

Konstantinos Moustakas

Electrical and Computer Engineer, PhD

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◆ Education

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| 2007 – 2011 | Postdoctoral Research Fellow
Informatics and Telematics Institute / Centre for Research and Technology Hellas (ITI/CERTH). |
| 2003 – 2007 | PhD thesis at the Electrical and Computer Engineering Department of the Polytechnic Faculty of the Aristotle University of Thessaloniki.
Supervisor: Michael. G. Strintzis.
PhD subject: "Novel techniques for multimodal rendering and simulation of interactive virtual environments". |
| 1998 – 2003 | Degree of the Electrical and Computer Engineering Department of the Polytechnic Faculty of the Aristotle University of Thessaloniki (Electronics and Computer section).
Final Thesis Subject: Development of a semi-automatic tool for depth estimation for the generation of stereoscopic sequences from monoscopic. |

◆ Research – Professional Experience

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| 2016 – now | Associate Professor, Electrical and Computer Engineering Department, School of Engineering, University of Patras. Head of the Visualization and Virtual Reality Group. |
| 2012 – 2016 | Assistant Professor, Electrical and Computer Engineering Department, School of Engineering, University of Patras. Head of the Vis- |

	ualization and Virtual Reality Group.
2007 – 2011	Postdoctoral Research Fellow in the Informatics and Telematics Institute / Centre for Research and Technology Hellas (ITI/CERTH).
2003 – 2007	Postgraduate Research Fellow in the Informatics and Telematics Institute / Centre for Research and Technology Hellas (ITI/CERTH).

◆ Research Activities

Virtual Reality:	Dynamic virtual reality simulations, haptic interaction in virtual environments, collision detection, physics-based sound and haptic rendering, physics-based simulations, tele-immersion, multimedia.
Augmented Reality, Computer Vision:	Performance optimization in augmented reality, augmented reality dynamic simulations and natural interaction, sound augmented reality, range image based augmented reality, stereoscopic vision, computer vision, applications.
Information Visualization:	Information visualization of dynamic time varying data, information theoretic tools for automatic visualization optimization, applications.
Virtual humans:	Computational modeling of virtual humans (virtual physiological humans), simulation of virtual humans, application in ergonomics, applications in biomedical engineering, sports and rehabilitation, applications in biometrics.
Geometry processing	Geometry processing of virtual reality surface models, coding compression and transmission of 3D models, skeletonization and deformation of 3D models, feature extraction for 3D content-based search.

◆ Research Projects

2017 – 2018	GameCAR: Gamification of EcoDriving Behaviors through Intelligent Management of dynamic car and driver information, H2020-IA (<i>project coordinator</i>)
2016 – 2018	FrailSafe: Sensing and predictive treatment of frailty and associat-

- ed co-morbidities using advanced personalized models and advanced interventions, H2020- RIA (*principal investigator, chair of the scientific board*)
- 2015 – 2017 myAirCoach: Analysis, modelling and sensing of both physiological and environmental factors for the customized and predictive self-management of Asthma, H2020-RIA (*principal investigator, quality manager*)
- 2014 – 2016 NOTREMOR: Virtual, Physiological and Computational Neuromuscular Models for the Predictive Treatment of Parkinson’s Disease, FP7-IST-STREP (*scientific coordinator*)
- 2014 – 2015 MOMIRAS: Mobile Mixed Reality System, Greece-Israel bilateral cooperation grant, GSRT (principal investigator)
- 2013 – now IBRASIL: Inclusive and Innovative Brazil, FP7 Erasmus-Mundus.
- 2011 – 2012 VIS-SENSE: Visual Analytic Representation of Large Datasets for Enhancing Network Security, FP7-IST-STREP
- 2010 – 2012 VERITAS: Virtual and Augmented Environments and Realistic User Interactions to Achieve Embedded Accessibility Designs, FP7-IST-IP
- 2010 – 2011 AEGIS: Open accessibility everywhere: Groundwork, Infrastructure, Standards, FP7-IST-IP
- 2008 – 2009 ACTIBIO: Unobtrusive Authentication Using ACTivity Related and Soft BIOmetrics, IST-STREP
- 2008 OASIS: Oper architecture for Accessible Services Integration and Standardisation, IST-IP.
- 2007 ASK-IT: Ambient Intelligence System of Agents for Knowledge-based and Integrated Services for Mobility Impaired Users, IST – Integrated Project
- 2006 – 2007 SIMILAR: “The European Research Taskforce Creating Human-Machine Interfaces SIMILAR to humans”, IST – Network of Excellence.
- 2005 – 2007 PENED 2003: “Advanced Methods of Visual Computing for Cultural Heritage Applications”, GSRT, 2005-2008.
- 2003 – 2005 VR@Theater: Virtual Reality Toolbox for Theater Professionals”, GSRT, EPAN-Culture, 2003-2006.
- 2005 Co-Leader of the eINTERFACE summer workshop Project 7 (A Multimodal “Gesture+Speech” Interface for 3D Model Search and Retrieval Integrated in a Virtual Assembly Application) held in Mons, Belgium (18 July-12 August) in the context of the SIMILAR IST NoE.
- 2006 Co-Leader of the eINTERFACE summer workshop Project 2 (Multimodal tools and interfaces for the intercommunication between visually impaired and “deaf and mute” people) held in Dubrovnik, Croatia (17/7-11/8) in the context of the SIMILAR IST NoE.

2003

POLEIS: Virtual Cultural Tours, GSRT, PABET-NE.

