PERSONAL INFORMATION

Dimitrios Zarpalas

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Sex Male | Date of Birth 25/02/1980 | Nationality Greek

BRIEF SUMMARY

EDUCATION AND POSITION

Dr. Dimitrios Zarpalas is an Electrical and Computer Engineer awarded by the Polytechnic School of Aristotle University of Thessaloniki (A.U.Th.), with an MSc in Electrical Engineering (specialization in computer vision) awarded by the Electrical Engineering School of The Pennsylvania State University, and a PhD in Medical Informatics from the department of Medicine, Health Science School, A.U.Th. supervised by Prof. Nicolaos Maglaveras. He re-joined the Information Technologies Institute in 2007, and is currently working as a senior researcher (grade C). He is co-founder of CERTH's spin-off company D-Cube (2016).

SCIENTIFIC AND RESEARCH ACTIVITIES

His current research interests include real time tele-immersion applications (4D reconstruction of moving humans, their hologram compression and transmission in real-time), 4D computer vision, 3D medical image processing, shape analysis of anatomical structures, 3D object recognition, motion capturing and evaluation, while in the past has also worked in indexing, search and retrieval and classification of 3D objects, proteins and 3D model watermarking. His involvement with those research areas has led to the co-authoring of 3 book chapter, 21 articles in refereed journals and 67 papers in international conferences. These include one IEEE distinguished paper, two best paper awards (IEEE IVMSP and International Conf. on Advances in MMEDIA), one best demo award (International MMM Conf.), contributions to the 3D Graphics Group of MPEG. He currently has a Google Scholar h-index of 19 and i10-index of 31, with 1630 citations. He is acting as reviewer for international journals and conferences, TPC member and session chair for conferences.

ACADEMIC ACTIVITIES

He is acting as adjunct lecturer for the post-graduate course of "Medical Image processing" offered by the Medical Informatics Lab, department of Medicine, A.U.Th.. He is/has been acting as thesis co-advisor for undergraduate (3), graduate (6), and PhD candidate (2) students

R&D PROJECTS AND ATTRACTING FUNDING

During the periods of 2003-2004, 2007-2009 and 2010-present he has been involved in 17 projects, 15 out of which funded by EC, and in 13 out of them he was heavily involved from the proposal preparation phase.

EDUCATION AND TRAINING

2008-2014

PhD in Medical Informatics

Department of Medicine, School of Health Sciences, Aristotle University of Thessaloniki, Greece
- Title: "Morphological analysis and automatic segmentation of biological structures from medical images."
- Supervisor: Prof. Nicolaos Maglaveras

2004-2006

Master of Science in Electrical Engineering

School of Electrical Engineering, The Pennsylvania State University, University Park, PA, USA
- Title: 3D object recognition based on range data.
- Supervisor: Prof. Octavia Camps

1997-2003

Diploma in Electrical and Computer Engineering

Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Greece
- Grade: 7.13/10.0
- 10/01–5/03: Specialization: Electronics and Computer Engineering.
- Grade: 8.5/10.0
- Thesis: Content based search and recognition of 3D models.
- Supervisor: Prof. Michael G. Strintzis

WORK EXPERIENCE

May 2019 - present

Senior Researcher - Grade C

Information Technologies Institute (www.iti.gr) of the Centre for Research and Technology Hellas (www.certh.gr)

April 2010 - April 2019

Research Associate

Information Technologies Institute (www.iti.gr) of the Centre for Research and Technology Hellas (www.certh.gr)
- Responsibilities: Managing and leading CERTH/ITI's participation in EU projects. Leading scientific research in relevant topics. Involved in EU proposal preparation.
- Topics: Tele-Immersive applications, real-time 3D reconstruction of human's performances, compression of 3D reconstruction sequences, 3D human motion capturing, analysis and evaluation, e-rehabilitation based on physical exercise monitoring and evaluation, adaptation technologies, holoscopic imaging, holoscopic depth extraction, 2.5D object recognition, medical imaging and segmentation.

April 2010-present

Adjunct Lecturer on "Medical Image Processing"

Medical Informatics Lab, Department of Medicine, School of Health Sciences, Aristotle University of Thessaloniki

May 2009-March 2010

Greek Army

Obligatory service in the Greek army, on the encrypted communications department

June 2007-April 2009

Research Associate

Informatics and Telematics Institute (www.iti.gr) of the Centre for Research and Technology Hellas (www.certh.gr)
- Research and development in the topics of 3D content based search and retrieval, medical imaging, segmentation of biological structures.

September 2006-May 2007

Research Assistant of Prof. Octavia Camps

Electrical and Computer Engineering Department, Northeastern University, Boston, MA, USA
- Topics: 3D object recognition

January 2006-May 2006

Teaching Assistant of Prof. Octavia Camps

Electrical and Computer Engineering Department, The Pennsylvania State University, University Park, PA, USA

▪ Course: CSE/EE 486 "Computer Vision I"

August 2003-July 2004   ## Research Assistant

Informatics and Telematics Institute (www.iti.gr) of the Centre for Research and Technology Hellas (www.certh.gr)

▪ Research and development on 3D content based search and retrieval, 3D model watermarking and bioinformatics

