Contents

Preface v
   James D. Westwood
MMVR19 Proceedings Editors vi
MMVR19 Organizing Committee vii

A Meshless EFG-Based Algorithm for 3D Deformable Modeling of Soft Tissue in Real-Time
   Elahe Abdi, Farzam Farahmand and Mohammad Durali 1

Design of a 4 DOF Laparoscopic Surgery Robot for Manipulation of Large Organs
   Alireza Alamdar, Alireza Mirbagheri, Farzam Farahmand and Mohammad Durali 8

Virtual Help for Real Surgery: The Case of Awake Surgery
   Giovanni Albani, Pietro Cipresso, Andrea Gaggioli, Silvia Serino, Cinzia Vigna, Lorenzo Priano, Alessandro Mauro, Angelo Franzini and Giuseppe Riva 13

Enhancing Medical Communication Training Using Motion Capture, Perspective Taking and Virtual Reality
   Ivelina V. Alexandrova, Marcus Rall, Martin Breidt, Gabriela Tullius, Uwe Kloos, Heinrich H. Bülthoff and Betty J. Mohler 16

Medical Students’ Attitudes Toward Obese Patient Avatars of Different Skin Color
   Allen D. Andrade, Jorge G. Ruiz, Michael J. Mintzer, Pedro Cifuentes, Ramanakumar Anam, Josh Diem, Orlando Gómez-Marín, Huaping Sun and Bernard A. Roos 23

Abnormal Red Blood Cells Detection Using Adaptive Neuro-Fuzzy System
   Nahid Babazadeh Khameneh, Hossein Arabalibek, Piruz Salehian and Saeed Setayeshi 30

Concurrent and Face Validity of a Capsulorhexis Simulation with Respect to Human Patients
   P. Pat Banerjee, Deepak P. Edward, Shun Liang, Charles S. Bouchard, Paul J. Bryar, Richard Ahuja, Phillip Dray and Daniel P. Bailey 35

An Aneurysm Clipping Training Module for the Neurosurgical Training Simulator NeuroSim
   Florian Beier, Evangelos Sismanidis, Axel Stadie, Kirsten Schmieder and Reinhard Männer 42

Distributed Adaptive Simulation Through Standards-Based Integration of Simulators and Adaptive Learning Systems
   Bryan Bergeron, Andrew Cline and Jaime Shipley 48

Volume Visual Attention Maps (VVAM) in Ray-Casting Rendering
   Andoni Beristain, John Congote and Oscar Ruiz 53

Haptic Feedback in OP:Sense – Augmented Reality in Telemanipulated Robotic Surgery
   T. Beyl, P. Nicolai, H. Mönnich, J. Raczkowksy and H. Wörn 58
Haptic Handles for Robotic Surgery

Hannes Bleuler, Laura Santos-Carreras, Ali Sengül and Giulio Rognini

Development of Medical Engagement Training Toolkits to Support Special Operations Military Assistance Programs in Austere Environments

Ben H. Boedeker, David Boedeker and Charmaine Tate

User Preference Comparing a Conventional Videolaryngoscope Blade vs. a Novel Suction Videolaryngoscope Blade in Simulated Hemorrhagic Airway Intubation

Ben H. Boedeker, Mary Bernhagen, David J. Miller and W. Bosseau Murray

Use of a Cardiac Algorithm in a Preoperative Evaluation Clinic – A Pilot Study

Ben H. Boedeker, Mary A. Barak-Bernhagen, Nikola Miljkovic, Thomas A. Nicholas IV, Ronald L. White and Bobbie Sweitzer

Surgical Tools Recognition and Pupil Segmentation for Cataract Surgical Process Modeling

David Bouget, Florent Lalys and Pierre Jannin

Evaluation of Neuroanatomical Training Using a 3D Visual Reality Model

Danielle N. Brewer, Timothy D. Wilson, Roy Eagleson and Sandrine de Ribauipierre

A Compact High-Definition Low-Cost Digital Stereoscopic Video Camera for Rapid Robotic Surgery Development

Jay Carlson, Jędrzej Kowalczyk, Eric Psota and Lance C. Pérez

Evaluation of Tensiometric Assessment as a Measure of Skill Degradation

Jeffrey J.H. Cheung, David Rojas, Bryce Weber, Bill Kapralos, Heather Carnahan and Adam Dubrowski

