Iasonas Kokkinos   Curriculum Vitae

Contact

Facebook Artificial Intelligence Research   Department of Computer Science
                                                   University College London
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Education

Habilitation à Diriger des Recherches (HDR), Computer Science, 2013
Université Paris-Est.
HDR Dissertation: "Learning and Optimization for Shape-based representations."

Ph.D., Electrical and Computer Engineering, 2006
National Technical University of Athens.
Ph.D. Dissertation: "Synergy between Image Segmentation and Object Recognition using Geometrical and Statistical Computer Vision Techniques."

M. Eng. Diploma, Electrical and Computer Engineering, 2001
National Technical University of Athens.
M. Eng. Thesis: "Modeling and Prediction of Speech Signals using Chaotic Time-Series Analysis Techniques."

Appointments

10/2016 - present	Lecturer	UCL, Dept. of Computer Science
12/2016 - present	Research Scientist	Facebook AI Research
10/2014 - 9/2016	Associate Professor	ECP, Dept. of Applied Mathematics
9/2008 - 9/2014	Assistant Professor	ECP, Dept. of Applied Mathematics
9/2008 - 9/2016	Affiliate Researcher	INRIA-Saclay, Galen Group
6/2006 - 8/2008	Postdoctoral Researcher	UCLA, Dept. of Statistics
11/2001- 6/2006	Graduate Research Assistant	NTUA, School of ECE
3/2002 - 7/2002	Visiting Student	INRIA-Sophia Antipolis, Odyssée Group

Curriculum Development

Introduction to Supervised Learning (2016-)

Master level course, 10 lectures - 30 teaching hours, attended by 120 students.
The course provides an introduction to Machine Learning and focuses on discriminatively trained models including Linear Regression, Logistic Regression, Adaboost, Support Vector Machines, Neural Networks and Deep Learning.

Introduction to Deep Learning (2014-2016) Master Level course, 8 lectures - 24 teaching hours, attended by 100-120 students

The course covers the principles of learning algorithms for deep, multi-layered classifier architectures (Deep Networks). We address both the Unsupervised and Discriminative

Training of Deep Convolutional Networks, Parameter Estimation in Graphical Models using Maximum Entropy, Sampling Algorithms, as well as deep architectures adapted to Computer Vision tasks, such as Object Detection.

Machine Learning for Computer Vision (2008-2016)

Master level course, 8 lectures - 24 teaching hours, attended by 60-70 students.
The course covers discriminative (Logistic Regression, Adaboost, Support Vector Machines, Multiple Instance Learning) and generative models (Mixture Models and Expectation-Maximization, Linear Models, Hidden Markov Models, Markov Random Fields) for vision, with an emphasis on structured models.

Introduction to Signal Processing (2009-2015)

7th semester course, 11 lectures - 22 teaching hours, attended by 35-45 students.
The course covers standard concepts from signals and systems (Frequency-domain analysis of Signals and Systems, Modulation and Gabor filters, Sampling, the Discrete-Time Fourier Trasform, the Z-transform, the Fast Fourier Transform) and elements of random signals (Autoregressive-Moving Average Processes, Wiener and Kalman filtering).

Introduction to Computer Vision (2009-2013)

8th semester course, 11 lectures - 22 teaching hours, attended by 20-30 students.
The course covers techniques for image analysis (Filterbanks, Scale-Space and Partial Differential Equations), energy minimization (Calclulus of Variations and Curve Evolution, Markov Random Fields), and category modeling (Active Appearance Models, Deformable Part Models/Graphical Models, Bag-of-Words models) with applications in denoising, image segmentation, motion estimation, object detection and tracking.

PhD Students

Supervised

Haithem Boussaid, École Centrale Paris (2010-2014)
Co-advised with Nikos Paragios.
Topic: Learning deformable models for medical image analysis

Siddhartha Chandra, École Centrale Paris (2014-)
Co-advised with Pawan Kumar.
Topic: Efficient learning and optimization for 3D visual data.

Riza Alp Guler, École Centrale Paris (2015-)
Topic: Learning-based models for surface analysis.

Stefan Kinauer, École Centrale Paris (2014-)
Topic: Surface-based representations for high-level vision.

Stavros Tsogkas, École Centrale Paris (2011-2015)
Topic: Shape-based optimization for object category detection.

Zbigniew Wojna, University College London (2016-)
Co-advised with Sebastian Riedel.
Topic: Advancing Deep Learning Techniques for Machine Vision.

