Shida Beigpour

Resumé

Lehrstuhl für Computergrafik
Hölderlinstraße 3
57076 Siegen, Germany
✉ *shida.beigpour@uni-siegen.de*

INFO

Born September 1985

Homepage `http://www.cg.informatik.uni-siegen.de/en/shida`

Linkedin `http://www.linkedin.com/in/shidabeigpour`

CURRENT STATUS

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

Topics Computer Vision, Inverse Rendering, Color Vision, Time-of-Flight imaging, Computational Photography, Multimodal Imaging and Sensor Fusion

ACADEMIC BACKGROUND

2013 **PhD. with honors**[1] **in Computer Vision**, *Computer Vision Center (CVC), Universitat Autònoma de Barcelona (1st in Spain)*[2], Bellaterra, Spain, Thesis titled: "Illumination and object reflectance modeling" - Certificate was awarded on June 21st.

2009 **Master of Science in Artificial Intelligence and Computer Vision**, *Universitat Autònoma de Barcelona (1st in Spain)*[2], 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 *90.8%* - Ranked 4th out of 28 students.

2007 **Bachelor of Science in Software Engineering**, *Shahid Beheshti University (among top 10 in Iran)*[3], 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 *82.65%* – Second best in Computer Engineering graduate year of 2007 (among 80 students)

2003 **Pre-university Certificate in Mathematics**, *Tehran, Iran*, (GPA *96%*).

2002 **High school Diploma of Mathematics and Physics**, *Tehran, Iran*, (GPA *91.7%*).

RESEARCH INTERESTS

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 and Perception.

Graphics Reflectance and illumination, Global Lighting, Lightfield, Photo-realism.

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1. Apto Cum Laude that is the maximum mark awarded for a doctoral degree in Spain (R.D. 99/2011)
2. By the 2012 QS World University Rankings published in topuniversities.com
3. According to the Iranian Ministry of Science, Research and Technology .

LANGUAGES

Self-assessment European level CEFR (C2 maximum evaluation)

		Comprehension		Speaking		Writing
		Listening	Reading	Interaction	Production	
Persian	(Farsi)	*C2*	*C2*	*C2*	*C2*	*C2*
English		*C2*	*C2*	*C2*	*C2*	*C1*
Spanish	(Castellano)	*C1*	*C1*	*C1*	*C1*	*B2*
German	(Deutsch)	*B1*	*B1*	*A2*	*A2*	*A2*

AWARDS AND FELLOWSHIPS

- **Lise Meitner Award Fellowship**: Max Planck Postdoctoral Fellowship for Excellent Women in Computer Science. Two-year fellowship grant (July 2016 - July 2018)
- **Second best student** (among 80) in the Computer Engineering graduate year of 2007, Shahid Beheshti University, Tehran, Iran.

EXPERIENCE

Research

2014 – 2016 **Senior Research Scientist**, *Chair for Computer Graphics and Multimedia Systems*, University of Siegen, Germany.
[Topics: Inverse Rendering, ToF, 3D imaging, Sensor Fusion, Hyperspectral/Multimodal imaging and data analysis]

2013 – 2014 **Associate Professor**, *Norwegian Colour and Visual Computing Laboratory*, Faculty of Computer Science and Media Technology, Gjovik University College (Høgskolen i Gjøvik - now Norwegian University of Science and Technology), Norway.
[Topics: Color Vision, Psychophysics, Gamification for Scientific Study]

2008 – 2013 **PhD student / research assistance**, *Computer Vision Center (CVC)*, Technical School of Engineering (ETSE), Universitat Autònoma de Barcelona, Bellaterra, Spain.
Under the supervision of Dr. Joost van de Weijer. [Topics included: Eye-tracking, Multi-colored Illuminant Detection and Correction using Object Reflectance and Graphical Models, Color Constancy, Dataset Acquisition and Benchmarking, and Physics-based Object Recoloring.]

2011 **Visiting Researcher**, *Pattern Recognition Lab* , Friedrich-Alexander University Erlangen-Nuremberg,Germany, Under the supervision of Dr. Elli Angelopoulou.
[Topics: Non-uniform Illumination and Color Constancy methods, Automatic White Balance, and Graphical Models.]