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R&D projects   ■

Summary

▪ **10 years of experience** in EC proposal idea and scope formulation, consortium formulation, and proposal writing.
▪ **Contribution to 11 successful proposals** for CERTH/ITI Visual Computing Lab: VRTogether (H2020), Hyper360 (H2020), 5G-MEDIA (H2020), ALADDIN (H2020), Factory2Fit (H2020), PATHWAY (H2020), FI-STAR (FP7), REPLAY (FP7), 3DLIVE (FP7), REVERIE (FP7), 3DVIVANT (FP7).
▪ **Participation to 15 projects** within CERTH/ITI: VRTogether (H2020), Hyper360 (H2020), 5G-MEDIA (H2020), ALADDIN (H2020), Factory2Fit (H2020), PATHWAY (H2020), FI-STAR (FP7), REPLAY (FP7), 3DLIVE (FP7), REVERIE (FP7), 3DVIVANT (FP7), CEEDs (FP7), VICTORY (FP7), altaB23D (national), REACH (national)
▪ **Technical Manager** in ALADDIN (H2020), and acting as Technical Manager (under the supervision of Dr. Petros Daras) in PATHway (H2020)
▪ **Leading of Work Packages** (WP leader) in the projects Hyper360 (H2020), Factory2Fit (H2020), FI-STAR (FP7), REPLAY (FP7), 3DLIVE (FP7).

Projects participation

June 2020 – May 2023   ### INFINITY - Immerse, Interact, Investigate

H2020

July 2020 – Feb 2021   ### ATLANTIS - AuThoring tooL for indoor Augmented and dimiNished realiTy experIenceS

H2020 - Technical Manager

Oct 2017 – Dec 2020   ### VRTOGETHER - An end-to-end system for the production and delivery of photorealistic and social virtual reality experiences

H2020 - http://vrtogether.eu - participation through CERTH/ITI
▪ Task Leader of "3D Capture and Reconstruction"
▪ Conducting and supervising the research and development team of CERTH/ITI

Oct 2017 – Sep 2020   ### Hyper 360 - Enriching 360 media with 3D storytelling and personalisation elements

H2020 - http://www.hyper360.eu - participation through CERTH/ITI
▪ Work Package Leader of "Free-Viewpoint Content"
▪ Conducting and supervising the research and development team of CERTH/ITI

Sep 2017 – Dec 2020   ### ALADDIN - Advanced hoListic Adverse Drone Detection, Identification Neutralization

H2020 - http://aladdin2020.eu - participation through CERTH/ITI
▪ Technical Manager
▪ Conducting and supervising the research and development team of CERTH/ITI

Jun 2017 – Feb 2020   ### 5G-MEDIA - Programmable edge-to-cloud virtualization fabric for the 5G Media industry

H2020 - http://www.5gmedia.eu - participation through CERTH/ITI
▪ Conducting and supervising the research and development team of CERTH/ITI

Oct 2016 – Sep 2019   ### Factory2Fit - Empowering and participatory adaptation of factory automation to fit for workers

H2020 - https://factory2fit.eu - participation through CERTH/ITI
▪ Work Package Leader of "Methods and tools for continuous adaptation of the manufacturing process"
▪ Conducting and supervising the research and development team of CERTH/ITI

Feb 2015 - Sep 2018	PATHWAY - Technology enabled behavioural change as a pathway towards better self-management of CVD

H2020 - http://pathway2health.eu - participation through CERTH/ITI
- Acting as Technical Manager
- Work Package Leader of "Patient and home exercise monitoring and interaction components"
- Conducting and supervising the research and development team of CERTH/ITI

Apr 2014 - Jul 2015	FI-STAR - Future Internet Social and Technological Alignment Research

H2020 - www.fi-star.eu/ - participation through CERTH/ITI
- Sub-project Leader of "HeartHealth"
- Conducting and supervising the research and development team of CERTH/ITI

Jul 2013 – Feb 2016	REPLAY - Reusable low-cost platform for digitizing and preserving traditional participative sports

FP7 - participation through CERTH/ITI
- Work Package Leader of "REFINE- Segmentation and annotation tools"
- Task Leader "Indoor short range motion capture & 3D reconstruction"
- Conducting and supervising the research and development team of CERTH/ITI

Oct 2012- Feb 2015	3DLIVE - 3D Living Interactions through Visual Environments

FP7 - participation through CERTH/ITI
- Work Package Leader of "Prototype the 3D-LIVE Tele-Immersive Environment"
- Task Leader of "3D reconstruction in real time", "Activity Recognition, through data fusion of visual and other sensorial data", "Data compression and transmission"

Jan 2012- Dec 2012	REVERIE - REal and Virtual Engagement in Realistic Immersive Environments

FP7 - participation through CERTH/ITI
- Conducting and supervising the research and development team of CERTH/ITI

Jan 2011 – Dec 2011	CEEDs - Collective Experience of Empathic Data Systems

FP7 - participation through CERTH/ITI
- Conducting research and development

Apr 2010- May 2013	3DVIVANT - Live Immerse Video-Audio Interactive Multimedia

FP7 - participation through CERTH/ITI
- Conducting and supervising the CERTH/ITI research and development on the task "3D Holoscopic depth estimation" and "3D Holoscopic content search and retrieval framework "

Jan 2008 – Apr 2009	VICTORY - Audio-visual content search and retrieval in a distributed P2P repository

FP7 - participation through CERTH/ITI
- Conducting research and development

Jun 2007- Dec 2007	altaB23D - 3D object search engine and exploitation to e-business

National project - participation through CERTH/ITI
- Conducting research and development

Aug 2003- Jul 2004	REACH - New Forms of Distributed Organization and Access to Cultural Heritage

National project - participation through CERTH/ITI
- Conducting research and development

