This volume contains papers presented at The 2013 International Conference on Computer Graphics & Virtual Reality (CGVR'13). Their inclusion in this publication does not necessarily constitute endorsements by editors or by the publisher.

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Foreword

It gives us great pleasure to introduce this collection of papers to be presented at the 2013 International Conference on Computer Graphics & Virtual Reality (CGVR’13), July 22 through 25, 2013, at The New Tropicana Hotel, Las Vegas, USA.

An important mission of the World Congress in Computer Science, Computer Engineering, and Applied Computing (a federated congress to which this conference is affiliated with) includes “Providing a unique platform for a diverse community of constituents composed of scholars, researchers, developers, educators, and practitioners. The Congress makes concerted effort to reach out to participants affiliated with diverse entities (such as: universities, institutions, corporations, government agencies, and research centers/labs) from all over the world. The congress also attempts to connect participants from institutions that have teaching as their main mission with those who are affiliated with institutions that have research as their main mission. The congress uses a quota system to achieve its institution and geography diversity objectives.” By any definition of diversity, this congress is among the most diverse scientific meeting in USA. We are proud to report that this federated congress has authors and participants from 82 different nations representing variety of personal and scientific experiences that arise from differences in culture and values. As can be seen (see below), the program committee of this conference as well as the program committee of all other tracks of the federated congress are as diverse as its authors and participants.

The program committee would like to thank all those who submitted papers for consideration. About 60% of the submissions were from outside the United States. Each submitted paper was peer-reviewed by two experts in the field for originality, significance, clarity, impact, and soundness. In cases of contradictory recommendations, a member of the conference program committee was charged to make the final decision; often, this involved seeking help from additional referees. In addition, papers whose authors included a member of the conference program committee were evaluated using the double-blinded review process. One exception to the above evaluation process was for papers that were submitted directly to chairs/organizers of pre-approved sessions/workshops; in these cases, the chairs/organizers were responsible for the evaluation of such submissions. The overall paper acceptance rate for regular papers was 27%; 6% of the remaining papers were accepted as poster papers (at the time of this writing, we had not yet received the acceptance rate for a few individual tracks.)

We are very grateful to the many colleagues who offered their services in organizing the conference. In particular, we would like to thank the members of the Program Committee of CGVR’13, members of the congress Steering Committee, and members of the committees of federated congress tracks that have topics within the scope of CGVR. Many individuals listed below, will be requested after the conference to provide their expertise and services for selecting papers for publication (extended versions) in journal special issues as well as for publication in a set of research books (to be prepared for publishers including: Springer, Elsevier, BMC, and others).

- Dr. Alireza Abbasi; School of Engineering and Information Technology, University of New South Wales (UNSW), Canberra, Australia
- Dr. Selim Aissi (World Congress Steering Committee); formerly, Chief Strategist - Security, Intel Corp., USA; Senior Business Leader & Head of Global Enterprise Security Architecture, Visa Corporation, USA
- Prof. Babak Akhgar (World Congress Steering Committee); Fellow of the British Computer Society, CITP; Professor of Informatics; Co-Director of CENTRIC (Centre of Excellence in Terrorism, Resilience, Intelligence & organised Crime research), Sheffield Hallam University, Sheffield, UK
- Prof. Nizar Al-Holou (World Congress Steering Committee); Professor and Chair, ECE Department; Vice Chair, IEEE/SEM-Computer Chapter; University of Detroit Mercy, Detroit, Michigan, USA
- Prof. Hamid R. Arabnia (World Congress Steering Committee); Professor, Computer Science; Editor-in-Chief, The Journal of Supercomputing (Springer); Elected Fellow, Int'l Society of Intelligent Biological Medicine (ISIBM); The University of Georgia, Department of Computer Science, USA
- Peyman Arebi; Assistant Professor, Department of Computer Engineering, Technical and Vocational University, Bushehr, Iran
- Prof. Juan Jose Martinez Castillo; Director of The Acantelys Research Group and Coordinator of the Computer Engineering Department, Universidad Gran Mariscal de Ayacucho, Venezuela
• Prof. Juan Cuadrado-Gallego; Universidad de Alcalà, Edificio Politecnico, Madrid, Spain; Ecole de technologie supérieure, University of Quebec, Canada
• Prof. Kevin Dami (World Congress Steering Committee); Director, Computer Science and Software Engineering Programs; Department of Mathematics, Computer Science and Software Engineering; University of Detroit Mercy, Detroit, Michigan, USA
• Prof. Leonidas Deligiannidis; Professor, Computer Science, Wentworth Institute of Technology, MA, USA
• Prof. George Jandieri (World Congress Steering Committee); Georgian Technical University, Tbilisi, Georgia; Chief Scientist, The Institute of Cybernetics, Georgian Academy of Science, Georgia; Editorial Board Member: International Journal of Microwaves and Optical Technology, Georgia
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• Dr. Ali Mostafaeipour; Industrial Engineering Department, Yazd University, Iran
• Dr. Saurabh Makherjee; Banasthali University, Banasthali, Rajasthan, India
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• Prof. James J. (Jong Hyuk) Park (World Congress Steering Committee); Professor of Computer Science and Engineering, Seoul National University of Science and Technology (SeoulTech), Korea; President, KITCS; President, FTRA; Editor-in-Chiefs: HCIS, JoC and IJITCC Journals
• Dr. Liang Shi; Senior Researcher, McAfee, USA
• Ashu M. G. Solo, (Publicity Chair); Fellow of British Computer Society, Principal/R&D Engineer, Maverick Technologies America Inc., USA
• Prof. Fernando G. Tinetti (World Congress Steering Committee); School of Computer Science, Universidad Nacional de La Plata, La Plata, Argentina; Co-editor, Journal of CS and Technology (JCS&T)
• Dr. Predrag Tosic (World Congress Steering Committee); Microsoft, Washington, USA
• Prof. Vladimir Volkov (World Congress Steering Committee); The Bonch-Bruevich State University of Telecommunications, Saint-Petersburg, Russia
• Prof. Patrick Wang; Fellow of IAPR, ISIBM, WASE; Zijiang Chair Professor, ECNU, Shanghai and NTUST, Taipei, Taiwan; Founding President and CEO, Wang Teknology Lab.; MIT Research Consultant; Harvard University, Adj. Faculty, USA; Northeastern University, Boston, MA, USA
• Prof. Jane You; The Hong Kong Polytechnic University, Hong Kong

provided significant help in organizing the conference as well as providing some resources. We are grateful to them all.

We express our gratitude to keynote, invited, and individual conference/tracks and tutorial speakers - the list of speakers appears on the conference web site. We would also like to thank the followings: UCMSS (Universal Conference Management Systems & Support, California, USA) for managing all aspects of the conference; Dr. Tim Field of APC for managing the printing of the proceedings; and the staff of the New Tropicana Hotel in Las Vegas for the professional service they provided. Last but not least, we would like to thank the Co-Editors of CGVR’13: Prof. Hamid R. Arabnia, Prof. Leonidas Deligiannidis, and Ashu M. G. Solo.

We present the proceedings of CGVR’13.

Steering Committee, 2013
http://www.world-academy-of-science.org/
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