Teaching

2013 – 2014 **Web Design**, *Faculty of Computer Science and Media Technology*, Gjovik University College (Høgskolen i Gjøvik - now Norwegian University of Science and Technology), Gjovik, Norway.
[Topics: HTML5, CSS3, basics of JavaScript]

2008 – 2013 **Artificial Intelligence**, *Technical School of Engineering (ETSE)*, Universitat Autònoma de Barcelona, Bellaterra, Spain.
[Topics included: Color Naming, Heuristic Search, Bayesian network, Classification and SVM]

2005 – 2008 **Computer Programming**, Tehran, Iran.
[Topics: Pascal, C++, and Algorithms]

2005 – 2008 **Multimedia Design**, Tehran, Iran.
[Topics: Adobe Flash, Photoshop, and Illustrator]

GRANTS

2016 **DAAD research mobility grant**, *joint project between University of Siegen in Germany and Gjovik University College in Norway titled: "Spectral and 3D Image Fusion for Enriched Visualization of Cultural Heritage Assets". Awarded grant: 4.6K Euros*.

2012–2013 **Research grant**, *for the duration of five months (October 2012 – March 2013)*, from the Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Bellaterra, Spain.

2011 **Visiting Researcher**, *Subject of the grant: Short length research stay from the Catalan government (AGAUR)*, for the duration of three month (April 2011 – July 2011), to conduct research at the Pattern Recognition Lab of the Friedrich-Alexander University Erlangen-Nuremberg, Germany.

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

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, created at the Chair for Computer Graphics and Multimedia Systems, University of Siegen.

2014 **Colourlab Image Database: Multi-Illuminant scene (CID:MI)**, Dataset for multi-illuminant color constancy benchmarking with accurate pixel-wise Groundtruth, created at Norwegian Colour and Visual Computing Laboratory, Gjovik University College (Høgskolen i Gjøvik), Norway.

2014 **Multi-Illuminant Multi-Object (MIMO)**, A real-world dataset for multi-illuminant color constancy benchmarking with accurate pixel-wise Groundtruth, created at the Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Spain.

2013 **Synthetic Intrinsic Image Dataset**, Computer graphics generated dataset for intrinsic estimation benchmarking in complex scenes, created at the Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Spain.

COMMUNITY SERVICES

Journal Reviewer

- IEEE Transactions on Image Processing (TIP)
- IEEE Transactions on Cybernetics
- IEEE Transactions on Multimedia
- Journal of Imaging Science and Technology (JIST)
- The Visual Computer journal (TVCJ)

PhD. Thesis Reviewer

- Dissertation of Dr. Marc Serra, Sept. 2015, Title: "Modeling, estimation and evaluation of intrinsic images considering color information", Computer Vision Center (CVC), Universitat Autònoma de Barcelona, Bellaterra, Spain.

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, on 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**, *National ICT Australia (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), Barcelona, Spain. October 2012.*

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

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

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

SKILLS

OS	Mac OS X, Windows, and Linux
Programming	Matlab, C#, C/C++, Pascal/Delphi, SQL, HTML5, CSS3, Javascript, Python, and XML
Multimedia	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).

INTERESTS

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

JOURNAL PUBLICATIONS

2014 Beigpour, Shida, Christian Riess, Joost van de Weijer, and Elli Angelopoulou. "Multi-Illuminant Estimation with Conditional Random Fields". In: *IEEE Transactions on Image Processing (TIP)* 23.1, pp. 83–96.

2014 Khan, Fahad Shahbaz, Shida Beigpour, Joost van de Weijer, and Michael Felsberg. "Painting-91: a large scale database for computational painting categorization". In: *Machine Vision and Applications*.

2014 Ziko, Imtiaz Masud, Shida Beigpour, and Jon Yngve Hardeberg. "Design and Creation of a Multi-Illuminant Scene Image Dataset". In: *Image and Signal Processing, Lecture Notes in Computer Science* 8509. (Chosen for oral presentation), pp. 531–538.

CONFERENCE PUBLICATIONS

2015 Beigpour, Shida, Andreas Kolb, and Sven Kunz. "A Comprehensive Multi-Illuminant Dataset for Benchmarking of Intrinsic Image Algorithms". In: *Proc. IEEE International Conference on Computer Vision (ICCV 2015).*

2015 Beigpour, Shida and Marius Pederson. "Color Play: Gamification for Color Vision Study". In: *AIC 2015, Color and Image, Midterm Meeting of the Association Internationale de la Couleur: Proceedings*. (Chosen for oral presentation). COLOR SCIENCE ASSOCIATION OF JAPAN.