ACADEMIC EXPERIENCE

2010 - present	Adjunct Lecturer

Medical Informatics Lab, Department of Medicine, School of Health Sciences, Aristotle University of Thessaloniki
Course: Medical Image processing (2nd Semester)

Co-Supervision of PhD candidates	▪ 2020-today: Alexandros Doumanoglou "Explainable AI", University of Maastricht, Associate Prof. Stylianos Asteriadis.
	▪ 2018-today: Nicolaos Zioulis "*3D reconstruction techniques for tele-immersive applications*", Universidad Politecnica de Madrid, Prof. Federico Alvarez
	2015-today: Anargyros Chatzitofis " *Low-cost 3D Motion Capture leveraging Computer Vision algorithms and 2.5D/3D data*", National Technical University of Athens, Prof. Stefanos Kolias
Co-Supervision of post-graduate diploma thesis	▪ Supervisor of Dimitrios Ataloglou "*Convolutional Neural Networks for segmenting hippocampus in MRIs*", MSc in Medical Informatics, AUTH (2017)
	▪ Co-supervisor of Andreas Ioannou "*Motion compensation of MRIs*", MSc in Medical Informatics, AUTH (2016)
	▪ Supervisor of Georgios Spanos "*Automatic segmentation of Hippocampus from human MRIs*", MSc in Medical Informatics, AUTH (2014)
	▪ Supervisor of Polyxeni Gkontra "*Morphometric description and analysis of 3D brain structures*", MSc in Medical Informatics, AUTH (2013)
	▪ Supervisor of Anastasios Zafeiropoulos "*Hippocampus-amygdala segmentation from MR Images*", MSc in Medical Informatics, AUTH (2012)
	▪ Co-supervisor of Vasilis Sakalis "*Prostate ultrasound image processing*", MSc in Medical Informatics, AUTH (2010)
Co-Supervision of graduate diploma thesis	▪ Co-supervisor of Georgios Zampokas "*3D reconstruction using multiple cameras: head orientation determination and surface estimation*", School of Electrical and Computer Engineering, AUTH (2016)
	▪ Co-supervisor of Giannis Kounakis, "*Localization and fitting of 3-D anatomical structures with the means of local regression kernels*", School of Electrical and Computer Engineering, AUTH (2011)
	▪ Co-supervisor of Erasmia Lyka, "*Depth estimation from integral images*", School of Electrical and Computer Engineering, AUTH (2010)

PUBLICATIONS ▪

Books

B.3 K. Apostolakis, N. Zioulis, A. Doumanoglou, D. Alexiadis, D. Zarpalas, P. Daras, "Beyond Online Multiplayer: Sharing and augmenting Tele-Immersive 3D game experiences with multiple geographically distributed users", IEEE COMSOC MMTC Communications – Frontiers, Vol. 12, No. 1, January 2017

B.2 Y. Tisserand, N. Magnenat-Thalmann, L. Unzueta, M.T. Linaza, A Ahmadi, N.E. O'Connor, N. Zioulis, D. Zarpalas, P. Daras, "Preservation and Gamification of Traditional Sports." Mixed Reality and Gamification for Cultural Heritage, Springer-Nature, M Ioannides, N. Magnenat-Thalmann, G. Papagiannakis (Eds), ISBN 978-3-319-49607-8, DOI 10.1007/978-3-319-49607-8, 2016.

B.1 Petros Daras, Dimitrios Zarpalas, Dimitrios Tzovaras, Dimitrios Simitopoulos and Michael G. Strintzis, "Combined Indexing and Watermarking of 3D Models Using the Generalized 3D Radon Transforms", Multimedia Security Handbook, B.Fuhrt and D.Kirouski Eds, CRC Press, pp 733-758, ISBN 0-8493-2773-3, December 2004.

Journals

J.21 S. Samaras, E. Diamantidou, D. Ataloglou, N. Sakellariou, A. Vafeiadis, V. Magoulianitis, A. Lalas, A. Dimou, D. Zarpalas, K. Votis, P. Daras, D. Tzovaras, "Deep Learning on Multi Sensor Data for Counter UAV Applications – A Systematic Review", Sensors 2019, 19 (22), 4837, Special Issue: Deep Learning for Multi-Sensor Fusion. DOI: https://doi.org/10.3390/s19224837

J.20 B. Takacs, Z. Vincze, H. Fassold, A. Karakottas, N. Zioulis, D. Zarpalas, P. Daras, "Hyper 360— Towards a Unified Tool Set Supporting Next Generation VR Film and TV Productions", Journal of Software Engineering and Applications (JSEA), Vol 12, Number 5, May 2019

J.19 F. Alvarez, D. Breitgand, D. Griffin, P. Adriani, S. Rizou, N. Zioulis, F. Moscatelli, J. Serrano, M. Keltsch, P. Trakadas, T. Khoa Phan, A. Weit, U. Acar, O. Prieto, F. Iadanza, G. Carrozzo, H. Koumaras, D. Zarpalas, D. Jimenez, "An Edge-to-Cloud Virtualized Multimedia Service Platform for 5G Networks", IEEE Transactions on Broadcasting, Special issue on 5G for Broadband Multimedia Systems and Broadcasting, 2019.