EEG Alpha Asymmetry in Virtual Environments for the Assessment of Stress-Related Disorders

Pietro Cipresso, Andrea Gaggioli, Silvia Serino, Federica Pallavicini, Simona Raspelli, Alessandra Grassi, Luigi Sellitti and Giuseppe Riva

Use of a Linear Motion Stroke Potentiometer as a High Precision Sensor for Linear Translation in a Laparoscopic Ligating Loop Simulation

Saurabh Dargar, Ganesh Sankaranarayanan and Suvranu De

ToolTrack™: A Compact, Low-Cost System for Measuring Surgical Tool Motion

Saurabh Dargar, Ganesh Sankaranarayanan and Suvranu De

Anatomic Hepatectomy Planning Through Mobile Display Visualization and Interaction

Henrique Galvan Debarba, Jerónimo Grandi, Anderson Maciel and Dinamar Zanchet

Towards a Generic Framework for Evaluation and Comparison of Soft Tissue Modeling

Aurélien Deram, Yohan Payan and Emmanuel Promayon

The Application of Technology for the Creation of “Retention Profiles” for Use in Adaptive Learning and the Delivery of Remedial Material

Ross Dworkin and Andrew Cline

A 6 Degrees-of-Freedom Haptic Milling Simulator for Surgical Training of Vertebral Operations

Magnus Eriksson and Jan Wikander
Force Sensing-Based Simulator for Arthroscopic Skills Assessment in Orthopaedic Knee Surgery  
*Abelardo Escoto, Ana Luisa Trejos, Michael D. Naish, Rajni V. Patel and Marie-Eve LeBel*

An Open Source Mobile Platform for Psychophysiological Self Tracking  
*Andrea Gaggioli, Pietro Cipresso, Silvia Serino, Giovanni Pioggia, Gemmaro Tartarisco, Giovanni Baldus, Daniele Corda and Giuseppe Riva*

Creating a Representative Map for Arthroscopy Simulation  
*John Daniel Hachey, Marie-Eve LeBel and Sayra Cristancho*

A Resource Management Tool for Real-Time Multimodal Surgical Simulation  
*Tansel Halic, Ganesh Sankaranarayanan and Suvranu De*

A Framework for Web Browser-Based Medical Simulation Using WebGL  
*Tansel Halic, Woojin Ahn and Suvranu De*

Haptic Simulator for Liver Diagnostics Through Palpation  
*Felix G. Hamza-Lup, Crenguta M. Bogdan and Adrian Seitan*

Classification of Wheeze Sounds Using Cepstral Analysis and Neural Networks  
*Amjad Hashemi, Hossein Arabalibeik and Khosrow Agin*

Training System for NOTES and SPS Surgery Robot That Enables Spatiotemporal Retrospective Analysis of the Training Process  
*Asaki Hattori, Naoki Suzuki, Satoshi Ieiri, Morimasa Tomikawa, Hajime Kenmotsu and Makoro Hashizume*

Training Diagnosis and Treatment of Cervical Spine Trauma Using a New Educational Program for Visualization Through Imaging and Simulation (VIS): A First Evaluation by Medical Students  
*Leif Hedman, Madeben Fahlstedt, Marcus Schlickum, Hans Möller, Peter Halldin, Hans von Holst and Li Felländer-Tsai*

SBAR ‘Flattens the Hierarchy’ Among Caregivers  
*Wm. LeRoy Heinrichs, Eric Bauman and Parvati Dev*

Potential of the Navigated Controlled Surgery at the Lateral Skull Base with the Navigated Control Unit (NCU 2.0)  
*Mathias Hofer, Tim Lueth, Andreas Dietz and Gero Strauss*

An Accelerated Haptic Feedback Algorithm Utilizing Volume Reconstruction  
*Rui Hu, Kenneth E. Barner and Karl V. Steiner*

A Non-Photorealistic Surgery Simulation System  
*Rui Hu, Kenneth E. Barner, Jingyi Yu and Karl V. Steiner*

Investigating the Muscle Activities of Performing Surgical Training Tasks Using a Virtual Simulator  
*Chun-Kai Huang, Irene H. Suh, Jung Hung Chien, Srikant Vallabhajosula, Dmitry Oleynikov and Ka-Chun Siu*

