
103	Hand Gesture Recognition based on SVM Classification. , 2019, , .		2
104	The Vid3oC and IntVID Datasets for Video Super Resolution and Quality Mapping. , 2019, , .		10
105	AIM 2019 Challenge on Image Extreme Super-Resolution: Methods and Results. , 2019, , .		19
106	Extremely Weak Supervised Image-to-Image Translation for Semantic Segmentation. , 2019, , .		6
107	AIM 2019 Challenge on Video Temporal Super-Resolution: Methods and Results. , 2019, , .		12
108	The Seventh Visual Object Tracking VOT2019 Challenge Results. , 2019, , .		216

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109	Learning Filter Basis for Convolutional Neural Network Compression. , 2019, , .		60
110	AIM 2019 Challenge on Constrained Super-Resolution: Methods and Results. , 2019, , .		35
111	AIM 2019 Challenge on Image Demoireing: Dataset and Study. , 2019, , .		19
112	NTIRE 2019 Challenge on Real Image Super-Resolution: Methods and Results. , 2019, , .		35
113	NTIRE 2019 Challenge on Real Image Denoising: Methods and Results. , 2019, , .		45
114	Frequency Separation for Real-World Super-Resolution. , 2019, , .		124
115	Efficient convolutional neural network for apparent age prediction. , 2019, , .		1
116	AIM 2019 Challenge on Bokeh Effect Synthesis: Methods and Results. , 2019, , .		19
117	Unsupervised Learning for Real-World Super-Resolution. , 2019, , .		129
118	AI Benchmark: All About Deep Learning on Smartphones in 2019. , 2019, , .		134
119	AIM 2019 Challenge on Video Extreme Super-Resolution: Methods and Results. , 2019, , .		7
120	NTIRE 2019 Challenge on Image Enhancement: Methods and Results. , 2019, , .		25
121	Self-Guided Network for Fast Image Denoising. , 2019, , .		105
122	Efficient Video Super-Resolution through Recurrent Latent Space Propagation. , 2019, , .		86
123	AIM 2019 Challenge on Image Demoireing: Methods and Results. , 2019, , .		13
124	AIM 2019 Challenge on RAW to RGB Mapping: Methods and Results. , 2019, , .		21
125	Fast Image Restoration With Multi-Bin Trainable Linear Units. , 2019, , .		13
126	DIV8K: DIVerse 8K Resolution Image Dataset. , 2019, , .		40

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127	AIM 2019 Challenge on Real-World Image Super-Resolution: Methods and Results. , 2019, , .		73
128	NTIRE 2019 Image Dehazing Challenge Report. , 2019, , .		22
129	Learning Discriminative Model Prediction for Tracking. , 2019, , .		697
130	NTIRE 2019 Challenge on Image Colorization: Report. , 2019, , .		12
131	Efficient Pupil Detection with a Convolutional Neural Network. , 2019, , .		2
132	3D Appearance Super-Resolution With Deep Learning. , 2019, , .		22
133	Practical Full Resolution Learned Lossless Image Compression. , 2019, , .		94
134	Generative Adversarial Networks for Extreme Learned Image Compression. , 2019, , .		259
135	SMIT: Stochastic Multi-Label Image-to-Image Translation. , 2019, , .		32
136	PIRM2018 Challenge on Spectral Image Super-Resolution: Dataset and Study. Lecture Notes in Computer Science, 2019, , 276-287.	1.3	11
137	A Brief Review of Image Denoising Algorithms and Beyond. The Springer Series on Challenges in Machine Learning, 2019, , 1-21.	10.4	30
138	Photo-Realistic and Robust Inpainting of Faces Using Refinement GANs. The Springer Series on Challenges in Machine Learning, 2019, , 129-144.	10.4	3
139	Convolutional Neural Networks Architectures for Facial Expression Recognition. , 2019, , .		6
140	Guest Editorial: Vision and Computational Photography and Graphics. Computer Vision and Image Understanding, 2018, 168, 1-2.	4.7	0
141	Deep Expectation of Real and Apparent Age from a Single Image Without Facial Landmarks. International Journal of Computer Vision, 2018, 126, 144-157.	15.6	502
142	O-HAZE: A Dehazing Benchmark with Real Hazy and Haze-Free Outdoor Images. , 2018, , .		393
143	Generative Adversarial Style Transfer Networks for Face Aging. , 2018, , .		43
144	ComboGAN: Unrestrained Scalability for Image Domain Translation. , 2018, , .		111

