Edgar Simo-Serra

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EDUCATION

2011 — 2015	PhD in Automatic Control, Robotics and Vision (*Cum Laude*) BarcelonaTech (UPC), **Barcelona**, **Spain** Advisors : Francesc Moreno-Noguer and Carme Torras Genís
2005 — 2011	Superior Industrial Engineering BarcelonaTech (UPC), **Barcelona**, **Spain** Advisors : Francesc Moreno-Noguer and Alba Perez-Gracia

EXPERIENCE

APRIL 2017 — CURRENT	Junior Researcher Waseda Research Institute for Science and Engineering , Tokyo, Japan
AUG 2015 — MARCH 2017	Junior Researcher Waseda University Faculty of Science and Engineering , Tokyo, Japan
MAR 2015 — JULY 2014	Visiting Scholar Nakamura Lab, University of Tokyo , Tokyo, Japan
APRIL 2014 — AUG 2014	Visiting Scholar University of Toronto , Toronto, Canada
JUNE 2013 — AUG 2013	Visiting Scholar Toyota Institute of Technology at Chicago (TTIC) , Chicago, USA
SEP 2011 — JUL 2015	PhD Student (FPI Grant) Institute of Industrial Robotics, Barcelona, Spain
MAY 2010 — SEP 2010	Contract Worker Google, Google Summer of Code 2010
MAY 2009 — SEP 2009	Contract Worker Google, Google Summer of Code 2009
OCT 2008 — DEC 2008	Scholarship Catalan Government (Generalitat), Barcelona, Spain

MAY 2008 — SEP 2008	Contract Worker
	Google, Google Summer of Code 2008

PROFESSIONAL ACTIVITIES

2017	Session Co-Chair for the IAPR International Conference on Machine Vision Applications (MVA) 2017
2017	Area Chair for the IAPR International Conference on Machine Vision Applications (MVA) 2017
ジャーナルの査読	IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)
	IEEE Computer Vision and Image Understanding (CVIU)
	IEEE Transactions on Image Processing
	IEEE Transactions on Affective Computing
	Sensors
学会の査読	ACM Special Interest Group on Computer Graphics and Interactive Techniques (SIGGRAPH)
	ACM Special Interest Group on Computer Graphics and Interactive Techniques in Asia (SIGGRAPH Asia)
	IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
	European Conference on Computer Vision (ECCV)
	International Conference on Computer Vision (ICCV)
	Conference on Neural Information Processing Systems (NIPS)
	Asian Conference on Computer Vision (ACCV)
	IEEE International Conference on Robotics and Automation (ICRA)
	IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
	IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS)
	International Conference of the Catalan Association for Artificial Intelligence (CCIA)

RESEARCH GRANTS AND PROJECTS

Dec. 2016—Mar. 2018	ACT-I (Information and Future), *Interactive AI-Aided Content Creation using Deep Unsupervised Learning (5 million Yen)*
Dec. 2012—July 2015	Spanish Ministry of Economy, Industry and Competitiveness, Grants for the Formation of the Research Staff (FPI), *Perception and Action in Robotics Problems with Large State Spaces*
Mar. 2015—July 2015	Spanish Ministry of Economy, Industry and Competitiveness, *The University of Tokyo*
April 2014—Aug. 2015	Spanish Ministry of Economy, Industry and Competitiveness, *University of Toronto*
June 2013—Aug. 2013	Spanish Ministry of Economy, Industry and Competitiveness, *Toyota Technological Institute at Chicago*

Awards

2016   CULTURE Award at the Japanese Ministry of Economy's Innovative Technologies 2016

2016   Catalan Association for Artificial Intelligence Best PhD Thesis on Artificial Intelligence 2016

2016   Selected for the Japanese Ministry of Economy's Innovative Technologies 2016

2015   Catalan Association for Artificial Intelligence prize to the best diffusion work on artificial intelligence 2015

2015   Best paper award at the International Conference on Machine Vision Applications (MVA) 2015

Languages

English   Native (mother tongue)
Spanish   Native
Catalan   Native
Japanese   JLPT N1

Invited Talks

Sep. 2017.   *Leveraging the Web for Fashion and Image Understanding*, Workshop on E-Commerce and Entertainment Computing

July 2017.   ディープラーニングによる画像生成, IAIP 定例研究会 ビッグデータ・画像認識

June 2017   *Frontiers of Image Processing and Computer Graphics by Deep Learning*, Computer Graphics International 2017

June 2017   ディープラーニングによる画像生成, 第 42 回 光学シンポジウム

Jan. 2017   *Towards Mastering the Image: Deep Learning for Computer Graphics*, 画像と人工知能の最前線