2013 Beigpour, Shida, Marc Serra, Joost van de Weijer, Robert Benavente, Maria Vanrell, Olivier Penacchio, and Dimitris Samaras. "Intrinsic Image Evaluation On Synthetic Complex Scenes". In: *IEEE International Conference on Image Processing (ICIP 2013)*.

2011 Beigpour, Shida and Joost van de Weijer. "Object Recoloring based on Intrinsic Image Estimation". In: *IEEE International Conference on Computer Vision (ICCV 2011)*.

2011 Bleier, Michael, Christian Riess, Shida Beigpour, Eva Eibenberger, Elli Angelopoulou, Tobias Tröger, and André Kaup. "Color constancy and non-uniform illumination: Can existing algorithms work?" In: *Computer Vision Workshops (ICCV Workshops), 2011 IEEE International Conference on*. IEEE, pp. 774–781.

2011 Weijer, Joost van de and Shida Beigpour. "The Dichromatic Reflection Model – Future Research Directions and Applications". In: *Int. Joint Conf. on Computer Vision, Imaging and Computer Graphics Theory and Applications*.

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

2009 Beigpour, Shida and Joost van de Weijer. "Object Color Alteration". In: *4th CVC workshop on the progress of research and development (CVCR&D)*. (Chosen for oral presentation).

THESIS

2013 Beigpour, Shida. "Illumination and object reflectance modeling". [Under the supervision of J. van de Weijer]. PhD. thesis. Barcelona, Spain: Computer Vision Center, Universitat Autonoma de Barcelona.

2009 Beigpour, Shida. "Physics-based Reflectance Estimation Applied To Recoloring". [Under the supervision of J. van de Weijer]. Master of Science. Barcelona, Spain: Computer Vision Center / Technical School of Engineering, Universidad Autonoma de Barcelona.

REFERENCES

University of Siegen

Prof. Dr. Andreas Kolb
Full Professor
Head of the Computer Graphics and Multimedia Systems
Chair for Computer Graphics and Multimedia Systems
University of Siegen
Hölderlinstraße 3,
57076 Siegen, Germany
✉ andreas.kolb@uni-siegen.de
☎ +49 271 740-2404
FAX +49 271 740-3337

Norwegian University of Science and Technology

Dr. Marius Pedersen
Associate Professor
Director of the Norwegian Colour and Visual Computing Laboratory
The Norwegian Colour and Visual Computing Laboratory
Norwegian University of Science and Technology
Teknologivn. 22,
2815 Gjøvik, Norway
✉ marius.pedersen@ntnu.no
☎ +47 61 13 52 46
FAX +47 61 13 51 70

Prof. Dr. Jon Yngve Hardeberg
Full Professor
The Norwegian Colour and Visual Computing Laboratory
Norwegian University of Science and Technology
Teknologivn. 22,
2815 Gjøvik, Norway
✉ jon.hardeberg@ntnu.no
☎ +47 61 13 52 15
FAX +47 61 13 51 70

Computer Vision Center (CVC)

Dr. Ramon Baldrich
Associate Professor
Centre de Visió per Computador
Universitat Autònoma de Barcelona
Edifici O, Campus UAB,
08193 - Bellaterra – Cerdanyola, Spain
✉ ramon.baldrich@cvc.uab.cat
☎ +34 93 581 1828
FAX +34 93 581 1670

Dr. Joost van de Weijer
Senior Researcher
Centre de Visió per Computador
Universitat Autònoma de Barcelona
Edifici O, Campus UAB,
08193 - Bellaterra – Cerdanyola, Spain
✉ joost@cvc.uab.es
☎ +34 93 581 3036
FAX +34 93 581 1670

Friedrich-Alexander University Erlangen-Nuremberg

Dr. Elli Angelopoulou
Associate Research Professor
Pattern Recognition Lab
University of Erlangen-Nuremberg
2401 Lafayette Ave, Winter Park
FL 32789, USA
✉ elli.angelopoulou@gmail.com
✉ elli@i5.informatik.uni-erlangen.de
☎ (407) 429-1461