External

Pierre-Andre Savalle, École Centrale Paris (2014)
Advisors: Gilles Fay and Nicolas Vayatis.
Topic: Deep Learning for Object Detection.

Olivier Teboul, École Centrale Paris (2008-2011)
Advisor: Nikos Paragios.
Topic: Reinforcement learning-based parsing of building facades with shape grammars.

Eduard Trulls, Universitad Polytecnica de Catalunia (2012-2015)
Advisors: Francesc Moreno and Alberto Sanfeliu.
Topic: Dense segmentation-aware descriptors for matching and recognition.

Michalis Raptis, University of California at Los Angeles (2009-2011)
Advisor: Stefano Soatto.
Topic: Mid-level video models for action recognition and localization.

Master and Intern Student Supervision

Samed Atouati, École Centrale Paris (2015)
Learning Equivariant Descriptors.

Aman Bindal, École Centrale Paris (2009)
Topic: Real-time jingle detection in video streams.

Siddhartha Chandra, École Centrale Paris (2011)
Topic: Descriptor matching for RGB-D data.

Grigorios Chrysos, École Centrale Paris (2014)
Topic: Object Detection with RGB-D data.

Yann Giret, École Centrale Paris (2015)
Topic: Optimization techniques for object localization.

Adam Hartley École Centrale Paris (2015)
Topic: Segmentation-aware filtering in deep learning.

Ishan Misra, École Centrale Paris (2012)
Topic: Groupwise shape-from-shading.

Stavros Tsogkas, École Centrale Paris (2011)
Topic: Learning symmetry detection.

Ramakrishna Vedantam, École Centrale Paris (2014)
Topic: Loopy Part Models for Detection.

PhD Thesis Committees

Anastasios Roussos, National Technical University of Athens (2010)
Topic: Nonlinear Diffusion in Computer Vision and Statistical Shape Models, with Applications in Image Analysis of Articulators of Voiced and Signed Speech.

Olivier Teboul, Ecole Centrale Paris (2011)
Topic: Shape Grammar Parsing: Application to Image-based Modeling.

Nikolaos Dimitriou, Aristotle University of Thessaloniki (2014)
Topic: Video Segmentation using Point Trajectories.

Mateusz Kozinski, Ecole des Ponts ParisTech (2015)
Topic: Segmentation of Facade Images with Shape Priors (thesis reviewer).

Varun Jampani, Max Planck Institute (2017)
Topic: Learning Inference Models for Computer Vision (thesis reviewer).

Raghudeep Gadde, Ecole des Ponts ParisTech (2017)
Topic: Semantic Segmentation of Highly Structured and Weakly Structured Images.

Research Grants

FP7 H2020 Project I-SUPPORT (2015-2018)
ICT-Supported bath robots
Joint research project with ROBOTNIK (Spain), SSSA (Italy), Bethenien (Germany), NTUA (Greece)
Our goal is to use 3D human pose estimation in a service robotics system aimed at assisting the elderly in bathing activitie.
Funding: 250K Euros for INRIA, 3.300K Euros total.

FP7 ICT-9 Project RECONFIG (2013-2016)
Cognitive, Decentralized Coordination of Heterogeneous Multi-Robot Systems via Reconfigurable Task Planning
Joint research project with KTH (Sweden), U. Aalto (Finland), NTUA (Greece)
Our goal is to use 3D object understanding and localization as a medium for multi-agent coordination and collaboration.
Funding: 400K Euros for ECP, 2.300K Euros total.

FP7 ICT-9 Project MOBOT (2013-2016)
Intelligent Active MObility Assistance RoBOT integrating Multimodal Sensory Processing, Proactive Autonomy and Adaptive Interaction.
Joint research project with TU Munich, U. Heidelberg (Germany), Accrea (Poland), NTUA-ICCS, ILSP (Greece)
Our goal is to equip robotic walking assistants with 3D pose estimation and action recognition capabilities to enable the proactive assistance of elderly users with walking disabilities.
Funding: 300K Euros for INRIA, 3.100K Euros total.

ANR-JCJC HiCoRe (2010-2014)
HIerarchical COmpositional REpresentation for computer vision.
Joung Researcher Award of the French National Research Foundation
Our goal is to develop computational mechanisms for inference and learning in hierarchical, shape-based object representations. Funding: 180K Euros for ECP

Equipment Grant from NVIDIA Corp., 2014
Two Nvidia Tesla K-40 Graphics cards (12K Euros) for research in Deep Learning.