Dec. 2016   全層畳込みニューラルネットワークによる画像生成, 第 4 回 MSR Intern Alumni 交流会

Nov. 2016   ディープラーニングによる画像生成の最前線（応用）, 3rd Fall Meeting of Federation of Imaging Societies

Oct. 2016   *Understanding Human-Centric Images: From Geometry to Fashion*, 19th International Conference of the Catalan Association for Artificial Intelligence

Aug. 2016   *Fashion Style in 128 Floats: Joint Ranking and Classification using Weak Data for Feature Extraction*, MIRU2016 Meeting on Image Recognition and Understanding

July 2016   *Learning to Simplify Sketches*, DCAJ Presentation Session "Industrial Application of Content Technology in Japan"

June 2016   *Learning to Simplify: Fully Convolutional Networks for Rough Sketch Cleanup*, Visual Computing Symposium

Seminars

Oct. 2016   *Fusing Global and Local Image Priors for Automatic Image Colorization*, Institute of Industrial Robotics, Barcelona

June 2015   *A Brief Introduction to Deep Networks*, Nakamura Lab , University of Tokyo

April 2015   *Understanding Human-Centric Images through Machine Learning*, Nakamura Lab , University of Tokyo

Jan. 2015	*Understanding Humans from Still Images: From Geometry to Fashion*, Ishikawa Lab , Waseda University
Jan. 2015	*Towards Understanding Human-Centric Images*, OMRON Corporation , Kyoto
June 2014	*3D Human Pose Estimation from Single Images*, Adaptive Systems Laboratory, Waterloo University
April 2014	*Perception of Nonrigid Shapes under Uncertainty*, Institute of Industrial Robotics, Barcelona
March 2014	*3D Human Pose Estimation from Single Images*, Nakamura Lab , University of Tokyo
Mar. 2014	*3D Human Pose Estimation from Single Images*, Sato Laboratory , University of Tokyo
June 2013	*A Joint Model for 2D and 3D Pose Estimation from a Single Image*, Institute of Industrial Robotics, Barcelona
May 2013	*Kinematic Synthesis of Multi-fingered Robotic Hands for Finite and Infinitesimal Tasks*, Institute of Industrial Robotics, Barcelona
May 2011	*Kinematic Model of the Hand using Computer Vision*, Institute of Industrial Robotics, Barcelona

Journal Publications

[1]   Satoshi Iizuka, Edgar Simo-Serra, Hiroshi Ishikawa.
Globally and Locally Consistent Image Completion.
ACM Transactions on Graphics (**SIGGRAPH**), 2017.

[2]   Edgar Simo-Serra, Carme Torras, Francesc Moreno-Noguer.
3D Human Pose Tracking Priors using Geodesic Mixture Models.
International Journal of Computer Vision (**IJCV**) 122(2):388-408, 2016.

[3]   Edgar Simo-Serra*, Satoshi Iizuka*, Kazuma Sasaki, Hiroshi Ishikawa (* equal contribution).
Learning to Clean Sketches: Fully Convolutional Neural Networks for Rough Sketch Simplification.
ACM Transactions on Graphics (**SIGGRAPH**), 2016.

[4]   Satoshi Iizuka*, Edgar Simo-Serra*, Hiroshi Ishikawa (* equal contribution).
Let there be Color!: Joint End-to-end Learning of Global and Local Image Priors for Automatic Image Colorization with Simultaneous Classification.
ACM Transactions on Graphics (**SIGGRAPH**), 2016.

[5]   Edgar Simo-Serra, Carme Torras and Francesc Moreno-Noguer.
DaLI: Deformation and Light Invariant Descriptor.
International Journal of Computer Vision (**IJCV**) 115(2):135-154, 2015.

[6]   Edgar Simo-Serra, Alba Perez-Gracia.
Kinematic Synthesis of Tree Topologies.
Mechanism and Machine Theory (**MAMT**) 72:94-113, 2014.

Conference Publications

[1] Antonio Rubio, Yu LongLong, Edgar Simo-Serra, Francesc Moreno-Noguer.
     Multi-Modal Joint Embedding for Fashion Product Retrieval.
     International Conference on Image Processing (**ICIP**), 2017.

[2] Kazuma Sasaki, Satoshi Iizuka, Edgar Simo-Serra, Hiroshi Ishikawa.
     Joint Gap Detection and Inpainting of Line Drawings.
     Conference in Computer Vision and Pattern Recognition (**CVPR**), 2017.

[3] Ryutaro Kitagawa, Yoshihiko Mochizuki, Satoshi Iizuka, Edgar Simo-Serra, Hiroshi
     Ishikawa.
     Banknote Portrait Detection Using Convolutional Neural Network.
     International Conference on Machine Vision Applications (**MVA**), 2017.

