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- 757 Whispered Speech Speaker Identification based on SVM and FA**
 X J Gu, H M Zhao
Soochow University, China
- 761 A Low Complexity Motion Estimation Algorithm Suitable for Frame Rate Conversion**
 X W Chen, E Yang, J J Zhao
Shanghai University, China
- 766 A Simplified Engineering Super-Set of Phonetic Notation for European Multi-Language Text to Speech Development**
 Z L Yu¹, P Qian¹, D J Yue²
¹*Shanghai Institute of Technology, China*
²*Shanghai University, China*
- 771 Two-level Approach for Detecting Non-lexical Audio Events in Spontaneous Speech**
 Y X Li, Q H He, W Li, Z F Wang
South China University of Technology, China
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- Session C3 - Oral
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- 778 Colour and Texture Based Pyramidal Image Segmentation**
 M Stojmenovic, A Solis-Montero, A Nayak
University of Ottawa, Canada
- 787 Human Object Segmentation Using Gaussian Mixture Model and Graph Cuts**
 B Y Ding, R Shi, Z Liu, Z Y Zhang
Shanghai University, China
- 791 Image Segmentation Based on Two-dimensional Cloud Model**
 K Qin¹, L Luo¹, T Wu², C Q Zeng³
¹*School of Remote Sensing Information Engineering, Wuhan University, China*
²*State key lab of software engineering, Wuhan University, China*
³*Institute of Remote Sensing and Applications, Chinese Academy of Sciences, China*
- 797 A Novel Interpolation Algorithm for 3D Reconstruction of Medical Images**
 X L Zhou^{1,2}, W G Wan¹, Z H Zhou¹, R Wang¹, F Qian
¹*Shanghai University, China*
²*Changshu Institute of Technology, China*
- 802 An Automatic Segmentation Algorithm for Touching Rice Grains Images**
 Q Yao¹, Y F Zhou¹, J N Wang²
¹*Zhejiang Sci-Tech University, China*
²*Institute of Zoology Chinese Academy of Sciences, China*
- 806 Adaptive Measurement for the Cylinder Cover Socket Sleeve Gap Width Based on the Image Analysis of Second Ant Colony Optimization**
 R J Zhang, S L Zhuang, D Q Zang
University of Shanghai for Science and Technology, China
- 811 A Novel Method for Flash Character Localization**
 J Liu, S W Zhang, H P Li, W Y Yang
Institute of Automation, Chinese Academy of Sciences, China
- 815 Image Sequence Segmentation Based on the Formal Lattice BOLTZMANN Equation and Its Lower Order Approximation**
 G T Ding, D X Luo, S Q Li
Shanghai University, China
- 821 Recognition of Chinese Character in Snapshot Translation System**
 F Wong, S Chao, W K Chan, Y P Li
Faculty of Science and Technology of University of Macau, China
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- Session D3- Oral
 Image and Computer Graphics:
 Modeling and Visualization**
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- 826 Visualizing Genetic Recombination with Interactive Computer Program**
 X L Yang, R Ge, C Tseng
Purdue University, USA

- 831 A Hybrid Technique for Acoustical Property of Induction Cookers**
Y S Wang^{1,2}, X L Tang^{2,3}, C M Lee³
¹Shanghai University of Engineering Science, China
²Liaoning University of Technology, China
³University of Ulsan, Korea
- 836 Discrete Variational Scheme for 3D Surface Modeling**
L C Jin, W G Wan, X Cheng, X Q Yu, X Liu,
Y T He
Shanghai University, China
- 840 A SVD-based Fragile Watermarking Scheme for Webpage Authentication**
X H Ma, J G Li
Soochow University, China
- 845 Acceleration by Programmable GPU on Realizing 3D Movie Playback**
Y Wan¹, X Cheng², X Q Yu², H W Xu²
¹City University of Hong Kong, China
²Shanghai University, China
- 851 Interactive Object Extraction Using Hierarchical Graph Cuts**
Y Zhang¹, H H Song¹, J Gu¹, S Y Yu², J Yang²
¹The Third Research Institute of Ministry of Public Security, China
²Shanghai Jiaotong University, China
- 859 The Lightweight Simulation Technology Based on Virtual Environment**
H M Tan, W H Zhu, M Z Zhang
Shanghai University, China
- 863 An Approach to Image Denoising Based on Variational Decomposition in Combination with Vector Field Filter**
Y P Zhang, Z K He, R N Su, S J Fan
Ningbo University of Technology, China
- 868 Discussion about Language, Image and Understanding**
W Guan^{1,2}
¹Shanghai International Studies University, China
²International Participant Dept., Bureau of Shanghai World Expo Coordination, China
- 877 Motion Capture System Data Reuse in Virtual Reality Environment**
L Huo, J Geng, G L Cheng, D Zhou, C Lv
Beijing University of Aeronautics and Astronautics, China
- 881 Marker Localization for Educational Game in Virtual Environment**
H W He^{1,2}, X Y Duan¹, Y M Wu^{1,2}
¹Guangdong University of Technology, China
²State Key Lab of Digital Manufacturing Equipment & Technology, China
- 886 Robust Gesture Recognition Based on Distance Distribution Feature and Skin-Color Segmentation**
B Y Zhang, R W Yun
Nanjing Normal University, Nanjing, China
- 892 Several Interactive Visualization Methods for Multiresolution Datasets**
P J Xu, W C Shen, L Liao
Beijing Institute of Applied Physics and Computational Mathematics, China
- 898 Image-based Rendering of Spatially-Varying BSDF**
H S Li, F X Li
Beijing Institute of Technology, China
- 903 Soft Tissue Simulation with Bimanual Force Feedback**
H Zhao, D X Wang
Beihang University, China
- 908 The Position Measurement of String-based Haptic Interface with Large Workspace**
J Li, P D Wu, J Huang
Beijing Institute of Technology, China
- 912 A Study on the Remote Monitoring System of Hydraulic Support Based on 3DVR**
H F Yan, F X Su, Z H Cheng, C L Du
University of Mining and Technology, China
- 916 The Virtual and Interactive Display of 3D Warehouse based on Web3D**
W J Cai, M G Chen
Tongji University, Shanghai Science and Technology Information Center, China

