Personal information

First name/ Surname **Shida Beigpour**

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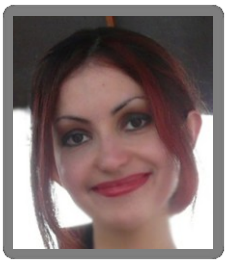
Birth year 1985



Research fields **Illuminant and Reflectance, Color Image Understanding, Time-of-Flight imaging, Terahertz Imaging and Analysis**

Current position Senior Research Scientist at the Chair for Computer Graphics and Multimedia Systems of the University of Siegen, Germany.

Academic background

2013 Ph.D. with honors in Computer Vision, Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Bellaterra, Spain. [Thesis titled: "*Illumination and object reflectance modeling*", Physics-based reflectance modeling and computational color constancy for complex scenes lit by multiple illuminants.] – The title has been granted on March 19th

2009 Artificial Intelligence and Computer Vision Master of Science (in English), Universitat Autònoma de Barcelona (1st. in Spain) [1] , Bellaterra, Spain. [Projects included: Object Segmentation and Classification, Graphical Models, Bag of Words, Object Tracking and Particle Filters, 3D Reconstruction, Neural Networks, Semantic Web and Ontology, Heuristic Search, and Multi-agent Systems] (GPA of 9.25/10 - 4th out of 28 students).

2007 Software Engineering Bachelor of Science, Shahid Beheshti University (among top 10 in Iran) [2], Tehran, Iran. [Projects included: Motion Capture using Optical Flow and Shape Matching, Database System, Semantic Web Ontology, Compliers and Programming Languages, Network and Internet Engineering, Software Design] (GPA of 8.26/10 – Second best student among 80).

2003 High school Diploma of Mathematics and Physics, Tehran, Iran. (GPA of 9.17/10)

Research interests

Computer Vision Computer Vision and Pattern Recognition, Computational Photography, Dataset Acquisition and Benchmarking, Inverse Rendering and Intrinsic Image Characterization, Computational Color Constancy, Color Vision, Multispectral Imaging and Analysis, RGB-D and 3D Scene Analysis, Multimodal Imaging and Sensor Fusion, Psychophysics.

Computer Graphics Reflectance and illumination, Global Lighting, 3D Scene Analysis, Realistic Automatic Photo-editing.

Languages

	Understanding				Speaking				Writing	
European level (*)	Listening		Reading		Spoken interaction		Spoken production			
Persian (Farsi)	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user
English	C2	Proficient user	C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user
Spanish (Castellano)	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	B2	Independent user
German (Deutsch)	B1	Independent user	B1	Independent user	B1	Independent user	A2	Basic user	A2	Basic user

(*) Common European Framework of Reference for Languages

1- By the 2012 QS World University Rankings published in http://www.topuniversities.com/
2- According to the iranian Ministry of Science, Research and Technology .

Scientific Publications

2015 S. Beigpour, A. Kolb, and S. Kunz, **A Comprehensive Multi-Illuminant Dataset for Benchmarking of Intrinsic Image Algorithms**, Proceedings of IEEE International Conference on Computer Vision (ICCV), December 2015.

2015 S. Beigpour and M. Pederson, **Color Play: Gamification for Color Vision Study**, In AIC 2015, Color and Image, Midterm Meeting of the Association Internationale de la Couleur: Proceedings, May 2015 (Chosen for oral presentation).

2014 S. Beigpour, C. Riess, J. van de Weijer, and E. Angelopoulou, **Multi-illuminant estimation using Conditional Random Field**, *IEEE Transactions on Image Processing (TIP)*, Vol. 23, No. 1, pp.83-96, January 2014.

2014 F. S. Khan, S. Beigpour, J. van de Weijer, and M. Felsberg, **Painting-91: a large scale database for computational painting categorization**, in Machine Vision and Applications, Vol. 25, No. 6, pp.1385-1397, June 2014

2014 I. M. Ziko, S. Beigpour, J. Y. Hardeberg, **Design and Creation of a Multi-Illuminant Scene Image Dataset**, in International Conference on Image and Signal Processing (ICISP), July 2014, (Chosen for oral presentation).