J.18 M. Tsourma, S. Zikos, G. Albanis, K. Apostolakis, E. Lithoxoidou, A. Drosou, D. Zarpalas, P. Daras, D. Tzovaras, "Gamification concepts for leveraging knowledge sharing in Industry 4.0", to International Journal of Serious Games, Volume 6, Issue 2, ISSN: 2384-8766, http://dx.doi.org/10.17083/ijsg.v6i2.273, June 2019

J.17 A. Chatzitofis, D. Zarpalas, S. Kollias, P. Daras, "DeepMoCap: Deep Optical Motion Capture Using Multiple Depth Sensors and Retro-Reflectors", Sensors 2019, 19, 282, Special Issue: Depth

Sensors and 3D Vision, https://doi.org/10.3390/s19020282

J.16 D. Ataloglou, A. Dimou, D. Zarpalas, P. Daras "Fast and precise hippocampus segmentation through deep convolutional neural network ensembles and transfer learning", Springer Neuroinformatics, 2019

J.15 A. Doumanoglou, P. Drakoulis, N. Zioulis, D. Zarpalas, P.Daras, "Benchmarking Open-Source Static 3D Mesh Codecs for Live Immersive Media Streaming", IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Feb 2019, DOI: https://doi.org/10.1109/JETCAS.2019.2898768

J.14 A. Triantafyllidis, D. Filos, R. Buys, J. Claes, V. Cornelissen, E. Kouidi, A. Chatzitofis, D. Zarpalas, P. Daras, D. Walsh, C. Woods, K. Moran, N. Maglaveras, I. Chouvarda, "Computerized decision support for beneficial home-based exercise rehabilitation in patients with cardiovascular disease", Computer Methods and Programs in Biomedicine, Volume 162, Pages 1-10, August 2018

J.13 A. Doumanoglou, D. Griffin, J. Serrano, N. Zioulis, T.K. Phan, D. Jimenez, D. Zarpalas, F. Alvarez, M. Rio, P. Daras, "Quality of Experience for 3D Immersive Media Streaming", IEEE Transactions on Broadcasting, Special Issue on Quality of Experience for Advanced Broadcast Service, Volume: 64, Issue: 2, pp 379-391, June 2018.

J.12 D. Alexiadis, N. Zioulis, D. Zarpalas, P. Daras, "Fast deformable model-based human performance capture and FVV using consumer-grade RGB-D sensors", ELSEVIER, Pattern Recognition, Volume 79, Pages 260-278, July 2018

J.11 F. Patrona, A. Chatzitofis, D. Zarpalas, P. Daras, "Motion Analysis: Action Detection, Recognition and Evaluation based on motion capture data", Pattern Recognition, Special Issue on Articulated Motion and Deformable Objects, 2017, DOI: 10.1016/j.patcog.2017.12.007, April 2018

J.10 D. Alexiadis, A. Chatzitofis, N. Zioulis, O. Zoidi, G. Louizis, D. Zarpalas, P. Daras, "An integrated platform for live 3D human reconstruction and motion capturing", IEEE Transactions on Circuits and Systems for Video Technology (2016, Volume:27 , Issue: 4)

J.9 Alexandros Doumanoglou, Dimitrios Alexiadis, Dimitrios Zarpalas, and Petros Daras, "Towards Real-Time and Efficient Compression of Human Time-Varying-Meshes", IEEE Transactions on Circuits and Systems for Video Technology, IEEE Transactions on Circuits and Systems for Video Technology, Vol: 24, Issue: 12, Dec 2014.

J.8 Dimitrios Zarpalas, Polyxeni Gkontra, Petros Daras, and Nicos Maglaveras, "Accurate and fully Automatic Hippocampus Segmentation using subject-specific 3D Optimal Local Maps into a hybrid Active Contour Model", IEEE Journal of Translational Engineering in Health and Medicine, Vol. 2, June 2014.

J.7 Dimitrios Zarpalas, Polyxeni Gkontra, Petros Daras, and Nicos Maglaveras, "Gradient based Reliability Maps for ACM based Segmentation of Hippocampus", IEEE Transactions on BioMedical Engineering, Vol: 61, Issue: 4, April 2014.

J.6 Dimitrios Alexiadis, Dimitrios Zarpalas, and Petros Daras, "Real-time, realistic, full 3-D reconstruction of moving humans from multiple Kinect streams", accepted for publication in IEEE Transactions on Multimedia, July 2012. **IEEE Distinguished paper**, IEEE MMTC R-Letter Vol 4, No 3, June2013.

J.5 Amar Aggoun, Emmanuel Tsekleves, Dimitrios Zarpalas, Anastasios Dimou, Petros Daras, Paulo Nunes, and Luis Ducla Soares, "Immersive 3D Holoscopic Video System", accepted for publication in IEEE MultiMedia, June 2012.

J.4 Dimitrios Zarpalas, Eleni Fotiadou, Iordanis Mpiperis and Petros Daras, "Anchoring Graph Cuts towards Accurate Depth Estimation in Integral Images", IEEE/OSA Journal of Display Technology, vol. 8, no. 7, July 2012.

J.3 Dimitrios Zarpalas, Petros Daras, Apostolos Axenopoulos, Dimitrios Tzovaras and Michael G. Strintzis, "3D Model Search and Retrieval Using the Spherical Trace Transform", EURASIP Journal on Advances in Signal Processing, vol. 2007, Special Issue on Search and Retrieval of 3D Content and Associated Knowledge Extraction and Propagation, 2007.   *2nd place at the world contest «SHREC2006, 3D Shape Retrieval Contest». Results available at: Technical report, UU-CS-2006-030, ISSN: 0924-3275, June 2006.*

J.2 Petros Daras, Dimitrios Zarpalas, Apostolos Axenopoulos, Dimitrios Tzovaras and Michael G. Strintzis, "Three-Dimensional Shape-Structure Comparison Method for Protein Classification", IEEE/ACM Trans. on Computational Biology and Bioinformatics, vol. 3, July-Sept. 2006.