Academic Service

Associate Editor
Image and Video Computing Journal (2011-2016)
Computer Vision and Image Understanding (2015-2016)

Guest Editor
Computer Vision and Image Understanding, Special Issue on Deep Learning in Computer Vision, 2016.

Computer Vision and Image Understanding, Special Issue on Generative Models in Computer Vision, 2014.

Area Chair
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2018.
International Conference on Computer Vision (ICCV), 2017.
British Machine Vision Conference (BMVC), 2017
European Conference on Computer Vision (ECCV), 2016.
Asian Conference on Computer Vision (ACCV), 2016.
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2016.
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2015.
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2012.

Program Chair
IEEE Workshop on Perceptual Organization in Computer Vision (POCV), 2012.

Workshop Chair
European Signal Processing Conference (EUSIPCO), 2017.

Tutorial Organizer
From Statistical Signal Processing to Probabilistic Deep Learning, ICCV 2015.
SPIL- Search and Planning for Inference and Learning, CVPR 2015.
BASIS- BAses for Surface and Image Analysis, CVPR 2014.

Journal Reviewer
International Journal of Computer Vision (2009-).
IEEE Transactions on Pattern Analysis and Machine Intelligence (2006-).
IEEE Transactions on Image Processing (2006-).
IEEE Transactions on Systems, Man and Cybernetics, B (2011).
IEEE Transactions on Neural Networks (2010).
Computer Vision and Image Understanding (2008-).
Image and Video Computing Journal (2010).
Computer Speech and Language (2009).
EURASIP Journal of Image and Video Processing (2012).
Machine Vision and Applications (2013).

Program Committee
Int'l. Conf. on Computer Vision (ICCV) 2007, 2009, 2011, 2013, 2015.
IEEE Conf. on Computer Vision and Pattern Recognition (CVPR) 2009, 2010, 2011, 2013, 2014,2016.
European Conf. on Computer Vision (ECCV) 2010, 2014.
Neural Information Processing Systems (NIPS), 2014, 2015.
Int'l. Conference on Learning Representations (ICLR), 2016, 2017
Int'l. Conf. on Artificial Intelligence and Statistics (AISTATS) 2012, 2014, 2015.
Asian Conf. on Computer Vision (ACCV) 2009, 2010, 2012, 2014.
Int'l. Conf. on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR) 2007, 2009, 2011, 2013, 2015.
Int'l. Workshop on Vision, Modeling and Visualization, 2013.
ACCV Workshop on Detection and Tracking in Challenging Environments, 2012.
Int'l. Workshop on Stochastic Image Grammars 2009, 2011.
IEEE Workshop on Perceptual Organization in Computer Vision (POCV), 2010, 2014.

Int'l Symposium on Visual Computing, 2009, 2010, 2011.
Indian Conference on Vision Graphics and Image Processing (ICVGIP), 2008, 2010.

Grant Reviewer
European Union, ERC awards, 2010.
Swiss National Science Foundation, 2013.
French National Research Agency (ANR), 2014

Distinctions and Awards

Best Reviewer award, IEEE Conference on Computer Vision and Pattern Recognition, 2013.

Best Reviewer award, International Conference on Computer Vision, 2009.

Bodossaki Foundation Scholarship as a graduate student.

Obtained in 4 years the 5-year NTUA M. Eng. Degree, ranking in the top 2%.

Paris Kanellakis award for highest ranking student in Computer Science major.

National scholarship foundation awards as an undergraduate.

Software Releases

Dual-Tree Branch-and-Bound for deformable part models.
`http://vision.mas.ecp.fr/Personnel/iasonas/dpms.html`
Fractional Programming Grouping.
`http://vision.mas.ecp.fr/Personnel/iasonas/contours.html`
Dense Scale-Invariant Descriptors for images and surfaces (with M. Bronstein).
`http://vision.mas.ecp.fr/Personnel/iasonas/descriptors.html`
Learning-based symmetry detection, code and benchmark (S. Tsogkas).
`http://www.centrale-ponts.fr/personnel/tsogkas/code.html`
Mid-level representations for action recognition, code and benchmark (M. Raptis).
`http://vision.ucla.edu/~raptis/action_parts.html`
Facade Parsing with Reinforcement Learning , code and benchmark (O. Teboul et. al.).
`http://vision.mas.ecp.fr/Personnel/teboul/grapesPage/index.php`
Modulation Features for Texture Analysis (with G. Evangelopoulos).
`http://cvsp.cs.ntua.gr/software/texture/`
Scale-Invariant Edges and Ridges.
`http://vision.mas.ecp.fr/Personnel/iasonas/sketch.html`

Personal

Date of Birth: 8th January 1980.
Languages: Greek, English, French, German.