#	Article	IF	Citations
145	NTIRE 2018 Challenge on Single Image Super-Resolution: Methods and Results. , 2018, , .		166
146	Conditional Probability Models for Deep Image Compression. , 2018, , .		289
147	Logo Synthesis and Manipulation with Clustered Generative Adversarial Networks. , 2018, , .		29
148	NTIRE 2018 Challenge on Image Dehazing: Methods and Results. , 2018, , .		80
149	Integrating Local and Non-local Denoiser Priors for Image Restoration. , 2018, , .		20
150	NTIRE 2018 Challenge on Spectral Reconstruction from RGB Images. , 2018, , .		58
151	WESPE: Weakly Supervised Photo Enhancer for Digital Cameras. , 2018, , .		129
152	I-HAZE: A Dehazing Benchmark with Real Hazy and Haze-Free Indoor Images. Lecture Notes in Computer Science, 2018, , 620-631.	1.3	159
153	Leveraging observation uncertainty for robust visual tracking. Computer Vision and Image Understanding, 2017, 158, 62-71.	4.7	3
154	From Face Images and Attributes to Attributes. Lecture Notes in Computer Science, 2017, , 313-329.	1.3	7
155	NTIRE 2017 Challenge on Single Image Super-Resolution: Methods and Results. , 2017, , .		645
156	NTIRE 2017 Challenge on Single Image Super-Resolution: Dataset and Study. , 2017, , .		1,883
157	Apparent and Real Age Estimation in Still Images with Deep Residual Regressors on Appa-Real Database. , 2017, , .		46
158	$$k^2$$ k 2 -means for Fast and Accurate Large Scale Clustering. Lecture Notes in Computer Science, 2017, , 775-791.	1.3	2
159	In Defense of Shallow Learned Spectral Reconstruction from RGB Images. , 2017, , .		38
160	Early Adaptation of Deep Priors in Age Prediction from Face Images. , 2017, , .		1
161	Anchored Regression Networks Applied to Age Estimation and Super Resolution. , 2017, , .		41
162	DSLR-Quality Photos on Mobile Devices with Deep Convolutional Networks. , 2017, , .		345

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163	Failure Detection for Facial Landmark Detectors. Lecture Notes in Computer Science, 2017, , 361-376.	1.3	4
164	Generic 3D Convolutional Fusion for Image Restoration. Lecture Notes in Computer Science, 2017, , 159-176.	1.3	2
165	Some Like It Hot â€" Visual Guidance for Preference Prediction. , 2016, , .		52
166	Deep Features or Not: Temperature and Time Prediction in Outdoor Scenes. , 2016, , .		10
167	Structured Output SVM Prediction of Apparent Age, Gender and Smile from Deep Features. , 2016, , .		33
168	Anchored fusion for image restoration. , 2016, , .		8
169	Seven Ways to Improve Example-Based Single Image Super Resolution. , 2016, , .		303
170	Fast Optical Flow Using Dense Inverse Search. Lecture Notes in Computer Science, 2016, , 471-488.	1.3	169
171	PICASO: PIxel correspondences and SOft match selection for real-time tracking. Computer Vision and Image Understanding, 2016, 153, 151-162.	4.7	7
172	Regressor Basis Learning for anchored super-resolution. , 2016, , .		11
173	Leveraging single for multi-target tracking using a novel trajectory overlap affinity measure. , 2016, , .		7
174	Demosaicing Based on Directional Difference Regression and Efficient Regression Priors. IEEE Transactions on Image Processing, 2016, 25, 3862-3874.	9.8	34
175	Semantic super-resolution: When and where is it useful?. Computer Vision and Image Understanding, 2016, 142, 1-12.	4.7	26
176	Learned Collaborative Representations for Image Classification. , 2015, , .		9
177	DEX: Deep EXpectation of Apparent Age from a Single Image. , 2015, , .		397
178	Jointly Optimized Regressors for Image Superâ€resolution. Computer Graphics Forum, 2015, 34, 95-104.	3.0	120
179	DLDR: Deep Linear Discriminative Retrieval for Cultural Event Classification from a Single Image. , 2015, , .		6
180	Efficient regression priors for post-processing demosaiced images. , 2015, , .		5

