RAFAEL PAGÉS

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rafapages.com

EXPERIENCE

CEO & Co-founder
Volograms Limited

Volograms is a technology startup on a mission to bring reality capture closer to everyone. Our technology uses a set of videos taken from different viewpoints and transforms them into volumetric holograms, volograms, that can be enjoyed in Virtual and Augmented Reality. Volograms is currently in Enterprise Ireland's HPSU start program.

2018 / present · Dublin, Ireland

Postdoctoral Research Fellow
Trinity College Dublin (TCD)

Working under the supervision of Prof. Aljosa Smolic at V-SENSE, a team of 20+ researchers in Visual Computing at the intersection of Computer Vision, Computer Graphics and Media Signal Processing. In particular, spearheaded research in the areas of Free-viewpoint Video, 3D reconstruction, Computer Vision, Virtual and Augmented Reality.

2016 / 2018 · Dublin, Ireland

Research Associate
Technical University of Madrid (UPM)

Working 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).

2010 / 2016 · Madrid, Spain

Visiting Researcher
RWTH Aachen

Working at Computer Graphics and Multimedia Group under the supervision of Prof. Leif Kobbelt.

2013 / 2014 · Aachen, Germany

Co-founder
eyeQoala S.L.

Founded eyeQoala, a technology startup that finds solutions to everyday problems using 3D technology. We experimented with Kinect for 3D video conferencing and 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.

2011 / 2013 · Madrid, Spain

SUMMARY

I am an experienced researcher with a great interest in transferring research to real world applications. My academic interests include 3D reconstruction, Free-viewpoint Video, VR/AR and Computer Vision. I co-founded Volograms, a Trinity College Dublin spin-off, which is based on state-of-the-art volumetric video technology we developed there.

EDUCATION

Ph.D. in Communication Technologies and Systems
Technical University of Madrid (UPM)

Doctoral dissertation: "Multi-textured 3D humanoid reconstruction through passive and active automatic techniques".

2012 / 2016 · Madrid, Spain

Master in Communication Technologies and Systems
Technical University of Madrid (UPM)

Master thesis: "Design and implementation of 3D facial model reconstruction techniques".

2010 / 2012 · Madrid, Spain

M.Sc. in Telecommunication Engineering
Technical University of Madrid (UPM)

Master thesis: "3D object modeling with multi-textured meshes".

2004 / 2010 · Madrid, Spain

Erasmus Exchange Program
Technical University of Denmark (DTU)

Digital Video Technology, Data Compression, Acoustic Communication, Fundamentals of Acoustics and Noise Control.

2008 / 2009 · Copenhagen, Denmark

LANGUAGES

Spanish: Mother tongue
English: Full proffesional proficiency
French: Elementary proficiency

SKILLS

Programming languages

C++ | C | Matlab | Python

Libraries & tools

OpenCV | PCL | Eigen | Boost | Qt | OpenGL | OpenMesh | Git

Design & typesetting

Photoshop | InDesign | LaTeX

INTERESTS & ACTIVITIES

Student activities

El Eco de Teleco, a satire student magazine. I was in charge of illustrations and photomontages. I was director of the magazine for two years.

I was member of a Spanish student delegation of Engineers Without Borders (now called ONGAWA).

Hobbies & interests

Technology: reading, researching and playing with gadgets.

Graphic design: illustration, drawing and photography.

Basketball: I have been playing since I was a kid. I also played in college and even coached the university's women's team.

Music: I play the bass guitar and I have played in amateur music bands.

PUBLICATIONS

Patent applications

R. Pagés, J. Ondrej, K. Amplianitis, D. Monaghan, A. Smolic, "Method and apparatus for generating a three-dimensional model", EP Application 12210382.2 - 1208. Filed in 2017.

T. Montserrat, J. Quelen, O. Divorra, C. Ferran, **R. Pagés**, D. Berjon, S. Arnaldo, F. Moran, "Method and a system for generating a realistic 3d reconstruction model for an object or being." US Application US20150178988A1, EP Application EP2852932A1, WO Application WO2013174671A1. Filed in 2012.

Journals

R. Pagés, K. Amplianitis, D. Monaghan, J. Ondrej, A. Smolic, "Affordable Content Creation for Free-Viewpoint Video and VR/AR Applications", Accepted at Elsevier Journal of Visual Communication and Image Representation. 2018. doi: 10.1016/j.jvcir.2018.03.012

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, May 2017. doi: 10.1109/TTHZ.2017.2702590

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

R. Pagés, D. Berjón, F. Morán, "Automatic System for Virtual Human Reconstruction with 3D Mesh Multi-Texturing and Facial Enhancement", Elsevier Signal Processing: Image Communications, 28, 9 pp.1089-1099. Oct. 2013. doi: 10.1016/j.image.2013.07.001

International conferences

N. O'Dwyer, N. Johnson, E. Bates, **R. Pagés**, J. Ondrej, K. Amplianitis, D. Monaghan, A. Smolic, "Virtual Play in Free-Viewpoint Video: Reinterpreting Samuel Beckett for Virtual Reality", IEEE International Symposium on Mixed and Augmented Reality, ISMAR 2017, pp. 262-267. Oct. 2017. doi: 10.1109/ISMAR-Adjunct.2017.87

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

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

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

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

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

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

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

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

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