[4] Antonio Rubio, Yu LongLong, Edgar Simo-Serra, Francesc Moreno-Noguer.
     Multi-Modal Fashion Product Retrieval.
     The 6th Workshop on Vision and Languagea (**VL**), 2017.

[5] Edgar Simo-Serra, Hiroshi Ishikawa.
     *Fashion Style in 128 Floats: Joint Ranking and Classification using Weak Data for Feature
     Extraction.*
     Conference in Computer Vision and Pattern Recognition (**CVPR**), 2016.

[6] Ariadna Quattoni, Arnau Ramisa, Pranava Swaroop Madhyastha, Edgar Simo-Serra,
     Francesc Moreno-Noguer.
     Structured Prediction with Output Embeddings for Semantic Image Annotation.
     Conference of the North American Chapter of the Association for Computational Linguis-
     tics: Human Language Technologies (**NAACL-HLT**), 2016.

[7] Antonio Rubio, Longlong Yu, Edgar Simo-Serra, Francesc Moreno-Noguer.
     Boundary-Aware Superpixel Segmentation.
     International Conference on Pattern Recognition (**ICPR**), 2016.

[8] Kosuke Fukano, Yoshihiko Mochizuki, Edgar Simo-Serra, Satoshi Iizuka, Akihiro Sugi-
     moto, Hiroshi Ishikawa.
     Room Reconstruction from a Single Spherical Image by Higher-order Energy Minimization.
     International Conference on Pattern Recognition (**ICPR**), 2016.

[9] Tomohiro Ishii, Edgar Simo-Serra, Satoshi Iizuka, Yoshihiko Mochizuki, Akihiro Sugimoto,
     Hiroshi Ishikawa, Ryosuke Nakamura.
     Detection by Classification of Buildings in Multispectral Satellite Imagery.
     International Conference on Pattern Recognition (**ICPR**), 2016.

[10] Edgar Simo-Serra*, Eduard Trulls*, Luis Ferraz, Iasonas Kokkinos, Pascual Fua, Francesc
     Moreno-Noguer (* equal contribution).
     Discriminative Learning of Deep Convolutional Feature Point Descriptors.
     International Conference on Computer Vision (**ICCV**), 2015.

[11] Edgar Simo-Serra, Sanja Fidler, Francesc Moreno-Noguer, Raquel Urtasun.
     Neuroaesthetics in Fashion: Modeling the Perception of Fashionability.
     Conference in Computer Vision and Pattern Recognition (**CVPR**), 2015.

[12] Antonio Rubio, Michael Villamizar, Luis Ferraz, Adrian Peñate-Sánchez, Arnau Ramisa,
     Edgar Simo-Serra, Alberto Sanfeliu, Francesc Moreno-Noguer.
     Efficient Pose Estimation for Complex 3D Models.
     International Conference in Robotics and Automation (**ICRA**), 2015.

[13] Edgar Simo-Serra, Carme Torras, Francesc Moreno-Noguer.
Lie Algebra-Based Kinematic Prior for 3D Human Pose Tracking.
International Conference on Machine Vision Applications (**MVA**), 2015.

[14] Edgar Simo-Serra, Sanja Fidler, Francesc Moreno-Noguer, Raquel Urtasun.
A High Performance CRF Model for Clothes Parsing.
Asian Conference on Computer Vision (**ACCV**), 2014.

[15] Edgar Simo-Serra, Carme Torras, Francesc Moreno-Noguer.
Geodesic Finite Mixture Models.
British Machine Vision Conference (**BMVC**), 2014.

[16] Edgar Simo-Serra, Ariadna Quattoni, Carme Torras, Francesc Moreno-Noguer.
A Joint Model for 2D and 3D Pose Estimation from a Single Image.
Conference in Computer Vision and Pattern Recognition (**CVPR**), 2013.

[17] Edgar Simo-Serra, Alba Perez-Gracia, Hyosong Moon, Nina Robson.
Design of Multi-fingered Robotic Hands for Finite and Infinitesimal Tasks using Kinematic Synthesis.
Advances in Robot Kinematics (**ARK**), 2012.

[18] Edgar Simo-Serra, Arnau Ramisa, Guillem Alenyà, Carme Torras, Francesc Moreno-Noguer.
Single Image 3D Human Pose Estimation from Noisy Observations.
Conference in Computer Vision and Pattern Recognition (**CVPR**), 2012.

[19] Edgar Simo-Serra, Francesc Moreno-Noguer, Alba Perez-Gracia.
Design of Non-Anthropomorphic Robotic Hands for Anthropomorphic Tasks.
ASME International Design Engineering Technical Conferences (**IDETC**), 2011.