Presentations and Academic Visits

September 2017	Signal Processing Meets Deep Learning Summer School
October 2016	Local features workshop (ECCV), Keynote
September 2016	Qualcomm-UvA Deep Vision Seminar
Jun 2016	Perceptual Organization in Computer Vision Workshop (CVPR)
May 2016	Astronomical Data Analysis Summer School, Keynote
May 2016	Facebook Artificial Intelligence Research (FAIR) Paris
May 2016	ETH
March 2016	Oxford University
March 2016	Univerity College London
March 2016	Center for Machine Perception, Prague
February 2016	Simon Fraser University
June 2015	University of California at Los Angeles
February 2015	Imperial College
March 2015	Xerox Research Center Europe
February 2015	Boston University
September 2014	Imagenet workshop
June 2014	TTI-Chicago
March 2014	KTH University
February 2014	Dagstuhl Seminar
November 2013	University of Oulu
July 2013	UCLA, IPAM summer school on computer vision
June 2013	Stony Brook University
April 2013	USI Lugano, visiting faculty (with Prof. M. Bronstein)
April 2013	Zuse Institute Berlin, Graphics Seminar
July 2012	JHU Summer School on Human Language Technology
June 2012	Carnegie Mellon University
June 2012	École Normale Superieure/Willow Group
June 2012	National Technical University of Athens
July 2011	ETH, Visual Computing Lunch
July 2011	USI Lugano, visiting faculty (with Prof. M. Bronstein)
June 2011	CVPR workshop on Symmetry Detection from Real World Images
January 2011	Oxford University, Visual Geometry Group
June 2010	UCLA, Center for Image and Vision Sciences
Aprin 2009	National Technical University of Athens
September 2008	UCLA, Image Processing Seminar
June 2008	UC Irvine, Artificial Intelligence Seminar
April 2008	Berkeley, Computer Vision Group
April 2008	Caltech, Computational Vision Lab
March 2008	Rutgers University, Dept. of Computer Science
March 2008	University of Pennsylvania, GRASP Laboratory
February 2008	Johns Hopkins University, Center for Imaging Science
February 2008	Stony Brook University, Image Analysis Lab
June 2007	Lotus Hill Institute
June 2003	INRIA Sophia-Antipolis, Odyssée Group

Publications

Journal articles, Book Chapters

1 L-C. Chen, G. Papandreou, I. Kokkinos, K. Murphy and A. L. Yuille: *DeepLab: Semantic Image Segmentation with Deep Convolutional Nets, Atrous Convolution, and Fully Connected CRFs.* IEEE Trans. on Pattern Analysis and Machine Intelligence, Accepted for publication, 2017

2 M. Cimpoi, S. Maji, I. Kokkinos, A. Vedaldi, *"Deep Filter Banks for Texture Recognition, Description, and Segmentation"* International Journal of Computer Vision (IJCV), 2016

3 E. Trulls, I. Kokkinos, A. Sanfeliu and F. Moreno, *"Dense Segmentation-Aware Descriptors"* In *Dense Image Correspondences for Computer Vision*, Ed.s C. Liu and T. Hassner, Springer, 2015

4 I. Kokkinos *"Accelerating Deformable Part Models with Branch-and-Bound"*, In *Perspectives in Shape Analysis - Dagstuhl Seminar on New Perspectives in Shape Analysis*, Ed.s M. Breu, A. Bruckstein, P. Maragos and St. Wuhrer, Springer, 2015

5 O. Teboul, I. Kokkinos, S. Loic, P. Katsourakis and N. Paragios, *"Parsing Facades with Shape Grammars and Reinforcement Learning."*. IEEE Trans. on Pattern Analysis and Machine Intelligence, Nov. 2012, IEEE computer Society Digital Library.

6 I. Kokkinos and A. Yuille, *"Inference and Learning with Hierarchical Shape Models."*, International Journal of Computer Vision (IJCV), Vol. 92(2), pp. 201-225, 2011.