Computational Fluid Dynamics Modeling of Airflow Inside Lungs Using Heterogenous Anisotropic Lung Tissue Elastic Properties  
*Olusegun Ilegbusi, Ziang Li, Yrugang Min, Sanford Meeks, Patrick Kupelian and Anand P. Santhanam*

Telementoring for Airway Management Between a Far Forward Special Operations Location to a Major Medical Center Using Inexpensive Telemedicine Solutions  
*Daniel Irizarry, Ben H. Boedeker, Mary Bernhagen, Nikola Miljkovic and Thomas Nicholas IV*
Using the Battlefield Telemedicine System (BTS) to Train Deployed Medical Personnel in Complicated Medical Tasks – A Proof of Concept

Daniel Irizarry, Michael C. Wadman, Mary A. Bernhagen, Nikola Miljkovic and Ben H. Boedeker

215

Real-Time Simulation of Interaction Between Colon and Endoscope for the Colonoscopy Simulation

Hoeryong Jung and Doo Yong Lee

218

Augmented Reality Visualization for Guidance in Neurovascular Surgery

Marta Kersten-Oertel, Sean S.J. Chen, Simon Drouin, David S. Sinclair and D. Louis Collins

225

Development of a VR-Based Injection Training System Using a Standardized Patient

Ayano Kikuchi, Toshiya Nakaguchi, Masahiro Tanabe and Hideaki Haneishi

230

AMILab Software: Medical Image Analysis, Processing and Visualization

Karl Krissian, Francisco Santana-Jorge, Daniel Santana-Cedrés, Carlos Falcón-Torres, Sara Arencibia, Sara Illera, Agustín Trujillo, Claire Chalopin and Luis Álvarez

233

Generation of 3D Ultrasound Training Volumes from Freehand Acquired Data

Jason Kutarnia and Peder C. Pedersen

238

Moving Past Normal Force: Capturing and Classifying Shear Motion Using 3D Sensors

Calvin Kwan, Lawrence Salud, Chiagozie Ononye, Shenshen Zhao and Carla Pugh

245

A Study About Coefficients to Estimate the Error in Biomechanical Models Used to Virtually Simulate the Organ Behaviors

M.A. Lago, F. Martínez-Martínez, M.J. Rupérez, C. Monserrat and M. Alcañiz

250

PleurAlert: An Augmented Chest Drainage System with Electronic Sensing, Automated Alerts and Internet Connectivity

Cory E. Leeson, Robert A. Weaver, Taylor Bissell, Rachel Hoyer, Corinne McClain, Douglas A. Nelson and Joseph T. Samosky

257

Utilization of a Civilian Academic Center as a Force Multiplier in Support of NATO Special Operations Medicine – A Pilot Demonstration

Peter Lennarson, Ben H. Boedeker, Gail M. Kuper, Øystein Petter Nygaard, Tonje Okkenhaug Johansen, Annette Halvorsen, Inge Halvorsen and Daniel Irizarry

260

Augmented Environments for Minimally Invasive Therapy: Implementation Barriers from Technology to Practice


263

Visual Tracking of Laparoscopic Instruments in a Hough Space

Constantinos Loukas and Evangelos Georgiou

270

Design and Evaluation of a Medical Teamwork Training Simulator Using Consumer-Level Equipment

Stefan Marks, John A. Windsor and Burkhard Wünsche

273

Direct Haptic Volume Rendering in Lumbar Puncture Simulation

Andre Mastmeyer, Dirk Fortmeier and Heinz Handels

280
Simulation of a Human Circulatory System

Vinay Menon

Tele-Orthopaedics: United States Army European Regional Medical Command

Jeffrey Morgan, Shaka Walker, David Melaas, Maria Crane, Jacob Bacahui and Ben H. Boedeker

A Prototype Stimulator System for Noninvasive Low Intensity Focused Ultrasound Delivery


Automated Real Time Peg and Tool Detection for the FLS Trainer Box

Arun Nemani and Ganesh Sankaranarayanan

Performance Comparison of Laryngoscopy and Suction Techniques in a Hemorrhagic Airway Manikin Simulator: Direct Laryngoscopy with Yankauer vs. Storz CMAC with Attached Suction Tip

Thomas A. Nicholas IV, Huiling Pang, Mary A. Bernhagen and Ben H. Boedeker

Nasotracheal Intubation in a Difficult Airway Using the Storz C-MAC Videolaryngoscope, the Boedeker Bougie Endotracheal Introducer, and the Boedeker Curved Forceps