J.1 Petros Daras, Dimitrios Zarpalas, Dimitrios Tzovaras and Michael G. Strintzis, "Efficient 3D Model Search and Retrieval Using Generalized 3D Radon Transforms", IEEE Trans. on Multimedia, vol. 8, February 2006.

Conferences

C.67 V. Gkitsas, N. Zioulis, F. Alvarez, D. Zarpalas, P. Daras, "Deep Lighting Environment Map Estimation from Spherical Panoramas", In 2020 Conference on Computer Vision and Pattern Recognition (CVPR). IEEE, June 2020.

C.66 A. Karakottas, N. Zioulis, A. Doumanglou, V. Sterzentsenko, V. Gkitsas, D. Zarpalas, P. Daras, "XR360: A toolkit for mixed 360 and 3D productions", In IEEE International Conference on Multimedia and Expo (ICME) June 2020.

C.65 V. Sterzentsenko, A. Doumanoglou, S. Thermos, N. Zioulis, D. Zarpalas, P. Daras, "Deep Soft Procrustes for Markerless Volumetric Sensor Alignment", In 2020 International Conference on Virtual Reality (IEEE VR), March 2020.

C.64 R. Athanasoulas, P. Boutis, A. Chatzitofis, A. Doumanoglou, P. Drakoulis, L. Saroglou, V. Sterzentsenko, N. Zioulis, D. Zarpalas, P. Daras, "AVoidX: An Augmented VR Game", In 2020 International Conference on Virtual Reality (IEEE VR), March 2020.

C.63 P. Athanasoulis, E. Christakis, K. Konstantoudakis, P. Drakoulis, S. Rizou, A. Weitz, A. Doumanoglou, N. Zioulis, D. Zarpalas, "Optimizing QoE and Cost in a 3D Immersive Media Platform: A Reinforcement Learning Approach", In International Conference on Advances in Multimedia (MMEDIA), Februrary 2020, **best paper award**

C.62 V. Sterzentsenko, L. Saroglou, A. Chatzitofis, S. Thermos, N. Zioulis, A. Doumanoglou, D. Zarpalas, P. Daras, "Self-Supervised Deep Depth Denoising", In Proceedings of the IEEE International Conference on Computer Vision, 2019 (pp. 1242-1251)

C.61 S. Samaras, V. Magoulianitis, A. Dimou, D. Zarpalas, P. Daras, "UAV Classification With Deep Learning Using Surveillance Radar Data", In Proceedings of the 12th International Conference on Computer Vision Systems (ICVS), Springer, Cham, 2019.

C.60 A. Coluccia, A. Fascista, A. Schumann, L. Sommer, M. Ghenescu, T. Piatrik, G. De Cubber, M. Nalamati, A. Kapoor, M. Saqib, N. Sharma, M. Blumenstein, V. Magoulianitis, D. Ataloglou, A. Dimou, D. Zarpalas, P. Daras, C. Craye, S. Ardjoune, D. De la Iglesia, M. Mandez, R.I Dosil, I. Gonzalez, "Drone-vs-Bird Detection Challenge at IEEE AVSS2019", 16th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS), Taipei, Taiwan, 18-21 Sept. 2019

C.59 V. Magoulianitis, D. Ataloglou, A. Dimou, D. Zarpalas, P. Daras, "Does Deep Super-Resolution Enhance UAV Detection?", 16th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS), Taipei, Taiwan, 18-21 Sept. 2019

C.58 N. Zioulis, A. Karakottas, D. Zarpalas, F. Alvarez, P. Daras, "Spherical View Synthesis for 360o Self-Supervised Depth Estimation", The 7th International Conference on 3D Vision (3DV), Quebec City, Canada, 16-19 September 2019

C.57 A. Karakottas, N. Zioulis, S. Samaras, D. Ataloglou, V. Gkitsas, D. Zarpalas, P. Daras, "360o Surface Regression with a Hyper-Sphere Loss", The 7th International Conference on 3D Vision (3DV), Quebec City, Canada, 16-19 September 2019

C.56 K. Christaki, K. Apostolakis, A. Doumanoglou, N. Zioulis, D. Zarpalas, P. Daras, "Space Wars: An AugmentedVR Game", 25th International Conference on MultiMedia Modeling (MMM), Thessaloniki, Greece, January 8-11, 2019, **best demo award.**

C.55 K. Christaki, E. Christakis, P. Drakoulis, A. Doumanoglou, N. Zioulis, D. Zarpalas, and P. Daras, "Subjective Visual Quality Assessment of Immersive 3D Media Compressed by Open-Source Static 3D Mesh Codecs", 25th International Conference on MultiMedia Modeling (MMM), Thessaloniki, Greece, January 8-11, 2019.

C.54 V. Sterzentsenko, A. Karakottas, A. Papachristou, N. Zioulis, A. Doumanoglou, D. Zarpalas, and P. Daras, "A low-cost, flexible and portable volumetric capturing system", The 14th International Conference on Signal Image Technology & Internet based Systems (SITIS 2018), Spain, 26-29 November 2018.