7 I. Kokkinos and P. Maragos, *"Synergy Between Image Segmentation and Object Recognition Using the Expectation Maximization Algorithm."*, IEEE Trans. on Pattern Analysis and Machine Intelligence, Vol. 31(8), pp. 1486-1501, 2009.

8 I. Kokkinos, G. Evangelopoulos and P. Maragos, *"Texture Analysis and Segmentation Using Modulation Features, Generative Models and Weighted Curve Evolution."*, IEEE Trans. on Pattern Analysis and Machine Intelligence, Vol. 31(1), pp. 142-157, 2009.

9 I. Kokkinos, R. Deriche, O. Faugeras and P. Maragos, *"Computational Analysis and Learning for a Biologically Motivated Model of Boundary Detection."*, Neurocomputing, Vol. 71(10-12), pp. 1798-1812, 2008.

10 I. Kokkinos and P. Maragos, *"Nonlinear Speech Analysis Using Models for Chaotic Systems."*, IEEE Trans. on Speech and Audio Processing, Vol. 13(6), pp. 1098-1109, 2005.

Double-blind, peer-reviewed conference articles (acceptance rate 20-30%)

11 S. Chandra, N. Usunier I. Kokkinos,"Dense and Low-Rank Gaussian CRFs Using Deep Embeddings", Proc. Int.l Conf. on Computer Vision (ICCV), 2017.

12 A. Harley, K. Derpanis, I. Kokkinos,"Segmentation-Aware Convolutional Networks Using Local Attention Masks", Proc. Int.l Conf. on Computer Vision (ICCV), 2017.

13 I. Kokkinos,"UberNet: A 'Universal' CNN for the joint treatment of Low-, Mid-, and High-Level Vision Problems", Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2017.

14 A. Guler, G. Trigeorgis, E. Antontakos, P. Snape, S. Zafeiriou and I. Kokkinos "ḊenseReg: Fully Convolutional Dense Shape Regression In-the-Wild", Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2017.

15 G. Trigeorgis, E. Antontakos, P. Snape, I. Kokkinos and S. Zafeiriou "Dense Face Normal Estimation in the Wild", Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2017.

16 S. Chandra and I. Kokkinos *"Fast, Exact and Multi-Scale Inference for Semantic Image Segmentation with Deep Gaussian CRFs"*, European Conference on Computer Vision (ECCV), 2016.

17 I. Kokkinos, *"Pushing the Boundaries of Boundary Detection using Deep Learning"*, Proc. Int.l Conf. on Learning Representations (ICLR), 2016.

18 E. Simo-Serra, E. Trulls, L. Ferraz, I. Kokkinos, P. Fua, F. Moreno-Noguer, *"Deep Convolutional Feature Point Descriptors"* Proc. Int.l Conf. on Computer Vision (ICCV), 2015.

19 G. Papandreou, I. Kokkinos and P. A. Savalle *"Modeling Local and Global Deformations in Deep Learning: Epitomic Convolution, Multiple Instance Learning, and Sliding Window Detection"*, Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2015.

20 L.-C. Chen, G. Papandreou, I. Kokkinos, K. Murphy and A. Yuille *"Semantic Image Segmentation with Deep Convolutional Nets and Fully Connected CRFs"* Proc. Int.l Conf. on Learning Representations (ICLR) 2015.

21 H. Boussaid and I. Kokkinos *"Fast and Exact: ADMM-Based Discriminative Shape Segmentation with Loopy Part Models"*, Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2014.

22 E. Trulls, S. Tsogkas, I. Kokkinos, A. Sanfeliu and F. Moreno, *"Segmentation-Aware Deformable Part Models"* Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2014.

23 M. Cimpol, S. Maji, I. Kokkinos, S. Mohammad, and A. Vedaldi *"Describing Textures in the Wild"* Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2014.

24 A. Vedaldi, S. Mahendran, S. Tsogkas, S. Maji, R. Girshick, J. Kannala, E. Rahtu, I. Kokkinos, M. Blaschko, N. Saphra and S. Mohammad *"Understanding Objects in Detail with Fine-grained Attributes"*, Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2014.

25 I. Kokkinos, *"Shufflets: Shared Mid-level Parts for Fast Multi-Category Detection"* Proc. Int.l Conf. on Computer Vision (ICCV), 2013.

26 E. Trulls, I. Kokkinos, A. Sanfeliu and F. Moreno, *"Dense Segmentation-Aware Descriptors"* In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2013.