Thomas A. Nicholas IV, Mary A. Bernhagen and Ben H. Boedeker

Perception of Stiffness in Laparoscopy – The Fulcrum Effect

Ilana Nisky, Felix Huang, Amit Milstein, Carla M. Pugh, Ferdinando A. Mussa-Ivaldi and Amir Karniel

Real-Time Human Pose Detection and Tracking for Tele-Rehabilitation in Virtual Reality

Štěpán Obdržálek, Gregorij Kurillo, Jay Han, Ted Abresch and Ruzena Bajcsy

Step-Based Cognitive Virtual Surgery Simulation: An Innovative Approach to Surgical Education

Aaron Oliker, Zachary Napier, Nicolette Deluccia, John Qualter, Frank Sculli, Brandon Smith, Carrie Stern, Roberto Flores, Alexes Hazen and Joseph McCarthy

An Experimental Study on CHVE’s Performance Evaluation

Paulo V.F. Paiva, Liliane S. Machado and Jauvane C. Oliveira

Virtual Reality Paced Serial Assessment Test for Neuropsychological Assessment of a Military Cohort

Thomas D. Parsons, Christopher Courtney, Albert A. Rizzo, Christina Armstrong, Joseph Edwards and Gregory Reger

Virtual Worlds Are an Innovative Tool for Medical Device Training in a Simulated Environment

Vishal Patel, Henry Lee, Dave Taylor, Rajesh Aggarwal, James Kinross and Ara Darzi

Personal Low-Cost Ultrasound Training System

Peder C. Pedersen and Daniel Skehan

Validation of Three Virtual Reality Fundamentals of Laparoscopic Surgery (FLS) Modules

Kristen B. Pitzul, Teodor P. Grantcharov and Allan Okrainec
A Simple Master-Slave Control Mapping Setup to Learn Robot-Assisted Surgery Manipulation

Sukitti Punak and Sergei Kurenov

The BioDigital Human: A Web-Based 3D Platform for Medical Visualization and Education

John Qualter, Frank Sculli, Aaron Oliker, Zachary Napier, Sabrina Lee, Julio Garcia, Sally Frenkel, Victoria Harnik and Marc Triola

Detail-on-Demand Visualization for Lean Understanding of Lung Abnormalities

Sushravya Raghunath, Srinivasan Rajagopalan, Ronald A. Karwoski, Alan G. Larson, Brian J. Bartholmai and Richard A. Robb

Learning Island: The Development of a Virtual Reality System for the Experiential Training of Stress Management

Giuseppe Riva, Cinzia Vigna, Alessandra Grassi, Simona Raspelli, Pietro Cipresso, Federica Pallavicini, Silvia Serino and Andrea Gaggioli

Shader Lamps Virtual Patients: The Physical Manifestation of Virtual Patients

Diego Rivera-Gutierrez, Greg Welch, Peter Lincoln, Mary Whitton, Juan Cendan, David A. Chesmurt, Henry Fuchs and Benjamin Lok

STRIVE: Stress Resilience in Virtual Environments: A Pre-Deployment VR System for Training Emotional Coping Skills and Assessing Chronic and Acute Stress Responses

Albert Rizzo, J. Galen Buckwalter, Bruce John, Brad Newman, Thomas Parsons, Patrick Kenny and Josh Williams

Developing Effective Serious Games: The Effect of Background Sound on Visual Fidelity Perception with Varying Texture Resolution

David Rojas, Bill Kapralos, Sayra Cristancho, Karen Collins, Andrew Hogue, Cristina Conati and Adam Dubrowski

An Online Practice and Educational Networking System for Technical Skills: Learning Experience in Expert Facilitated vs. Independent Learning Communities

David Rojas, Jeffrey J.H. Cheung, Bryce Weber, Bill Kapralos, Heather Carnahan, Darius J. Bögli and Adam Dubrowski

Virtual Skin Biopsy with Gabor Domain Optical Coherence Microscopy

Jannick P. Rolland; Kye-Sung Lee, Laura Khoudeir, Panomsak Meemon, Kevin P. Thompson, Jinxin Huang, Jianing Yao and Sherrif F. Ibrahim