◆ Teaching Experience

2012 – now	Instructor in the following courses of the Electrical and Computer Engineering Department, University of Patras: <ul style="list-style-type: none">- Artificial Intelligence I, 7th semester- Artificial Intelligence II, 8th semester- Computational Geometry, 8th semester- Computer Graphics and Virtual Reality, 9th semester- Human-Computer Interaction, 10th semester
2015 – now	Instructor in the Master's program "Biomedical Engineering" in the course "Modelling and Simulation". Representative of the Electrical and Computer Engineering Department in the Scientific Board.
2007 – 2008	Visiting Lecturer of the Electrical and Computer Engineering Department of the Aristotle University of Thessaloniki for the course of "Digital Filters" of the 8 th semester.
2004 – 2005	Assistant Lecturer in the course "Digital Filters" of the 8 th semester of the Electrical and Computer Engineering Department of the Aristotle University of Thessaloniki.
2005 – 2006	
2006 – 2007	
2006 – 2007	Visiting Lecturer in the post-graduate course "Human Computer Interaction" of the international Master's program MUNDUS.
2008 – 2009	
2009 – 2010	
2006 - 2007	Assistant Lecturer in the course "Microprocessors" of the Electronics department of the technical university of Thessaloniki.

◆ Foreign Languages

English	Perfect Knowledge. Proficiency in English (University of Cambridge)
German	Perfect Knowledge. Oberstufe.

◆ Technical Skills

Programming languages:	C, C++, Visual C++, PASCAL, FORTRAN.
Software:	Microsoft Visual Studio 6, Microsoft Visual Studio.NET, Borland C++ Builder 5, MS Office 2000/XP, Matlab 6, 3Dsmax, Poser.

◆ Research Activities

- ◆ Reviewer of the following international scientific journals:
 - IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG)
 - IEEE Transactions on Multimedia (IEEE TMM)
 - IEEE Transactions on Robotics (IEEE TRO)
 - IEEE Transactions on Image Processing (IEEE TIP)
 - IEEE Transactions on Circuits and Systems for Video Technology (IEEE CSVT)
 - IEEE Transactions on Systems, Man and Cybernetics (IEEE SMC)
 - IEEE Transactions on Cybernetics (IEEE CYB)
 - IEEE Signal Processing Letters (IEEE SPL)
 - IEEE Transactions on Haptics (IEEE ToH)
 - IEEE Transactions on Intelligent Transportation Systems (IEEE ITS)
 - IET Computer Vision
 - IET Biometrics
 - The Computer Journal, Oxford University Press
 - Eurasip Journal on Applied Signal Processing (JASP)
 - Eurasip Journal on Image and Video Processing (JIVP)
 - Elsevier Computer Aided Design
 - Elsevier Computers & Graphics
 - Elsevier Pattern Recognition Letters
 - Elsevier Applied Ergonomics
 - Elsevier Mechanism and Machine Theory
 - Sensors Journal (ISSN 1424-8220)
 - Springer Multimedia Tools and Applications (MTAP)
 - Springer International Journal of Computer Assisted Radiology and Surgery (JCARS)
 - International Journal of Biometrics
 - European Journal on Physical and Rehabilitation Medicine
- ◆ Member of the Technical Program Committee and Reviewer in numerous international conferences.
- ◆ Research projects' evaluator for the Greek General Secretariat of Research and

Technology.

- ◆ Scientific fellow and editor in the Greek scientific journal "Περισκόπιο της επιστήμης" (Spectrum of Science).
 - K. Moustakas, "Virtual Surgery: The future in the training of young surgeons", Περισκόπιο της Επιστήμης, (Spectrum of Science), no. 317, pp. 64-75, July 2007 (in Greek).
 - K. Moustakas, "Seeing by touch: Replacing vision in virtual and mixed reality environments", Περισκόπιο της Επιστήμης, (Spectrum of Science), no. 332, pp. 12-23, December 2008 (in Greek).
- ◆ Member of the IEEE.
- ◆ Member of the IEEE Computer Society.
- ◆ Member of the following IEEE Technical Committees:
 - IEEE TCH: Technical committee on haptics
 - IEEE TCVG: Technical committee on visualization and graphics
 - IEEE TCSIM: Technical committee on simulation
- ◆ Member of the Technical Chamber of Greece.
- ◆ Best paper award at IEEE ISSPIT 2015 for the paper "Sparse Coding of Dense 3d Meshes in Mobile Cloud Applications".
- ◆ Selection of the following article as one of the best papers in biometrics and publication in the Virtual Special Issue "Celebrating the Breadth of Biometrics Research" of the Elsevier Image and Vision Computing journal. "A. Drosou, D. Ioannidis, D. Tzovaras, K. Moustakas and M. Petrou, "Prehension Bi-ometrics for Human Authentication", Elsevier Pattern Recognition, to appear, 2014, doi: 10.1016/j.patcog.2014.12.008.
- ◆ Winner (Judges Award) of the Microsoft sponsored challenge "Web Accessibility Challenge", in the context of the international conference W4A 2010 (26&27 April 2010, Raleigh, North Carolina, USA - <http://www.w4a.info/>) for the project "3D HapticWebBrowser: Towards Universal Web Navigation for the Visually Impaired, N. Kaklanis, K. Votis, K. Moustakas, D. Tzovaras".
- ◆ Special article of the US edition of Scientific American for the project "Haptic Rendering of Visual Data for the Visually Impaired", IEEE Multimedia, vol. 14, no. 1, pp. 62-72, January 2007" (<http://www.scientificamerican.com/article.cfm?id=getting-in-touch-virtual>).
- ◆ "Outstanding paper award" for the paper "Point-based similarity estimation between 2.5D visual hulls and 3d objects" presented at the international conference on Computer Graphics and Visualization (CGVCVIP 2011) in Rome, Italy, 2011.