27 S. Tsogkas and I. Kokkinos, *"Learning-based Symmetry Detection in Natural Images"* In Proc. European Conf. on Computer Vision (ECCV), 2012.

28 I. Kokkinos, M. Bronstein, R. Littman and A. Bronstein *"Intrinsic Shape Context Descriptors for Deformable Shapes"* In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2012.

29 M. Raptis, I. Kokkinos, S. Soatto *"Discovering Discriminative Action Parts from Mid-Level Video Representations"* In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2012.

30 I. Kokkinos, *"Rapid Deformable Object Detection using Dual Tree Branch and Bound"* In Proc. Neural Information Processing Systems (NIPS), 2011.

31 O. Teboul, I. Kokkinos, L. Simon, P. Koutsourakis, and N. Paragios, *"Shape Grammar Parsing via Reinforcement Learning"* In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2011.

32 I. Kokkinos, *"Boundary Detection using F-measure, Filter- and Feature Boost."*, In Proc. European Conference in Computer Vision (ECCV), 2010.

33 I. Kokkinos, *"Highly Accurate Boundary Detection and Grouping."*, In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2010.

34 M. Bronstein and I. Kokkinos, *"Scale-invariant heat kernel signatures for non-rigid shape recognition."*, In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2010.

35 I. Kokkinos and A. Yuille, *"HOP: Hierarchical Object Parsing."*, In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2009.

36 I. Kokkinos and A. Yuille, *"Scale Invariance without Scale Selection."*, In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2008.

37 I. Kokkinos and A. Yuille, *"Unsupervised Learning of Object Deformation Models."*, In Proc. IEEE Int'l. Conf. on Computer Vision (ICCV), 2007.

38 I. Kokkinos, P. Maragos and A. Yuille, *"Bottom-Up and Top-Down Object Detection Using Primal Sketch Features and Graphical Models."*, In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2006.

39 I. Kokkinos and P. Maragos, *"An Expectation Maximization Approach to the Synergy Between Image Segmentation and Object Categorization."*, In Proc. IEEE Int'l. Conf. on Computer Vision (ICCV), 2005.

40 I. Kokkinos, R. Deriche, P. Maragos and O. Faugeras, *"A Biologically Motivated and Computationally Tractable Model of Low- and Mid- Level Vision Tasks."*, In Proc. European Conference on Computer Vision (ECCV), 2004.

Peer-reviewed conference and workshop articles

41 A. Guler, N. Kardaris, S. Chandra, V. Pitsikalis, C. Werner, K. Hauer, C. S. Tzafestas, P. Maragos, I. Kokkinos: *"Human Joint Angle Estimation and Gesture Recognition for Assistive Robotic Vision."*, European Conference on Computer Vision Workshops (2) 2016.

42 M. Shakeri, S. Tsogkas, E. Ferrante, S. Lippe, S. Kadouri, N. Paragios and I. Kokkinos, *"Coregistration and Cosegmentation with Weak Segmentation Priors"*, International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2016.

43 S. Tsogkas, M. Shakeri, E. Ferrante, S. Lippe, S. Kadoury, N. Paragios, I. Kokkinos, *Subcortical Brain Structure Segmentation Using F-CNNs*, International Symposium on Biomedical Imaging (ISBI), 2016.

44 A. W. Harley, K. G. Derpanis, I. Kokkinos *Learning Dense Convolutional Embeddings for Semantic Segmentation*, Proc. Int.l Conf. on Learning Representations (ICLR), workshop track, 2016.

45 S. Chandra, G. Chrysos and I. Kokkinos, *"Surface Based Object Detection in RGBD Images"*, Proc. British Machine Vision Conference (BMVC), 2015.

46 P.-A. Savalle, S. Tsogkas, G. Papandreou and I. Kokkinos, *" Deformable Part Models with CNN Features"*, Proc. Workshop on Parts and Attributes, in conjunction with ECCV, 2014.

47 H. Boussaid, I. Kokkinos, and N. Paragios *" Discriminative Learning of Deformable Contour Models"*, International Symposium on Biomedical Imaging (ISBI), 2014.

48 Evita-Stavroula Fotinea, Eleni Efthimiou, Athanasia-Lida Dimou, Theodore Goulas, Panayotis Karioris, Angelika Peer, Petros Maragos, Costas S. Tzafestas, Iasonas Kokkinos, Klaus Hauer, Katja Mombaur, Yiannis Koumpouros and Bartlomiej Stanczyk: *"Data Acquisition towards Defining a Multimodal Interaction Model for Human - Assistive Robot Communication."* HCI (6) 2014.