C.53 K. Konstantoudakis, E. Christakis, P. Drakoulis, A. Doumanoglou, N. Zioulis, D. Zarpalas, and P. Daras, "Comparing CNNs and JPEG for Real-Time Multi-view Streaming in Tele-Immersive Scenarios", The 14th International Conference on Signal Image Technology & Internet based Systems (SITIS 2018), Spain, 26-29 November 2018.

C.52 S. Aromaa, M. Liinasuo, E. Kaasinen, M. Bojko, F. Schmalfuß, K.C. Apostolakis, D. Zarpalas, P. Daras, C. Öztürk, M. Boubekeuer, "User Evaluation of Industry 4.0 Concepts for Worker Engagement", Proceedings of the 1st International Conference on Human Systems Engineering and Design (IHSED2018): Future Trends and Applications, October 25–27, 2018, CHU-Université de Reims Champagne-Ardenne, France

C.51 A. Karakottas, N. Zioulis, D. Zarpalas, P. Daras, "360D: A dataset and baseline for dense depth

estimation from 360 images", 1st Workshop on 360o Perception and Interaction, European Conference on Computer Vision (ECCV) , Munich, Germany, 8 – 14 September 2018

C.50 N. Zioulis, A. Karakottas, D. Zarpalas, P. Daras, "OmniDepth: Dense Depth Estimation for Indoors Spherical Panoramas", European Conference on Computer Vision (ECCV), Munich, Germany, 8 – 14 September 2018

C.49 G. Albanis, K. Apostolakis, C. Ozturk, D. Zarpalas, P. Daras, "Adaptive web-based tools for capability-driven workforce management and task sequencing optimization", International Conference on Industrial Internet of Things and Smart Manufacturing (IoTsm 2018), London, UK, 5-6 Sep. 2018.

C.48 X. Chen, M. Bojko, R. Riedel, K. Apostolakis, D. Zarpalas, P. Daras, "Human-centred Adaptation and Task Distribution utilizing Levels of Automation", 16th IFAC Symposium on Information Control Problems in Manufacturing (INCOM 2018) 11-13 June 2018, Bergamo, Italy

C.47 A. Doumanoglou, N. Zioulis, D. Griffin, J. Serrano, T. Khoa Phan, D. Jimenez, D. Zarpalas, F. Alvarez, M. Rio, P. Daras, "A System Architecture for Live Immersive 3D-Media Transcoding over 5G Networks", Workshop on Media delivery innovations using flexible network models in 5G, IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB18), Valencia, Spain, 6th - 8th June 2018

C.46 A. Doumanoglou, N. Zioulis, E. Christakis, D. Zarpalas, P. Daras, "Subjective quality assessment of textured human full-body 3D-reconstructions", International Conference on Quality of Multimedia Experience (QoMEX 2018), Sardinia, Italy, 29 May - 1 June 2018

C.45 A. Papachristou, N. Zioulis, D. Zarpalas, P. Daras, "Markerless Structure-based Multi-sensor Calibration for Free Viewpoint Video Capture", the 26th International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG 2018), Pilsen, Czech Republic, May 28 - June 1, 2018

C.44 A. Karakottas, A. Papachristou, A. Doumanoglou, N. Zioulis, D. Zarpalas, P. Daras, "Augmented VR", IEEE VR, Reutlingen, Germany, 18-22 March 2018, https://www.youtube.com/watch?v=7O_TrhtmP5Q

C.43 A. Chatzitofis, D. Zarpalas, P. Daras, "A computerized system for real-time exercise performance monitoring and e-coaching using motion capture data", International Conference on Biomedical and Health Informatics Thessaloniki, Greece, 18-21 November 2017

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C.40 A. Chatzitofis, D. Zarpalas, D. Filos, A. Triantafyllidis, I. Chouvarda, N. Maglaveras, P. Daras, "Technological module for unsupervised, personalized cardiac rehabilitation exercising", Proceedings of the 2017 IEEE 41st Annual Computer Software and Applications Conference (COMPSAC 2017), July 4-8, 2017, Turin, Italy.

C.39 K. Moran, H. Wei, D.S. Monaghan, C. Woods, N.E. O'Connor, D. Zarpalas, A. Chatzitofis, P. Daras, J. Piesk, A. Pomazanskyi, "A Technology Platform for Enabling Behavioural Change as a "PATHway" Towards Better Self-management of CVD", Oct 16, 2016 - Oct 16, 2016, Amsterdam, the Netherlands

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C.34 F. Destelle, A. Ahmadi, K. Moran, N. E. O'Connor, N. Zioulis, A. Chatzitofis, D. Zarpalas, P. Daras, L. Unzueta, J. Goenetxea, M. Rodriguez, M. T. Linaza, Y. Tisserand, N. Magnenat-Thalmann, "A Multi-Modal 3D Capturing Platform for Learning and Preservation of Traditional Sports and Games", 23rd ACM Multimedia Conference 2015, 26-30 Oct 2015, Brisbane, Australia

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"HeartHealth: A Cardiovascular Disease Home-Based Rehabilitation System", 5th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare, ICTH 2015.

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C.31 D. Alexiadis, D. Zarpalas, P. Daras, "Fast and smooth 3D reconstruction using multiple RGB-Depth sensors", IEEE International Conference on Visual Communications and Image Processing, VCIP 2014, Dec 7-10, Valletta, Malta, **best paper award candidate**.

C.30 D. Alexiadis, A. Doumanoglou, D. Zarpalas, P. Daras, "A case study for tele-immersion communication applications: from 3D capturing to rendering", IEEE International Conference on Visual Communications and Image Processing, VCIP 2014, Dec 7-10, Valletta, Malta.

