

Rafael Pagés Scasso

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Research Experience

Research Areas	Free-viewpoint Video, Virtual/Augmented Reality. 3D reconstruction: geometry acquisition through passive (using standard images) and active techniques (using structured light projectors, time-of-flight cameras). 3D mesh multi-view texturing through static seamless image blending techniques.
Trinity College Dublin 2016/-	Postdoctoral Research Fellow Working at Graphics, Vision and Visualization group (GV2) under the supervision of Prof. Aljosa Smolic in project V-SENSE.
Universidad Politécnica de Madrid 2010/2016	Research Associate Worked at Image Processing Group (GTI, Grupo de Tratamiento de Imágenes) under the supervision of Prof. Francisco Morán in the following projects: BRIDGET (BRIDging the Gap for Enhanced broadcast). EC FP7-ICT Program (project 610691). MMOG (Middleware platform for the development of a new generation social virtual 3D platform for casual players). Ingenio Program 2010 / Avanza 2 (project TSI-020110-2009-205). VISION (New generation video communications). Ingenio Program 2010 / CENIT (project 2007-1007).
RWTH Aachen 2013/2014	Visiting Researcher Worked at Computer Graphics and Multimedia Group in RWTH Aachen University, Germany, under the supervision of Prof. Leif Kobbelt, from Sep 13 to Mar 14.

Entrepreneurship Experience

eyeQoala 2011/2013	Founded eyeQoala, a technology startup that finds solutions to everyday problems using 3D technology. We experimented with Kinect for 3D video conferencing, and also for 3D geometry reconstruction (3D scanning). We won the UPM's startup competition, actúaUPM, as the best business project created by students. We also won first place on Yuzz, the Program for Young Entrepreneurs promoted by the Banesto Foundation.
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Education

2012/2016	Ph.D. in Communication Technologies and Systems at Technical University of Madrid (UPM). Ph.D. Thesis title: Multi-textured 3D humanoid reconstruction through passive and active automatic techniques.
2010/2012	Master in Communication Technologies and Systems, UPM. Master Thesis title: Design and implementation of 3D facial model reconstruction techniques.
2004/2010	M.Sc. in Telecommunication Engineering, UPM. Master Thesis title: 3D object modeling with multi-textured meshes.
2008/2009	Exchange Program in Technical University of Denmark, Copenhagen. Attending audiovisual master courses.

Programming Skills

Languages	Experienced with C++, the main language used to implement algorithms leading to the publications below. Basic knowledge of Matlab, C, Java, Javascript and Python.
Libraries	Experienced with Qt, PCL, OpenCV, Eigen, Boost, OpenGL and OpenMesh.
VCS	Experienced with Git, basic knowledge of Subversion.

Other stuff

Social skills	Friendly, empathetic, tolerant, good ability to adapt to multicultural environments.
Student activities	El Eco de Teleco, a satire student magazine. I was in charge of Photoshop montages and illustrations in general. I was director of the magazine for two years. I was member of the Spanish student branch of Engineers Without Borders.
Hobbies	Everything related to graphic design: illustration, drawing, photography or playing with images using Photoshop. Basketball: I have been playing since I was a kid. I also played in college and even coached the university's women team. Music: I play the bass guitar and I have played in a couple of amateur music bands.

Publications

Journals 2013/2017	<p>G. Ortiz-Jiménez, F. García-Rial, L. Úbeda-Medina, R. Pagés, N. García, J. Grajal, "Simulation Framework for a 3D High Resolution Imaging Radar at 300 GHz with a Scattering Model based on Rendering Techniques", IEEE Transactions on Terahertz Science and Technology,) Online since 24-May-2017. doi: 10.1109/TTHZ.2017.2702590</p> <p>R. Pagés, D. Berjón, F. Morán, N. García, "Seamless, Static Multi-texturing of 3D Meshes", Computer Graphics Forum, vol. 34, no. 1, pp. 228-238, Feb. 2015. doi: 10.1111/cgf.12508</p> <p>R. Pagés, D. Berjón, F. Morán, "Automatic System for Virtual Human Reconstruction with 3D Mesh Multi-Texturing and Facial Enhancement", Elsevier's journal "Signal Processing: Image Communications" 28, 9 pp.1089-1099. Oct. 2013. doi: 10.1016/j.image.2013.07.001</p>
International conferences 2010/2017	<p>D. Berjón, R. Pagés, F. Morán, "Fast feature matching for detailed point cloud generation", Int. Conf. on Image Processing Theory, Tools and Applications, IPTA2016, Oulu, Finland, 12-15 Dec 2016. doi: 10.1109/IPTA.2016.7820978</p> <p>R. Pagés, S. García, D. Berjón, F. Morán, "SPLASH: A Hybrid 3D Modeling/Rendering Approach Mixing Splats and Meshes", 20th Int. Conf. on 3D Web Technology, Web3D 2015, Heraklion, Greece, pp. 231-234, 18-21 Jun. 2015. doi: 10.1145/2775292.2775320</p> <p>S. García, R. Pagés, D. Berjón, F. Morán, "Textured Splat-Based Point Clouds for Rendering in Handheld Devices", 20th Int. Conf. on 3D Web Technology, Web3D 2015, Heraklion, Greece, pp. 227-230, 18-21 Jun. 2015. doi: 10.1145/2775292.2782779</p> <p>R. Pagés, F. Morán, "3D Facial Merging for Virtual Human Reconstruction", proc. of IEEE 3DTV conf. 2012, pp. 1-4, Zürich, Switzerland, 15-17 Oct. 2012. doi: 10.1109/3DTV.2012.6365448</p> <p>R. Pagés, F. Morán, L. Salgado, D. Berjón, "Refined Facial Disparity Maps for Automatic Creation of 3D Avatars", proc. of IS&T/SPIE conf. on 3D Image Processing and Applications 2012 (SPIE vol. 8290), pp. 82900J-[1-8], San Francisco Airport (CA), USA, 24-26 Jan. 2012. doi: 10.1117/12.908259</p> <p>R. Pagés, S. Arnaldo, F. Morán, "Face Lift Surgery for Reconstructed Virtual Humans", proc. of IEEE conf. on Cyberworlds 2011, pp. 249-253, Banff, Canada, 4-6 Oct. 2011. doi: 10.1109/CW.2011.13</p> <p>D. Fuentes, R. Pagés, F. Morán, "Multi-Resolution Texture Coding for Multi-Resolution 3D Meshes", proc. of IEEE conf. on Visual Communication and Image Processing 2011, pp. 1-4, Tainan, Taiwan, 6-9 Nov. 2011. doi: 10.1109/VCIP.2011.6116055</p> <p>R. Pagés, D. Fuentes, F. Morán, "ITEM: Inter-Texture Error Measurement for 3D Meshes", proc. of ACM conf. on 3D Web Technology (Web3D) 2011, pp. 31-37, Paris, France, 20-22 Jun. 2011. doi: 10.1145/2010425.2010431</p> <p>R. Pagés, S. Arnaldo, F. Morán, D. Berjón, "Composition of texture atlases for 3D mesh multi-texturing", proc. of EG Italian Chapter conf. 2010, pp. 123-128, Genoa, Italy, 18-19 Nov. 2010. doi: 10.2312/LocalChapterEvents/ItalChap/ItalianChapConf2010/123-128</p>