Using Anthropomorphic Avatars Resembling Sedentary Older Individuals as Models to Enhance Self-Efficacy and Adherence to Physical Activity: Psychophysiological Correlates

Jorge G. Ruiz, Allen D. Andrade, Ramankumar Anam, Rudxandra Aguiar, Huaping Sun and Bernard A. Roos

The Benefits of Fundamentals of Laparoscopic Surgery (FLS) Training on Simulated Arthroscopy Performance

Oleg Safir, Adam Dubrowski, Camille Williams, Yvonne Hui, David Backstein and Heather Carnahan

Modification of Commercially Available Simulators to Elicit Decision Making Behavior

Jonathan Salud, Chiagozie Oonye, Lawrence Salud and Carla Pugh

Introducing Simulation Technology to New Faculty: Do Not Let Them Play

Jonathan Salud, Chiagozie Oonye, Lawrence Salud and Carla Pugh
Clinical Examination Simulation: Getting to Real

Lawrence H. Salud, Chiagozie I. Ononye, Calvin Kwan, Jonathan C. Salud and Carla M. Pugh

A Novel Automated Drug Simulant Recognition System for Naturalistic Real-Time Medical Simulation

Joseph T. Samosky, Brandon Mikulis, Russell Bregman and Douglas A. Nelson

BodyWindows: Enhancing a Mannequin with Projective Augmented Reality for Exploring Anatomy, Physiology and Medical Procedures

Joseph T. Samosky, Bo Wang, Douglas A. Nelson, Russell Bregman, Andrew Hosmer and Robert A. Weaver

A Simulation Framework for Tool Tissue Interactions in Robotic Surgery

Ganesh Sankaranarayanan, Venkata Sreekanth Arikatla and Suvranu De

An Optical Tracking System for a Microsurgical Training Simulator

Oliver Schuppe

Using a Smart Wheelchair as a Gaming Device for Floor-Projected Games: A Mixed-Reality Environment for Training Powered-Wheelchair Driving Skills

R. Secoli, D. Zondervan and D. Reinkensmeyer

Virtual Trainer for Intra-Detrusor Injection of Botulinum Toxin to Treat Urinary Incontinence

Yunhe Shen, Pankaj Vasandani, Jayesh Iyer, Arjune Gunasekaran, Yingchun Zhang, Daniel Burke, Dennis Dykstra and Robert Sweet

A Transurethral Catheter-Based Ultrasound System for Multi-Modal Fusion

Anton Shkel, Shyam Natarajan, Stefan Schimpf, Martin O. Culjat, Andreas Brose, Axel Boese, Bertram Schmidt, Peter G. Schulam, Hua Lee, Warren Grundfest and Rahul Singh

Assessing Surgeon and Novice Force Skill on a Haptic Stiffness Simulator for Laparoscopic Surgery


Haptic Tasks for Physical Laparoscopic ("Box") Trainers to Differentiate Surgeon Skill


Assessment of Laparoscopic Surgical Skill Acquisition and Retention

Anna Skinner and Corinna Lathan

MRI Skin Segmentation for the Virtual Deformation of the Breast Under Mammographic Compression

J.A. Solves Llorens, C. Monserrat, M.J. Rupérez, V. Naranjo, M. Alajami, E. Feliu, M. Garcia and M. Lloret