◆ Publications

Dissertation

1. **K. Moustakas**, "Novel Techniques of Multimodal Rendering and Simulation of Interactive Virtual Environments", Aristotle University of Thessaloniki, 2007 (in Greek).

Books

1. **K. Moustakas**, I. Paliokas, A. Tsakiris, D. Tzovaras, "Computer Graphics and Virtual Reality", Hellenic Electronic Text Books, ISBN 978-960-603-255-4, In press (in Greek).
2. N. Avouris, N. Tselios, C. Katsanos, **K. Moustakas**, "Human Computer Interaction and Interactive System Design", Hellenic Electronic Text Books, In press (in Greek).

Journals

- J1. **K. Moustakas**, D. Tzovaras and M.G. Strintzis, "Stereoscopic Video Generation Based on Efficient Layered Structure and Motion Estimation from a Monoscopic Image Sequence", IEEE Transactions on Circuits and Systems for Video Technology, vol. 15, no. 8, pp. 1065 - 1073, August 2005.
- J2. **K. Moustakas**, D. Tzovaras, S. Carbini, O. Bernier, J.E. Viallet, S. Raidt, M. Mancas, M. Dimiccoli, E. Yagci, S. Balci, E.I. Leon and M.G. Strintzis, "MASTERPIECE: Physical Interaction and 3D content-based search in VR Applications", IEEE Multimedia, vol. 13, no. 3, pp. 92-100, July 2006.
- J3. **K. Moustakas**, D. Tzovaras and M.G. Strintzis, "SQ-Map: Efficient Layered Collision Detection and Haptic Rendering", IEEE Transactions on Visualization and Computer Graphics, vol. 13, no. 1, pp. 80 - 93, January 2007.
- J4. **K. Moustakas**, G. Nikolakis, K. Kostopoulos, D. Tzovaras and M.G. Strintzis, "Haptic Rendering of Visual Data for the Visually Impaired", IEEE Multimedia, vol. 14, no. 1, pp. 62-72, January 2007.
- J5. **K. Moustakas**, D. Tzovaras and G. Nikolakis, "Simulating the use of ancient technology works using advanced virtual reality technologies", International Journal of Architectural Computing, Special Issue on Cultural Heritage, vol. 5, no. 2, pp. 256-282, June 2007.
- J6. D. Ioannidis, D. Tzovaras, I.G. Damousis, S. Argyropoulos and **K. Moustakas**. "Gait Recognition using Compact Feature Extraction Transforms and Depth Information", IEEE Transactions on Information Forensics and Security, vol. 2, no. 3, pp. 623-630, September 2007.
- J7. K. Kostopoulos, **K. Moustakas**, D. Tzovaras, G. Nikolakis, C. Thillou and B. Gosselin, "Haptic Access to Conventional 2D Maps for the Visually Impaired", Springer International Journal on Multimodal User Interfaces, vol. 1, no. 2, pp. 13-19, July, 2007.
- J8. T. Pun, P. Roth, G. Bologna, **K. Moustakas** and D. Tzovaras, "Image and video processing for visually handicapped people", Eurasip International Journal on Image and Video Processing, volume 2007, article ID 25214, 12 pages.
- J9. S. Argyropoulos, **K. Moustakas**, A. Tsakiris, D. Tzovaras, O. Aran, A. Karpov and G.

- Varni, "Multimodal User Interface for the Communication of the Disabled", Springer International Journal on Multimodal User Interfaces, vol.2, no.2, pp.105-116, September 2008.
- J10. D. Tzovaras, **K. Moustakas**, G. Nikolakis and M.G. Strintzis, "Interactive Mixed Reality White Cane Simulation for the Training of the Blind and the Visually Impaired", Springer International Journal on Personal and Ubiquitous Computing, vol.13, no.1, pp.51-58, January 2009.
- J11. **K. Moustakas**, G. Nikolakis, D. Tzovaras, S. Carhini, O. Bernier, J.E. Viallet, "3D content-based search using sketches", Springer International Journal on Personal and Ubiquitous Computing, vol.13, no.1, pp. 59-67, January 2009.
- J12. **K. Moustakas**, D. Tzovaras and G. Stavropoulos, "Gait recognition using geometric features and soft biometrics", IEEE Signal Processing Letters, vol. 17, no. 4, pp. 367-370, April 2010.
- J13. A. Mademlis, K. Kostopoulos, **K. Moustakas**, D. Tzovaras and M.G. Strintzis, "A Map Search Framework Based on Attributed Graph Matching", IEEE Multimedia, vol.17, no.3, pp. 24-33, July 2010.
- J14. A. Vogianou, **K. Moustakas**, D. Tzovaras and M.G. Strintzis, "Enhancing Bounding Volumes using Support Plane Mappings for Collision Detection", Eurographics Computer Graphics Forum, vol. 29, no. 5, pp. 1595-1604, August 2010.
- J15. G. Stavropoulos, P. Moschonas, **K. Moustakas**, D. Tzovaras and M.G. Strintzis, "3D Model Search and Retrieval from Range Images using Salient Features", IEEE Transactions on Multimedia, vol. 12, no.7, pp. 692-704, November 2010.
- J16. A. Drosou, D. Ioannidis, **K. Moustakas** and D. Tzovaras, "Unobtrusive Behavioural and Activity Related Multimodal Biometrics: The ACTIBIO Authentication Concept", The Scientific World Journal: Special Issue on Biometrics, vol. 11, pp. 520-528, March 2011.
- J17. **K. Moustakas**, L. Dybkjaer, O. Aran, D. Tzovaras and N.O. Bernsen, "Using Modality Replacement to Facilitate Communication Between Blind and Hearing Impaired People", IEEE Multimedia, vol. 18, no. 2, pp. 26-37, April 2011.
- J18. D. Giakoumis, D. Tzovaras, **K. Moustakas** and G. Hassapis, "Automatic Recognition of Boredom in Video Games using novel Biosignal Moment-based Features", IEEE Transactions on Affective Computing, vol. 2, no. 3, pp. 119-133, September 2011.
- J19. A. Drosou, G. Stavropoulos, D. Ioannidis, **K. Moustakas** and D. Tzovaras, "Unobtrusive Multi-modal Biometric Recognition using Activity-related Signatures", IET Computer Vision Journal, , vol. 5, no. 6, pp. 367-379, 2011.
- J20. A. Drosou, D. Ioannidis, **K. Moustakas** and D. Tzovaras, "Spatiotemporal analysis of human activities for biometric authentication", Elsevier Computer Vision and Image Understanding, vol. 116, no. 3, pp.411-421, March 2012.
- J21. **K. Moustakas**, G. Stavropoulos, D. Tzovaras, "Point-based Similarity Estimation Between 2.5D Visual Hulls and 3D Objects", International Journal on Computer Science and Information Systems, vol.7, no.1, pp. 18-31, September 2012.
- J22. A.Drosou, **K. Moustakas**, D. Tzovaras and M. Petrou, "Systematic Error Analysis for the Enhancement of Biometric Systems using Soft Biometrics", IEEE Signal Processing Letters, vol. 19, no. 12, pp. 833-836, December 2012.