49 Xanthi S. Papageorgiou, Costas S. Tzafestas, Petros Maragos, Georgios Pavlakos, Georgia Chalvatzaki, George Moustris, Iasonas Kokkinos, Angelika Peer, Bartlomiej Stanczyk, Evita-Stavroula Fotinea, Eleni Efthimiou: *"Advances in Intelligent Mobility Assistance Robot Integrating Multimodal Sensory Processing."* HCI (6) 2014.

50 H. Boussaid, I. Kokkinos, and N. Paragios *"Rapid Mode Estimation for 3D MRI Brain Tumor Segmentation "*, Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR), 2013.

51 I. Kokkinos, *"Bounding Part Scores for Rapid Detection with Deformable Part Models "*, Proc. Workshop on Parts and Attributes, in conjunction with ECCV, 2012.

52 H. Boussaid, S.Kadoury, I. Kokkinos, J.-Y. Lazennec, G. Zheng, N. Paragios, *"3D Model-based Reconstruction of the Proximal Femur from Low-dose Biplanar X-Ray Images"*, Proc. British Machine Vision Conference (BMVC), 2011.

53 A. M. Bronstein, M. M. Bronstein, B. Bustos, U. Castellani, M. Crisani, B. Falcidieno, L. J. Guibas, I. Kokkinos, V. Murino, M. Ovsjanikov, G. Patan, I. Sipiran, M. Spagnuolo, J. Sun, *"SHREC 2010: robust feature detection and description benchmark."*, Proc. EUROGRAPHICS Workshop on 3D Object Retrieval (3DOR), 2010.

54 A. M. Bronstein, M. M. Bronstein, U. Castellani, B. Falcidieno, A. Fusiello, A. Godil, L. J. Guibas, I. Kokkinos, Z. Lian, M. Ovsjanikov, G. Patan, M. Spagnuolo, R. Toldo, *"SHREC 2010: robust large-scale shape retrieval benchmark."*, Proc. EUROGRAPHICS Workshop on 3D Object Retrieval (3DOR), 2010.

55 I. Kokkinos and A. Yuille, *"Inference and Learning with Hierarchical Compositional Models."*, In Proc. 1st Int'l. Workshop on Stochastic Image Grammars, in conjunction with CVPR 2009.

56 I. Kokkinos and P. Maragos, *"A Detection-Theoretic Approach to Texture and Edge Discrimination."*, In Proc. 4th Int'l. Workshop on Texture Analysis and Synthesis, in conjunction with ICCV 2005.

57 G. Evangelopoulos, I. Kokkinos and P. Maragos, *"Advances in Variational Image Segmentation using AM-FM models: Regularized Demodulation and Probabilistic Cue Integration."*, In Proc. 3rd IEEE Variational and Level-Set Methods (VLSM) Workshop, in conjunction with ICCV 2005.

58 I. Kokkinos, G. Evangelopoulos and P. Maragos, *"Advances in Texture Analysis: Energy Dominant Component & Multiple Hypothesis Testing."*, In Proc. IEEE Int'l. Conf. on Image Processing (ICIP), 2004.

59 I. Kokkinos, G. Evangelopoulos and P. Maragos, *"Modulation-Feature based Textured Image Segmenation Using Curve Evolution."*, In Proc. IEEE Int'l. Conf. on Image Processing (ICIP), 2004.

60 V. Pitsikalis, I. Kokkinos and P. Maragos, *"Nonlinear Analysis of Speech Signals: Generalized Dimensions and Lyapunov Exponents."*, In Proc. European Conference on Speech Communication and Technology (EUROSPEECH), 2003.

61 P. Maragos, A. Dimakis and I. Kokkinos. *"Some Advances in Nonlinear Speech Modeling Using Modulations Fractals and Chaos."* In Proc. IEEE Int'l. Conf. on Digital Signal Processing, 2002.

Preprints and Technical Reports

62 S. Tsogkas, I. Kokkinos, G. Papandreou, A. Vedaldi *Deep Learning for Semantic Part Segmentation with High-Level Guidance*, Arxiv 2015.

63 I. Kokkinos, M. Bronstein and A. Yuille, *Dense Scale-Invariant Descriptors for Images and Surfaces*, INRIA Research Report RR-7914, 2012.

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