C.29 N.E. O'Connor, Y. Tisserand, A. Chatzitofis, F. Destelle, J. Goenetxea, L. Unzueta, D. Zarpalas, P. Daras, M. Linaza, K. Moran, N. Magnenat Thalmann, "Interactive Games for Preservation and Promotion of Sporting Movements", 22nd European Signal Processing Conference (EUSIPCO 2014), Lisbon, Portugal, 2-5 Sept. 2014.

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C.26 A. Doumanoglou, D. Alexiadis, S. Asteriadis, D. Zarpalas, P. Daras, "On human time-varying mesh compression exploiting activity-related characteristics", IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Florence, Italy, May 4-9, 2014.

C.25 A. Doumanoglou, S. Asteriadis, D. Alexiadis, D. Zarpalas, P. Daras, "A Dataset of Kinect-based 3D scans", 11th IEEE IVMSP Workshop: 3D Image/Video Technologies and Applications, Yonsei University, Seoul, Korea, 10-12 June 2013.

C.24 D. Alexiadis, D. Zarpalas, P. Daras, "Real-time, Realistic Full-body 3D Reconstruction and Texture Mapping from Multiple Kinects", 11th IEEE IVMSP Workshop: 3D Image/Video Technologies and Applications, Yonsei University, Seoul, Korea, 10-12 June 2013, **best paper award**.

C.23 S. Asteriadis, A. Chatzitofis, D. Zarpalas, D. Alexiadis, P. Daras, "Estimating human motion from multiple Kinect Sensors", Mirage 2013, 6th International Conference on Computer Vision / Computer Graphics Collaboration Techniques and Applications, June 6–7, 2013, Berlin, Germany

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C.21 A. Chatzitofis, N. Vretos, D. Zarpalas, P. Daras, "Three-dimensional Monitoring of Weightlifting for Computer Assisted Training", 15th International Conference on Virtual Reality and Converging Technologies, Laval, France, 2013

C.20 D. Kontotasiou, D. Zarpalas, C. Bratsas, P. Bamidis, "A collaborative Wiki-based tool for semantic management of medical interventions", IEEE 12th International Conference on Bioinformatics & Bioengineering (BIBE), Larnaca, Cyprus, 2012.

C.19 D. Zarpalas, P. Gkontra, P. Daras and N. Maglaveras, "Segmentation through a local and adaptive weighting scheme, for contour-based blending of image and prior information", IEEE International Symposium on Computer-Based Medical Systems (CBMS 2012), 20-22 June, Rome, Italy, 2012.

C.18 D. Zarpalas, P. Gkontra, P. Daras and N. Maglaveras, "Hippocampus segmentation by optimizing the local contribution of image and prior terms, through graph cuts and multi-atlas", International Symposium on Biomedical Imaging (ISBI 2012), Barcelona, Spain, May 2-5, 2012.

C.17 D. Zarpalas, A. Zafeiropoulos, P. Daras and N. Maglaveras, "Hippocampus Segmentation using a Local Prior Model on its Boundary", International Conference on Machine Vision, Image Processing, and Pattern Analysis (ICMVIPPA 2011), Venice, Italy, November 28-30, 2011.

C.16 D. Zarpalas, A. Zafeiropoulos, P. Daras, N. Maglaveras and M. G. Strintzis, "Brain Structures Segmentation using Optimum Global and Local Weights on Mixing Active Contours and Neighboring Constraints", International Symposium on Applied Sciences in Biomedical and Communication Technologies, ISABEL 2011, Barcelona, Spain, October 26-29, 2011.

C.15 D. Zarpalas, G. Kordelas, P. Daras, "Recognizing 3D Objects in cluttered scenes using projection images", IEEE International Conference on Image Processing (ICIP 2011), Brussels, Belgium, September 11-14, 2011.

C.14 D. Zarpalas, I. Mpiperis, E. Fotiadou, E. Lyka, P. Daras and M.G. Strintzis, "Depth estimation in

integral images using constrained optimization techniques", IEEE International Conference on Multimedia and Expo (ICME 2011), Barcelona, Spain, July 11-15, 2011.

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C.12 R. Lublinerman, N. Ozay, D. Zarpalas and O. Camps, "Activity Recognition from Silhouettes using Linear Systems and Model (In)validation Techniques", International Conference on Pattern Recognition (ICPR 2006), Hong Kong, August 20-24, 2006.

C.11 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "3D Protein Classification", IEEE International Conference on Image Processing (ICIP 2005), Genova, Italy, September 11-14, 2005.

C.10 A. Axenopoulos, P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "3D Content-based Search based on 2D Wavelet Transform", IEEE International Conference on Image Processing (ICIP 2005), Genova, Italy, September 11-14, 2005.

C.9 D. Zarpalas, P. Daras, D. Tzovaras and M. G. Strintzis, "3D Shape Descriptors Based on Fourier Transforms", 6th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2005), Montreux, Switzerland, April 13-15, 2005.

C.8 P. Daras, D. Zarpalas, D. Tzovaras, M. G. Strintzis, "Search and retrieval of 3D protein structures", 6th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2005), Montreux, Switzerland, April 2005.

C.7 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "Protein Matching based on Geometrical Characteristics", 6th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2005), Montreux, Switzerland, April 13-15, 2005.

C.6 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "Watermarking of 3D Models for Data Hiding", IEEE International Conference on Image Processing (ICIP 2004), Singapore, Taiwan, Oct. 24-27, 2004.