- J23. N. Kaklanis, P. Moschonas, **K. Moustakas** and D. Tzouvaras, "Virtual User Models for the elderly and disabled for automatic simulated accessibility and ergonomics evaluation of designs", Springer International Journal of Universal Access in the Information Society, Special Issue on Accessibility Issues in UIDLs, November 2013, Volume 12, Issue 4, pp 403-425.
- J24. A. Drosou, D. Ioannidis, D. Tzouvaras, **K. Moustakas** and M. Petrou, "Prehension Biometrics for Human Authentication", Elsevier Pattern Recognition, vol. 48, no. 5, pp. 1743-1759, 2015.
- J25. **K. Moustakas**, "6DoF Haptic Rendering using Distance Maps over Implicit Representations", Multimedia Tools and Applications, vol. 75, pp. 4543-4557, 2016.
- J26. S. Papadopoulos, **K. Moustakas**, A. Drosou and D. Tzouvaras, "BGPGraph: Detecting and Visualizing Internet Routing Anomalies", IET Information Security, vol. 10, no. 3, pp. 125-133, March 2016.
- J27. D. Stanev, **K. Moustakas**, J. Gliatis and C. Koutsojannis, "ACL Reconstruction Decision Support. Personalized Simulation of the Lachman Test and Custom Activities.", Methods of Information in Medicine, vol. 55, no. 1, pp. 98-105, January, 2016.
- J28. **K. Moustakas** and A.S. Lalos, "An information-theoretic treatment of passive haptic media", Multimedia Tools and Applications, to appear.
- J29. A.S Lalos, J. Lakoumentas, T. Dimas and **K. Moustakas**, "Energy Efficient Monitoring of Metered Dose Inhaler Usage", Springer International Journal of Medical Systems, accepted for publication.
- J30. A.S Lalos, I. Nikolas, E. Vlachos and **K. Moustakas**, "Compressed sensing for efficient encoding of dense 3D Meshes using model based Bayesian learning", IEEE Transactions on Multimedia, accepted for publication.

Book chapters:

- B1.**K. Moustakas**, P. Daras, D. Tzouvaras and M.G. Strintzis, "Interactive Simulation of Deformable Objects for Medical Applications", Wiley Encyclopedia of Biomedical Engineering, 6- Volume Set, Metin Akay (Editor), ISBN: 0-471-24967-X, June 2006.
- B2.G. Nikolakis, D. Koutsonanos, P. Daras, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Haptic Interaction in Medical Virtual Environments", Wiley Encyclopedia of Biomedical Engineering, 6- Volume Set, Metin Akay (Editor), ISBN: 0-471-24967-X, June 2006.
- B3.**K. Moustakas**, G. Nikolakis, D. Tzouvaras and M.G. Strintzis, "Haptic Access to Virtual Models of Real Data for Training the Visually Impaired", Applied Technologies in Medicine and Neuroscience, Verlag Integrative Psychiatrie, ISBN 3-85184-027-5, 2005.
- B4.**K. Moustakas**, G. Nikolakis, D. Tzouvaras and M.G. Strintzis, "Haptic Interface for the Performance of a Remote Echography Examination", Applied Technologies in Medicine and Neuroscience, Verlag Integrative Psychiatrie, ISBN 3-85184-027-5, 2005.
- B5.S. Argyropoulos and **K. Moustakas**, "Modality Replacement Framework for Applications for the Disabled", Multimodal User Interfaces, From Signals to Interaction, Springer Signals and Communication Technology Series, pp. 251-270, 2008.
- B6.**K. Moustakas**, S. Argyropoulos and D. Tzouvaras, "A Joint Modality Recognition Framework: Case Studies in Enhanced Speech Recognition for the Disabled and Multimodal Biometric Authentication", in H. Bourlard, F. Marques, J-P. Thiran (Eds) Mul-

timodal signal processing: methods and techniques to build multimodal interactive systems, Elsevier, November 2009.