2013 S. Beigpour, M. Serra, J. van de Weijer, R. Benavente, M. Vanrell, O. Penacchio, and D. Samaras, **Intrinsic Image Evaluation On Synthetic Complex Scenes**, *Proceedings of IEEE International Conference on Image Processing (ICIP)*, September 2013.

2013 S. Beigpour, **Illumination and object reflectance modeling**, *Ph.D dissertation from Computer Vision Center / Technical School of Engineering,* Universidad Autonoma de Barcelona, [Under the supervision of J. van de Weijer], March 19th 2013.

2011 S. Beigpour and J. van de Weijer, **Object Recoloring based on Intrinsic Image Estimation**, *Proceedings of IEEE International Conference on Computer Vision (ICCV)*, November 2011.

2011 J. van de Weijer and S. Beigpour, **The Dichromatic Reflection Model: Future Research Directions and Applications**, *invited paper at Int. Conf. on Computer Vision, Imaging and Computer Graphics Theory and Applications (VISIGRAPP)*, Portugal, 2011.

2011 M. Bleier, C. Riess, S. Beigpour, E. Eibenberger, E. Angelopoulou, T. Troeger, and A. Kaup. **"Color Constancy and Non-Uniform Illumination: Can Existing Algorithms Work?" ,** *ICCV Workshop on Color and Photometry in Computer Vision (ICCV Workshop)*, November 2011.

2010 S. Beigpour and J. van de Weijer, **Photo-Realistic Color Alteration For Architecture And Design**, *Proceedings of Colour Research for European Advanced Technology Employment (CREATE) Conference*, Jun 2010, (Chosen for oral presentation).

2009 S. Beigpour and J. van de Weijer, **Object Color Alteration**, *4th CVC workshop on the progress of research and development (CVCR&D)*, October 2009.

2009 S. Beigpour**, Physics-based Reflectance Estimation Applied To Recoloring**, *Master thesis from Computer Vision Center / Technical School of Engineering*, Universidad Autonoma de Barcelona, [Under the supervision of J. van de Weijer], July 2009.

Research experience

2014-present Senior Research Scientist at the Chair for Computer Graphics and Multimedia Systems of the University of Siegen, Germany.

2013-2014 Associated Professor/Researcher at the Norwegian Colour and Visual Computing Laboratory, Gjovik University College (Høgskolen i Gjøvik), Norway.

2008-2013 Color Vision PhD student / research assistance, Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Bellaterra, Spain. [Subjects: Eye-tracking, Multi-colored illuminant detection and correction using Object Reflectance and Graphical Models, Color Constancy, Object Recoloring for automatic photo editing, and acquisition of a Multi-illuminant image dataset]

2011 Research stay (April-July), Pattern Recognition Lab of the Friedrich-Alexander University Erlangen-Nuremberg, under the supervision of Elli Angelopoulou Ph.D. [Subjects: Non-uniform Illumination and Color Constancy methods, Automatic White Balance, and Graphical Models.]

2008-2009 Computer Vision and Artificial intelligence (graduate level), Technical School of Engineering (ETSE), Universitat Autònoma de Barcelona, Bellaterra, Spain. [Subjects included: Segmentation, Classification, Learning and SVN, Bag of Words, Object tracking and particle filters, 3D reconstruction, Neural Networks, Graphical Models, PASCAL challenge, Heuristic Search, and Fuzzy Logic]

2006-2007 Vision-based Motion Capture Systems, Vision Lab, School of Mathematics, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran. [Subject: Motion transfer using Shape Matching and Optical flow.]

2006 RoboCup, Urban Search and Rescue Simulation (USARSim), SBCe_Saviour team, Electrical and Computer Engineering Department, Shahid Beheshti University, Tehran, Iran. [Subjects: Image Processing; Human detection using infra-red camera.]

2005 RoboCup, Rescue Simulation, SBCe_Saviour team, Electrical and Computer Engineering Department, Shahid Beheshti University, Tehran, Iran.