C.5 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "3D Model Search and Retrieval Based on the Spherical Trace Transform", IEEE International Workshop on Multimedia Signal Processing (MMSP 2004), Siena, Italy, Sept 29 – Oct. 1, 2004.

C.4 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "Shape Matching Using the 3D Radon Transform", IEEE International Symposium on 3D Data Processing, Visualization, and Transmission (3DPVT 2004), Thessaloniki, Greece, Sept 6 – 9, 2004.

C.3 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "3D Model Watermarking for Indexing Using the Generalized Radon Transform", IEEE International Symposium on 3D Data Processing, Visualization, and Transmission (3DPVT 2004), Thessaloniki, Greece, Sept 6 – 9, 2004.

C.2 D. Zarpalas, P. Daras, D. Tzovaras and M.G. Strintzis, "3D Model Search and Retrieval Based on the 3D Radon Transform", IEEE International Conference on Communications (ICC 2004), Multimedia Technologies and Services Symposium (MMTS), Paris, France, June 20-24, 2004.

C.1 P. Daras, D. Zarpalas, D. Tzovaras and M. G. Strintzis, "Generalized Radon Transform Based 3D Feature Extraction for 3D Object Classification", 5th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2004), Lisboa, Portugal, April 21-23, 2004

Citations   The total number of citations is 1061, with **h-index=13** and **i10-index=19**, as extracted from Scholar Google, while manually verified as non-self-citations are 677 of them (as counted on Nov. 2018).

SCIENTIFIC ACTIVITIES

Achievements	▪ **[J.6]** was awarded as **IEEE Distinguished paper**, IEEE MMTC R-Letter Vol 4, No 3, June2013
	▪ **Best paper award** [C.24] D. Alexiadis, D. Zarpalas, P. Daras, "Real-time, Realistic Full-body 3D Reconstruction and Texture Mapping from Multiple Kinects", 11th IEEE IVMSP Workshop: 3D Image/Video Technologies and Applications, Yonsei University, Seoul, Korea, 10-12 June 2013.
	▪ **Best paper award** [C.63] P. Athanasoulis, E. Christakis, K. Konstantoudakis, P. Drakoulis, S. Rizou, A. Weitz, A. Doumanoglou, N. Zioulis, D. Zarpalas, "Optimizing QoE and Cost in a 3D Immersive Media Platform: A Reinforcement Learning Approach", In International Conference on Advances in Multimedia (MMEDIA), Februrary 2020
	▪ **Best demo award** [C.56] K. Christaki, K. Apostolakis, A. Doumanoglou, N. Zioulis, D. Zarpalas, P. Daras, "Space Wars: An AugmentedVR Game", 25th International Conference on MultiMedia Modeling (MMM), Thessaloniki, Greece, January 8-11, 2019
	▪ **Best paper award candidate** [C.31] D. Alexiadis, D. Zarpalas, P. Daras, "Fast and smooth 3D reconstruction using multiple RGB-Depth sensors", IEEE International Conference on Visual Communications and Image Processing, VCIP 2014, Valletta, Malta.
	▪ **[J3] 2nd place at the world contest** «SHREC2006, 3D Shape Retrieval Contest». Results available at: Technical report, UU-CS-2006-030, ISSN: 0924-3275, June 2006.
Invited Speaker	▪ Invited talk on "Real-time 3D reconstruction enabling Tele-Immersion", April 11, 2014, International Conference on Virtual Reality, Laval, France.
Member of Technical Program Committee / Workshops / Special Sessions in Conferences	▪ Organizer of the First International Workshop on "Tools for Creating XR Media Experiences" and Chair of the session in the IEEE ICME 2020
	▪ Organizer of the Workshop on " Vision-enabled UAV and counter-UAV technologies for surveillance and security of critical infrastructures (UAV4S)" in the 12th International Conference on Computer Vision Systems (ICVS 2019), Thessaloniki, Greece, September 2019.
	▪ TPC member for HealthMedia workshop on Multimedia and Healthcare, ACM Multimedia 2018
	▪ Co-organizer of the special session on "Augmented Experience within Real-Time Tele-Immersive Environments", in the 16th International Conference on Virtual Reality, Laval Virtual, Laval, France, April 2014.
	▪ Chair of the session on "Brain imaging" in the 25th IEEE International Symposium on Computer-Based Medical Systems (CBMS 2012), Rome, Italy, June 2012.
Journal reviewing activities	▪ Elsevier Computer Methods and Programs in Biomedicine (IF 2.674)
	▪ Eurasip Journal on Image and Video processing (IF 2.455)
	▪ Human Brain Mapping (IF 4.927)
	▪ Elsevier NeuroComputing (IF 3.241)
	▪ IEEE Transactions on Cybernetics (IF 8.803)
	▪ IEEE Transactions on Instrumentation and Measurement (IF 2.794)
	▪ International Journal on Distributed Sensor Networks (1.787)
	▪ MDPI Sensors (IF 2.475)
	Recent (starting from 2016) list of reviewing activities: publons.com

PERSONAL SKILLS

Mother tongue   Greek

Foreign language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Interaction	Spoken Production	
English	C2	C2	C2	C2	C2
			Cambridge Proficiency		
German	A1	A2	A1	A1	A2
			Goethe Mittelstufe		

Levels: A1/A2: Basic User - B1/B2: Independent User - C1/C2 Proficient User
Common European Language Levels