Contents

Problems of Human-Computer Interaction in Cyberworlds ......................... 1
Alexei Sourin, Rae Earnshaw, Marina Gavrilova, and Olga Sourina

Mark Projection on Real World with Precise Measurement of Angular Velocity for Helping Picking Works ......................................................... 23
Kyota Aoki and Naoki Aoyagi

Application for Real-Time Generation of Mathematically Defined 3D Worlds ................................................................. 45
Mikael Fridenfalk

Generating Chinese Calligraphy on Freeform Shapes .............................. 69
Qian Fu, Zhongke Wu, Xiang Ying, Mengdi Wang, Xia Zheng, and Mingquan Zhou

How the Perceived Identity of a NPC Companion Influences Player Behavior ..................................................................................... 88
Christopher J. Headleand, James Jackson, Ben Williams, Lee Priday, William J. Teahan, and LLyr Ap Cenydd

CogniMeter: EEG-Based Brain States Monitoring ...................................... 108
Xiyuan Hou, Yisi Liu, Wei Lun Lim, Zirui Lan, Olga Sourina, Wolfgang Mueller-Wittig, and Lipo Wang

Four Adaptive Memetic Bat Algorithm Schemes for Bézier Curve Parameterization ................................................................. 127
Andrés Iglesias, Akemi Gálvez, and Marta Collantes

Auto-Parameterized Shape Grammar for Constructing Islamic Geometric Motif-Based Structures ................................................................. 146
Zahra Sayed, Hassan Ugail, Ian Palmer, Jon Purdy, and Carlton Reeve

Data Mining via Association Rules for Power Ramps Detected by Clustering or Optimization ................................................................. 163
Nurseda Yıldırım and Bahri Uzunoğlu

Author Index .......................................................................................... 177
Transactions on Computational Science XXVIII
Special Issue on Cyberworlds and Cybersecurity
Gavrilova, M.; Tan, C.J.K.; Sourin, A. (Eds.)
2016, XIII, 177 p. 116 illus., 18 illus. in color., Softcover
ISBN: 978-3-662-53089-4