- B7.N. Kaklanis, **K. Moustakas** and D. Tzouvaras, "Haptic Rendering of HTML components and 2D maps included in web pages" in G. Ghinea, F. Andres, S. Gulliver (Eds) Multiple Sensorial Media Advances and Applications: New Developments in MulSeMedia, IGI Global, 2012. 116-139.
- B8.A. Voggiannou, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Non-Linear Particle Systems for Scalable Simulation of Deformable Models", Lecture Notes in Communications in Computer and Information Science, Springer, vol. 229, pp. 260-273, 2011.
- B9.A. Drosou, D. Ioannidis, G. Stavropoulos, **K. Moustakas** and D. Tzouvaras, "Biometric Keys for the Encryption of Multimodal Signatures" in InTech *Biometrics/Book 2*, ISBN 978-953-307-487-0, 2011.
- B10. A. Tspouriaris, A. Kogkas, C. Triantafyllou, **K. Moustakas** and C. Koutsojannis, "Modeling and simulating a virtual physiological knee for ACL reconstruction planning", Springer Communications in Computer and Information Science (CCIS), accepted for publication.

Conferences:

- C1.**K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Stereoscopic Video Authoring Tool based on Efficient Object-based Structure and Motion Estimation from a Monoscopic Image Sequence", 2nd International Workshop on ICTs, Arts and Cultural Heritage, Athens, October 2003.
- C2.**K. Moustakas**, G. Nikolakis, D. Tzouvaras and M.G. Strintzis, "Extraction of 3D Scene Structure from a Video for the Generation of 3D Visual and Haptic Representations", W3C Workshop on Multimodal Interaction, Sophia Antipolis, France, July, 2004.
- C3.**K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Fast Hierarchical Simulation of Cloth and Deformable Objects using an Optimal Pyramidal Representation", International Conference on Computer Animation and Social Agents, CASA2004, pp. 163-170, July 2004, Geneva.
- C4.**K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "A Non Causal Bayesian Framework for Object Tracking and Occlusion Handling for the Synthesis of Stereoscopic Video", 2nd Inter. Symposium on 3D Data Processing, Visualization and Transmission (3DPVT'04), Thessaloniki, September, 2004.
- C5.**K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Optimal Hierarchical Representation and Simulation of Cloth and Deformable Objects", IEEE International Conference on Image Processing ICIP2004, pp. 3013-3016, October 2004, Singapore.
- C6.D. Koutsonanos, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Interactive Cloth Editing and Simulation in Virtual Reality Applications for Theater Professionals", 5th International Symposium on Virtual Reality, Archaeology and Cultural Heritage (Eurographics), pp. 37-46, December 2004, Brussels.
- C7.**K. Moustakas**, G. Nikolakis, D. Tzouvaras and M.G. Strintzis, "A Geometry Education Haptic VR Application Based on a New Virtual Hand Representation", in IEEE VR2005, pp. 249-252, March 2005, Bonn.
- C8.**K. Moustakas**, G. Nikolakis, D. Koutsonanos, D. Tzouvaras and M.G. Strintzis, "Haptic Feedback Using an Efficient Superquadric Based Collision Detection Method", in First Joint Eurohaptics Conference and Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems, March 2005, Pisa.

- C9. **K. Moustakas**, D. Koutsonanos, D. Tzouvaras and M.G. Strintzis, "Enhancing Costume designer Creativity Utilizing Haptic Interaction in Cloth Editing Applications", in HCI International, July 2005, Las Vegas.
- C10. G. Nikolakis, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Haptic Representation of Images for the Blind and the Visually Impaired", in HCI International, July 2005, Las Vegas.
- C11. **K. Moustakas**, G. Nikolakis, D. Tzouvaras and M.G. Strintzis, "Haptic Interaction with a Virtual Environment Dynamically Created from a Monoscopic Video", in HCI International, July 2005, Las Vegas.
- C12. **K. Moustakas**, P. Daras, D. Tzouvaras and M.G. Strintzis, "Classification of 3D Models using Combined Semantical and Geometrical Information", Workshop towards Semantic Virtual Environments (SVE2005), pp. 77-85, March 2005, Villars, Switzerland.
- C13. **K. Moustakas**, D. Tzouvaras, S. Carbini, O. Bernier, J.E. Viallet, S. Raidt, M. Mancas, M. Dimiccoli, E. Yagci, S. Balci and E.I. Leon, "MASTER-PIECE: A Multimodal (Gesture+Speech) Interface for 3D Model Search and Retrieval Integrated in a Virtual Assembly Application", Proceedings of the eINTERFACE 2005, pp. 62-75, August 2005.
- C14. D. Tzouvaras, **K. Moustakas**, G. Nikolakis and M.G. Strintzis, "Mixed Reality Cane Simulation", International conference on Artificial Intelligence Applications and Innovations, pp. 353-360, June 2006, Athens.
- C15. **K. Moustakas**, G. Nikolakis, D. Tzouvaras, S. Carbini, O. Bernier and J.E. Viallet, "3D content-based search using sketches", International conference on Artificial Intelligence Applications and Innovations, pp. 361-368, June 2006, Athens.
- C16. G. Nikolakis, G. Brochard, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis: "Navigation Training Tool for the Visually Impaired", International Conference on Assistive Technologies for Vision and Hearing Impairment , CVHI 2006, Kufstein, July, 2006.
- C17. **K. Moustakas**, G. Nikolakis, D. Tzouvaras, B. Deville, I. Marras and J. Pavlek, "Multimodal Tools and Interfaces for the Intercommunication Between Visually Impaired and "Deaf and Mute" People", Proceedings of the eINTERFACE 2006, Dubrovnik, August, 2006.
- C18. G. Nikolakis, **K. Moustakas**, D. Tzouvaras and T. Harissis, "Interactive Simulation of Ancient Technology Works", 5th International Symposium on Virtual Reality, Archaeology and Cultural Heritage (Eurographics), Nikosia, November, 2006.
- C19. K. Kostopoulos, **K. Moustakas**, D. Tzouvaras and G. Nikolakis, "Haptic Access to Conventional 2D Maps for the Visually Impaired", 3DTV conference, Kos, May, 2007.
- C20. S. Argyropoulos, **K. Moustakas**, A. Karpov, O. Aran, D. Tzouvaras, T. Tsakiris, G. Varni and B. Kwon, "A Multimodal Framework for the Communication of the Disabled", Proceedings of the eINTERFACE 2007, Istanbul, August, 2007.
- C21. D. Ioannidis, D. Tzouvaras, **K. Moustakas**, "Gait Identification Using the 3D Protrusion Transform", IEEE International Conference on Image Processing ICIP2007, pp. 349-352, 2007.
- C22. G. Stavropoulos, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "A Novel Approach for Range Image to 3D Model Partial Matching", in Eurographics Workshop on 3D Object Retrieval, April 2008, Crete, Greece.