Datasets

2015 **Multi-Illuminant Intrinsic Image Dataset:** A real-capture intrinsic image dataset with accurate pixel-wise ground-truth for intrinsic image estimation benchmarking in complex multi-illuminant scenes.

2014 **Colourlab Image Database: Multi-Illuminant scene (CID:MI):** Dataset for multi-illuminant color constancy benchmarking with accurate pixel-wise Groundtruth.

2014 **Multi-Illuminant Multi-Object (MIMO):** A real-world dataset for multi-illuminant color constancy benchmarking with accurate pixel-wise Groundtruth.

2013 **Synthetic intrinsic image dataset:** Computer graphics generated dataset for intrinsic estimation benchmarking in complex scenes.

Grants

2012-2013 Research grant (October 2012 – March 2013), Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Bellaterra, Spain.

2008-2012 Training Research Staff (PIF- Personal de Investigación en Formación), Technical School of Engineering (ETSE), Universitat Autònoma de Barcelona, Bellaterra, Spain.

2011 Short length stay outside Catalunya for PIF grant holders, Subject of the grant: 3 month (April to July) stay at the Pattern Recognition Lab of the Friedrich-Alexander University Erlangen-Nuremberg, Germany.

Awards

2007 Second best student (among 80) of the Electrical and Computer Engineering Department, Shahid Beheshti University, Tehran, Iran.

Teaching experience

2013 Web design (HTML5 and CSS3), at the Faculty of Computer Science and Media Technology in Gjovik University College (Høgskolen i Gjøvik), Gjovik, Norway.

2009-2012 Artificial Intelligence, at the Technical School of Engineering (ETSE), Universitat Autònoma de Barcelona, Bellaterra, Spain. [Subjects: Color Naming; Heuristic Search.]

2008-2009 Artificial Intelligence II (Advanced), at the Technical School of Engineering (ETSE), Universitat Autònoma de Barcelona, Bellaterra, Spain. [Subjects: Bayesian network; Classification and SVN.]

2003-2007 Computer programming in Tehran, Iran. [Subjects: Algorithms, Pascal, and C++]

2003-2007 Multimedia design in Tehran, Iran. [Subjects: Adobe Flash, Photoshop, and Illustrator]

Highlighted Talks

2015 Color Play: Gamification for Color Vision Study, Oral presentation at the AIC 2015, Color and Image, Midterm Meeting of the Association Internationale de la Couleur: May 2015.

2014 Design and Creation of a Multi-Illuminant Scene Image Dataset, Oral presentation at the International Conference on Image and Signal Processing (ICISP), June 2014.

2013 Illumination and object reflectance modeling, NICTA, Canberra Research Laboratory, Australia, September 2013.

2012 Object Recoloring based on Intrinsic Image Estimation, 7th CVC workshop on the progress of research and development (CVCR&D), October 2012.

2010 Photo-Realistic Color Alteration For Architecture And Design, Colour Research For European Advanced Technology Employment (CREATE) Conference - June 2010, Gjøvik, Norway.

2007 Vision Based Approaches for Motion Capture, Institute for Studies in Theoretical Physics and Mathematics (IPM) – July 2007, Tehran, Iran.

2006 Motion Capture Systems, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran.

2006 Languages and Tools for Web Ontology Construction, Shahid Beheshti University, Tehran, Iran.

2006 Face Detection, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran.

Computer skills

Operating systems	Mac OS X, Windows, and Linux
Programming	Matlab, C#, C/C++, Pascal/Delphi, SQL, Javascript, HTML5, CSS3, Python, and XML
Graphics and Multimedia Design	Adobe Flash (Action Script 2.0), Adobe Photoshop, Adobe Illustrator, 3DsMax, and Blender.
Others	Latex, Microsoft Office (PowerPoint, Word, and Excel), and Protégé (ontology editor).

Personal Interests and Hobbies

Photography, Architecture, Animation, Graphics, Languages and Literature, Hiking, Music, Traveling, and Painting.