Haptic Editing of MRI Brain Data

Alexei Sourin and Shamima Yasmin

Integration of Surgical Simulation in Plastic Surgery Residency Training

Carrie Stern, Aaron Oliker, Zachary Napier, John Qualter, Nicolette Deluccia, Frank Sculli, Sarah Long, Joe Rosen and Alexes Hazen
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Simulation of Mouse Anatomy and Procedural Techniques</td>
<td>500</td>
</tr>
<tr>
<td>Don Stredney, Bradley Hittle, Chun-Ming Chen, Thomas Kerwin,</td>
<td></td>
</tr>
<tr>
<td>Anna Bratasz, Niranchana Manivannan and Kimerly Powell</td>
<td></td>
</tr>
<tr>
<td>System Development for Unrestrictive View and 4D Shape Acquisition in</td>
<td>506</td>
</tr>
<tr>
<td>Abdominal Cavity Operation Using Virtual Space</td>
<td></td>
</tr>
<tr>
<td>Naoki Suzuki and Asaki Hattori</td>
<td></td>
</tr>
<tr>
<td>Conductometric Catheter-Mounted Pressure Sensor</td>
<td>512</td>
</tr>
<tr>
<td>Robert Tan, Peter Schulam and Jacob Schmidt</td>
<td></td>
</tr>
<tr>
<td>THP-1 Leukemia Cancer Treatment Using a Portable Plasma Device</td>
<td>515</td>
</tr>
<tr>
<td>Magesh Thiyagarajan, Lillian Waldbeser and Amanda Whitmill</td>
<td></td>
</tr>
<tr>
<td>Portable Plasma Medical Device for Infection Treatment</td>
<td>518</td>
</tr>
<tr>
<td>Magesh Thiyagarajan and Lillian Waldbeser</td>
<td></td>
</tr>
<tr>
<td>3DUI Assisted Lower and Upper Member Therapy</td>
<td>521</td>
</tr>
<tr>
<td>Alvaro Uribe-Quevedo and Byron Perez-Gutierrez</td>
<td></td>
</tr>
<tr>
<td>The Effects of a Mobile Stress Management Protocol on Nurses Working with Cancer Patients: A Preliminary Controlled Study</td>
<td>524</td>
</tr>
<tr>
<td>Daniela Villani, Alessandra Grassi, Chiara Cognetta, Pietro Cipresso, Davide Toniolo and Giuseppe Riva</td>
<td></td>
</tr>
<tr>
<td>A Method to Compute Respiration Parameters for Patient-Based Simulators</td>
<td>529</td>
</tr>
<tr>
<td>Pierre-Frédéric Villard, Franck P. Vidal, Fernando Bello and Nigel W. John</td>
<td></td>
</tr>
<tr>
<td>A Comparison of an Integrated Suction Blade Versus a Traditional Videolaryngoscope Blade in the Endotracheal Intubation of a Hemorrhagic Cadaver Model - A Pilot Study</td>
<td>534</td>
</tr>
<tr>
<td>Michael Wadman, Thomas A. Nicholas, Mary A. Bernhagen, Gail M. Kuper, Nikola Miljkovic, Steven Schmidt, Jason Massignan and Ben H. Boedeker</td>
<td></td>
</tr>
<tr>
<td>Use of a Malleable Bougie and Curved Forceps with Videolaryngoscopy in Airway Management Training in a Cadaver Model - A Pilot Study</td>
<td>537</td>
</tr>
<tr>
<td>Michael Wadman, Thomas A. Nicholas, Mary A. Bernhagen, Gail M. Kuper, Nikola Miljkovic, Steven Schmidt, Jason Massignan and Ben H. Boedeker</td>
<td></td>
</tr>
<tr>
<td>Virtual Intubation Training at a Remote Military Site</td>
<td>540</td>
</tr>
<tr>
<td>Robert B. Walker, P.K. Underwood, Mary Bernhagen, Nicholas Markin and Ben H. Boedeker</td>
<td></td>
</tr>
<tr>
<td>Translating Surgical Metrics into Automated Assessments</td>
<td>543</td>
</tr>
<tr>
<td>Gregory Wiet, Bradley Hittle, Thomas Kerwin and Don Stredney</td>
<td></td>
</tr>
<tr>
<td>Three-Dimensional Micro-Imaging (µCT) Based Physical Anatomic Teaching Models: Implementation of a New Learning Aid for Routine Use in Anatomy Lectures</td>
<td>549</td>
</tr>
<tr>
<td>Joerg Wulf, Isabelle Rohde, Thomas Koppe and Robert John Winder</td>
<td></td>
</tr>
<tr>
<td>A Voice-Based Automated System for PTSD Screening and Monitoring</td>
<td>552</td>
</tr>
<tr>
<td>Roger Xu, Gang Mei, Guangfan Zhang, Pan Gao, Timothy Judkins,</td>
<td></td>
</tr>
<tr>
<td>Michael Cannizzaro and Jiang Li</td>
<td></td>
</tr>
<tr>
<td>A Decision Fusion Strategy for Polyp Detection in Capsule Endoscopy</td>
<td>559</td>
</tr>
<tr>
<td>Qian Zhao, Themistocles Dassopoulos, Gerard E. Mullin, Max Q.-H. Meng and Rajesh Kumar</td>
<td></td>
</tr>
</tbody>
</table>

Subject Index 567
Author Index 571