- C23. A. Vogianou, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Distance Maps for Collision Detection of Deformable Models", IADIS Computer Graphics and Visualization 2008 (CGV 2008) Conference, pp. 216-220, July 2008.
- C24. A. Vogianou, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "A First approach to Contact-Based Biometrics for User Authentication", 3rd IAPR/IEEE International Conference on Biometrics, pp. 838-845, Sassari, Italy, June 2009.
- C25. **K. Moustakas**, D. Tzouvaras, L. Dybkjaer and N.O. Bernsen, "A Modality Replacement Framework for the Communication between Blind and Hearing Impaired People", in HCI International 2009, pp. 226-235, San Diego, July 2009.
- C26. N. Kaklanis, D. Tzouvaras and **K. Moustakas**, "Haptic navigation in the World Wide Web", in HCI International 2009, pp. 707-715, San Diego, July 2009.
- C27. A. Vogianou, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "Enhancing Haptic Rendering through Predictive Collision Detection", in HCI International 2009, pp. 394-402, San Diego, July 2009.
- C28. D. Giakoumis, A. Vogianou, I. Kosunen, D. Devlaminck, M. Ahn, A-M. Burns, F. Khademi, **K. Moustakas**, D. Tzouvaras, "Multimodal monitoring of the behavioral and physiological state of the user in interactive VR games", Proceedings of the eNTERFACE 2009, Genova, August 2009.
- C29. D. Giakoumis, A. Vogianou, I. Kosunen, **K. Moustakas**, D. Tzouvaras, G. Hassapis, "Identifying Psychophysiological Correlates of Boredom and Negative Mood induced during HCI", International Conference on Biomedical Engineering Systems and Technologies, BIOSTEC 2010, pp. 3-12, 2010.
- C30. T. Tsakiris, **K. Moustakas** and D. Tzouvaras, "Improved Accessibility in Maps for Visually Impaired Users", European Joint Conferences on Theory and Practice of Software, Accessible Mainstream Applications, ETAPS 2010.
- C31. A. Drosou, **K. Moustakas** and D. Tzouvaras, "On the Potential of Activity Related Recognition", International Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, Angers, France, 2010.
- C32. A. Vogianou, **K. Moustakas**, D. Tzouvaras and M.G. Strintzis, "A Practical Approach for applying Non-Linear Dynamics to Particle Systems", International Conference on Computer Graphics Theory and Applications, Angers, France, 2010.
- C33. **K. Moustakas** and D. Tzouvaras, "Virtual Simulation of Cultural Heritage Works using Haptic Interaction", 6th Hellenic Conference on Artificial Intelligence (SETN 2010), Athens, May 2010.
- C34. N. Kaklanis, K. Votis, **K. Moustakas** and D. Tzouvaras, "3D HapticWebBrowser: Towards Universal Web Navigation for the Visually Impaired", 7th International Conference on Web Accessibility, W4A 2010, Raleigh, USA, April 2010.
- C35. N. Kaklanis, **K. Moustakas**, K. Votis and D. Tzouvaras, "A framework for accessibility testing of virtual environments based on UsiXML", ACM SIGCHI Symposium on Engineering Interactive Computing Systems, UsiXML-EICS 2010, Berlin, June 2010.
- C36. G. Petkos, V. Darlagiannis, **K. Moustakas** and D. Tzouvaras, "Utilizing treemaps for multicriterial search of 3D objects", Eurographics International Symposium on Visual Analytics Science and Technology, EuroVAST 2010, Bordeaux, June 2010.