#	Article	IF	Citations
181	Sparse Flow: Sparse Matching for Small to Large Displacement Optical Flow. , 2015, , .		36
182	Metric imitation by manifold transfer for efficient vision applications. , 2015, , .		17
183	Efficient regression priors for reducing image compression artifacts. , 2015, , .		19
184	Make my day - high-fidelity color denoising with Near-Infrared. , 2015, , .		13
185	An Elastic Deformation Field Model for Object Detection and Tracking. International Journal of Computer Vision, 2015, 111, 137-152.	15.6	12
186	Discovery of Sets of Mutually Orthogonal Vanishing Points in Videos. , 2015, , .		2
187	Iterative Nearest Neighbors. Pattern Recognition, 2015, 48, 60-72.	8.1	18
188	A+: Adjusted Anchored Neighborhood Regression for Fast Super-Resolution. Lecture Notes in Computer Science, 2015, , 111-126.	1.3	504
189	Using a Deformation Field Model for Localizing Faces and Facial Points under Weak Supervision. , 2014, , .		9
190	Adaptive and Weighted Collaborative Representations for image classification. Pattern Recognition Letters, 2014, 43, 127-135.	4.2	70
191	Multi-view traffic sign detection, recognition, and 3D localisation. Machine Vision and Applications, 2014, 25, 633-647.	2.7	222
192	Scale-invariant line descriptors for wide baseline matching. , 2014, , .		33
193	Traffic sign recognition &#x2014; How far are we from the solution?. , 2013, , .		215
194	Handling Occlusions with Franken-Classifiers. , 2013, , .		114
195	Anchored Neighborhood Regression for Fast Example-Based Super-Resolution. , 2013, , .		896
196	Naive Bayes Image Classification: Beyond Nearest Neighbors. Lecture Notes in Computer Science, 2013, , 689-703.	1.3	13
197	Automatic Stave Discovery for Musical Facsimiles. Lecture Notes in Computer Science, 2013, , 510-523.	1.3	3
198	Robust Scene Stitching in Large Scale Mobile Mapping. , 2013, , .		1

#	Article	IF	Citations
199	Efficient Loopy Belief Propagation Using the Four Color Theorem. Advances in Computer Vision and Pattern Recognition, 2013, , 313-339.	1.3	1
200	Non-parametric motion-priors for flow understanding. , 2012, , .		5
201	Iterative Nearest Neighbors for classification and dimensionality reduction. , 2012, , .		24
202	Pedestrian detection at 100 frames per second. , 2012, , .		399
203	A Training-free Classification Framework for Textures, Writers, and Materials. , 2012, , .		25
204	Stixels estimation without depth map computation. , 2011, , .		45
205	Multi-view manhole detection, recognition, and 3D localisation. , 2011, , .		22
206	COMBINING TRAFFIC SIGN DETECTION WITH 3D TRACKING TOWARDS BETTER DRIVER ASSISTANCE. Series in Computer Vision, 2011, , 425-446.	0.1	14
207	Sparse Representation Based Projections. , 2011, , .		39
208	Four Color Theorem for Fast Early Vision. Lecture Notes in Computer Science, 2011, , 411-424.	1.3	1
209	Integrating Object Detection with 3D Tracking Towards a Better Driver Assistance System. , 2010, , .		37
210	Hough Transform and 3DÂSURF for Robust ThreeÂDimensional Classification. Lecture Notes in Computer Science, 2010, , 589-602.	1.3	180
211	Multi-view traffic sign detection, recognition, and 3D localisation. , 2009, , .		83