- C37. A. Vogianou, **K. Moustakas**, D. Tzouvaras, M. G. Strintzis, "Enhancing Bounding Volumes using Support Plane Mappings for Collision Detection", Eurographics Symposium on Geometry Processing 2010, (SGP 2010), 5-7 July 2010, Lyon, France
- C38. V. Darlagiannis, **K. Moustakas** and D. Tzouvaras, "On Geometric and Soft Shape Content-Based Search", IEEE International Conference on Image Processing ICIP2010, pp.3157-3160, Hong Kong, September 2010.
- C39. A. Drosou, **K. Moustakas**, D. Ioannidis and D. Tzouvaras, "Activity-related biometrics based on motion trajectories", BIOSIG 2010, Darmstadt, Germany, September 2010.
- C40. A. Drosou, **K. Moustakas** and D. Tzouvaras, "Event-based unobtrusive authentication using multi-view image sequences", ACM Multimedia 2010 ARTEMIS workshop, Florence, Italy, October 2010.
- C41. N. Kaklanis, P. Moschonas, **K. Moustakas** and D. Tzouvaras, "Enforcing accessible design of products and services through simulated accessibility evaluation", International Conference on ICT for ageing and eInclusion, CONFIDENCE 2010, Jyväskylä, Finland, December 2010.
- C42. N. Kaklanis, **K. Moustakas** and D. Tzouvaras, "A framework for automatic simulated accessibility assessment in virtual environments", in Digital Human Modeling, HCII 2011, Orlando, Florida, July 2011.
- C43. **K. Moustakas**, G. Stavropoulos and D. Tzouvaras, "Point-based similarity estimation between 2.5D visual hulls and 3d objects", in Proceedings of the International Conference on Computer Graphics, Visualization, Computer Vision and Image Processing (CGVCVIP 2011), Rome, Italy, July 2011.
- C44. A. Drosou, **K. Moustakas**, D. Ioannidis, D. Tzouvaras, "Activity related biometric authentication using Spherical Harmonics", IEEE International Workshop on Computer Vision for Computer Games, Colorado Springs, June 2011.
- C45. N. Kaklanis, **K. Moustakas** and D. Tzouvaras, "An extension of UsiXML enabling the detailed description of users including elderly and disabled", in International Workshop on Software Support for User Interface Description Language, Interact 2011, Lisbon, 2011.
- C46. P. Moschonas, N. Kaklanis, A. Tsakiris, **K. Moustakas**, and D. Tzouvaras, "An Open Simulation Framework for Automated and Immersive Accessibility Engineering", 6th Cambridge Workshop on Universal Access and Assistive Technology, CWUAAT 2012, March 2012.
- C47. A. Tsakiris, P. Moschonas, **K. Moustakas** and D. Tzouvaras, "An open framework for immersive and non-immersive accessibility simulation for smart living spaces", ICO-ST'12 Proceedings of the 10th international smart homes and health telematics conference on Impact Analysis of Solutions for Chronic Disease Prevention and Management, pp. 291-294, 2012.
- C48. N. Kaklanis, **K. Moustakas** and D. Tzouvaras, "A methodology for generating virtual user models of elderly and disabled for the accessibility assessment of new products", 13th International Conference on Computers Helping People with Special Needs, IC-CHP2012, Linz, July 2012.
- C49. **K. Moustakas**, G. Stavropoulos and D. Tzouvaras, "Protrusion Fields for 3D Model Search and Retrieval based on Range Image Queries", 8th International Symposium

on Visual Computing, Crete, July 2012.

- C50. S. Papadopoulos, **K. Moustakas**, and D. Tzovaras, "Hierarchical Visualization of BGP Routing Changes Using Entropy Measures", 8th International Symposium on Visual Computing, Crete, July 2012.
- C51. S. Papadopoulos, **K. Moustakas**, and D. Tzovaras, "BGPViewer: Using Graph representations to explore BGP routing changes", DSP 2013, July 2013, Santorini, Greece.
- C52. **K. Moustakas**, "Handling haptics as a stand-alone medium", 21st International Conference on Computer Graphics, Visualization and Computer Vision 2013, WSCG 2013, Plzen, June 2013.
- C53. **K. Moustakas**, "Haptic Media from an Information Theoretic Perspective", IEEE International Symposium on Haptic Audiovisual Environments and Games, HAVE 2013, Istanbul, October 2013.
- C54. **K. Moustakas**, "Free-form implicit haptic rendering", 19th Eurographics Symposium on Virtual Environments, JVRC 2013, Paris, December, 2013.
- C55. **K. Moustakas**, "Haptic Rendering using Support Plane Mappings", 9th International Conference on Computer Graphics and Applications, GRAPP 2014, Lisbon, January, 2014.
- C56. A. Tsipouriaris, A. Kogkas, C. Triantafyllou, **K. Moustakas** and C. Koutsojannis, "Simulation of ACL reconstruction dynamics for optimal rehabilitation planning", 8th International Conference on Pervasive Computing Technologies for Healthcare, REHAB 2014, May 2014, Oldenburg, Germany.
- C57. C. Papapavlou and **K. Moustakas**, "Physics-based modelling and animation of saccadic eye movement", 22nd International Conference on Computer Graphics, Visualization and Computer Vision, WSCG 2014, Plzen, June 2014.
- C58. **K. Moustakas**, "Six Degrees of Freedom Implicit Haptic Rendering", 10th International Conference on Artificial Intelligence Applications and Innovations, AIAI 2014, Rhodes, September, 2014.
- C59. D. Stanev and **K. Moustakas**, "Virtual human behavioural profile extraction using Kinect based motion tracking", Cyberworlds 2014, Santander, Spain, October 2014.
- C60. **K. Moustakas**, K. Votis, D. Tzovaras, K. Gurney, S. Anderson, P. Brown, M. Hu, M. Da Lio, E. Chroni, "NoTremor: Virtual, Physiological and Computational Neuromuscular Models for the Predictive Treatment of Parkinson's Disease", Virtual Physiological Human Conference 2014, Trondheim, September 2014.
- C61. S. James, A. Blenkinsop, S. Anderson, C. Papapavlou, **K. Moustakas** and K. Gurney, "A computational framework for describing the saccadic eye movement system of the Parkinsonian digital patient", Virtual Physiological Human Conference 2014, Trondheim, September 2014.
- C62. C. Papapavlou and **K. Moustakas**, "Neuromuscular simulation of saccadic eye movement", 6th ELEMbio conference, Patras, October 2014.
- C63. G. Stavropoulos, S. Krinidis, D. Ioannidis, **K. Moustakas** and Dimitris Tzovaras "A Building Performance Evaluation & Visualization System", IEEE Big Data 2014, Washington, October 2014.
- C64. I. Nikolas and **K. Moustakas**, "Space and time partitioning for efficient uncluttered

scientific visualization", IEEE Scientific Visualization 2014 (SciVis contest), November 2014.

- C65. D. Stanev and **K. Moustakas**, "Proprioceptive Modeling of the Peripheral Nervous System as an Extension to the Biomechanics Musculoskeletal Models", 6th Panhellenic Conference on Biomedical Technology, Athens 2015.
- C66. K. Votis, A.S. Lalos, **K. Moustakas** and D. Tzovaras, "Analysis Modeling and Sensing of Both Physiological and Environmental Factors for the Customized and Predictive Self-Management of Asthma", 6th Panhellenic Conference on Biomedical Technology, Athens 2015.
- C67. I. Nikolas, C. Papapavlou, A. Lalos and **K. Moustakas**, "Interactive Visualization and Analysis of Eye Biomechanics", 9th International Conference on Computer Graphics and Visualization, Las Palmas, July 2015.
- C68. A.S. Lalos and **K. Moustakas**, "Energy Efficient Telemonitoring of Asthmatic Wheezes", EUSIPCO 2015, Nice 2015.
- C69. G. Arvanitis, **K. Moustakas** and N. Fakotakis, "Real-Time Context Aware Audio Augmented Reality", SPECOM 2015, Athens, Greece, September 2015.
- C70. D. Stanev, P. Moschonas, K. Votis, D. Tzovaras and **K. Moustakas**, "Simulation and Visual Analysis of Neuromusculoskeletal Models and Data", 11th International Conference on Artificial Intelligence Applications and Innovations, AIAI 2014, Biarritz-Anglet-Bayonne, France, September, 2015.
- C71. V. Kyriazakos and **K. Moustakas**, "A User-Perspective View for Mobile AR Systems Using Discrete Depth Segmentation", Cyberworlds 2015, Gotland, Sweden, October 2015.
- C72. M. Bikos, Y. Itoh, G. Klinker and **K. Moustakas**, "An Interactive Augmented Reality Chess Game using Bare-Hand Pinch Gestures", Cyberworlds 2015, Gotland, Sweden, October 2015.
- C73. A.S. Lalos, I. Nikolas and **K. Moustakas**, "Sparse Coding of Dense 3d Meshes in Mobile Cloud Applications", ISSPIT 15th IEEE International Symposium on Signal Processing and Information Technology, Abu Dhabi, December 2015.
- C74. A. Spathis-Papadiotis and **K. Moustakas**, "Simulation of Tsunami impact upon Coastline", 3rd International Conference on Augmented Reality, Virtual Reality and Computer Graphics, Otrando, Lecce, June 2016.
- C75. V. Kyriazakos, G. Nikolakis and **K. Moustakas**, "Natural Interaction with 3D Content on Mobile AR Systems using Gesture Recognition", 3rd International Conference on Augmented Reality, Virtual Reality and Computer Graphics, Otrando, Lecce, June 2016.
- C76. S. Nousias, A. Lalos and **K. Moustakas**, "Computational Modeling for Simulating Obstructive Lung Diseases Based on Geometry Processing Methods", HCI International 2016, Toronto, July 2016.
- C77. A. Anastasiou, J. Lakoumentas and **K. Moustakas**, "A mHealth system for Parkinson's disease evaluation using Smartphone test data", IEICE Information and Communication Technology Forum, Patras, July 2016.
- C78. G. Arvanitis, **K. Moustakas** and N. Fakotakis, "Online Biometric Identification with

- Face Analysis in Web Applications”, SPECOM 2016, Budapest, Hungary, August 2016.
- C79. N. Dimitriou, G. Stavropoulos, **K. Moustakas** and D. Tzovaras, “Multiple Object Tracking based on Motion Segmentation of Point Trajectories”, IEEE Advanced Video and Signal-based Surveillance (AVSS) 2016, Colorado Springs, August 2016.
- C80. S.S. James, A. Cope, A. Blenkinsop, C. Papapoulou, **K. Moustakas**, S. Anderson and K. Gurney, “Using the SpineML toolchain to simulate an integrated brain and biomechanical model of the oculomotor system”, Frontiers Neuroinformatics 2016, September, Reading, UK.
- C81. S. Nousias, A. Lalos, A. Lalas, D. Kikidis, **K. Moustakas**, K. Votis, D. Tzovaras, O. Usmani, F. Chung, “Computational modeling methods for simulating obstructive human lung diseases”, ERS 2016, London, September 2016.
- C82. S. James, A. Blenkinsop, A. Cope, S. Anderson, C. Papapavlou, **K. Moustakas**, K. Gurney, “Integrating brain and biomechanics for the study of Parkinson’s disease”, Virtual Physiological Human 2016, Amsterdam, September 2016.
- C83. D. Stanev, A. Blenkinsop, K. Gurney, **K. Moustakas**, “Neuromusculoskeletal Inertial Filtering of Centrally Generated Beta Oscillations in Parkinson's Disease”, Virtual Physiological Human 2016, Amsterdam, September 2016.
- C84. S. Nousias, J. Lakoumentas, A. Lalos, D. Kikidis, **K. Moustakas**, K. Votis, D. Tzovaras, “Monitoring asthma medication adherence through content based audio classification”, IEEE Symposium on Computational Intelligence, Athens, Greece, December 2016.
- C85. A. Lalas, S. Nousias, D. Kikidis, A. Lalos, **K. Moustakas**, K. Votis, O. Usmani and D. Tzovaras, “Numerical Assessment of Airflow and Inhaled Particles Attributes in Obstructed Pulmonary System”, IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2016), Shenzhen, December, 2016.