Session E3 - Poster I
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Modeling and Rendering

- 873 The Application of Augmented Reality Technologies for Factory Layout**
S Wan¹, J F Lu¹, H Zhang²
¹CIMS Research Center Tongji University, China
²Shanghai University of Electric Power, China

Session F3- Poster II
Image Processing and Virtual Reality:
Visualization and Interactive Environments

- 921 Research on the 3D Visualization of Information Operations Based on STK**
X Wu, G Y Si, Z Q Li, X F Hu, J Y Yang
NDU of PLA, Beijing, China

- 926 iRMSS: an Interactive Robotics Modeling and Simulation System based on MSRS**
L Huang¹, H Xiong², X H Jiang¹, Z G Pan¹
¹Zhejiang University, China
²Hangzhou Real-time Digital Media Tek Co. LTD, China
- 932 Wi-Fi-based Real-time Location and Virtual Guard System**
Y W Dou^{1,2}, Y Yin¹, X N Wu¹
¹Shanghai Normal University, China;
²Shanghai Zhen Zhuo Electrical Technology Ltd Co, China
- 936 The Exploitation Flat for Virtual Maintenance Based on Virtual Human**
L M Ou¹, P Jia², X G Xu¹, G X Chang³, J G Wang¹
¹Dalian Naval Academy, China
²Bengbu Naval Petty Officer Academy, China
- 941 Modeling Adaptive PerceptionSystem of Virtual Agent with Emotion Based on Q-learning**
Y Hong, Z Liu
Ningbo University, China
- 945 Robot Teleoperation Using a Vision-Based Manipulation Method**
G L Du, P Zhang, L Y Yang, Y B Su
South China University of Technology, China
- 950 A Virtual Telephone Communication System Based on LabVIEW**
Y T Liu, L Shi, L Feng, J W Wu
Beijing University of Posts and Telecommunications, China
- 955 Virtual Throwing Action Recognition Based on Time Series Data Mining in an Augmented Reality System**
D J Huang¹, C Wang¹, Y D Ding¹, W Tang²
¹Shanghai University, China
²University of Teesside, UK
- 960 The Design and Implement of Ultra-scale Data Parallel In-situ Visualization System**
N Liu, Y P Zhang, G X Gao, D M Zhu
Institute of Computing Technology, China
- 964 Network-Oriented Massive Remote-Sensing Image Organization and Application**
R Cao¹, J Jiang¹, L D Wu^{1,2}, J F Li¹
¹National University of Defense Technology, China
²The Academy of Equipment Command & Technology, China
- 969 Visual Data Mining Analysis for Information Operations in Complicated Information Environment**
Z Q Li¹, G Y Si¹, T H Guo², X Wu¹, J Y Yang¹, R T Hu¹, F Wang¹
¹The Department of Information Operation & Command Training, NDU of PLA, China
²The fourth department of general staff of PLA, China
- 975 Research on a Positioning Method of a Virtual Shooting Device in a Projection System**
Q Y Wang, Q Mi, P Y Shen, X Liu
Beijing Institute of Technology, China
- 980 Research on Hash Algorithm for Retrieval of Global Multi-resolution Terrain Cache Data**
J P Wang, L Q Yue, Q Xia
Information Engineering University, China
- 985 Research on Geographic Information Database Incremental Updating Method**
C L Jian^{1,2}, M L Huang¹
¹Fujian Provincial Geomatics Center, China
²State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, China
- 990 Development of Virtual-teaching Scene Based on Virtools**
M Fu, X Q Hu, X M Jiang
JiangXi Science and Technology Normal University, China
- 994 Research on the Application of Flash Online Advertising**
Y R Lv
Beijing Technology and Business University, China
- 997 Research and Implement of Flight Multi-function Display System Based on GL Studio/OpenGL**
Z L Wang¹, L H Xu², Z P Fu¹, Z Y Sun¹
¹Naval Aeronautical Engineering Institute Qingdao Branch, China;
²Information Engineering College of Qingdao University, China
- 1002 Implementation of Battlefield Electromagnetic Environment Ontology Visualization System**
L Zeng, F F Meng
National University of Defense Technology, China
- 1007 Forest Environment Virtual Reality Navigation System**
G X Wang¹, L M Li², L Wu², L Y Fan²
¹Psychology Department of Beijing Forestry University, China
²Information Institute of Beijing Forest University, China
- 1012 Feature-based Multi-style Cartoon System**
J F Che¹, J H Tao¹, X G Wang¹, K H Mu¹, H T Li²

Session G3 - Poster III
Image Processing and Virtual Reality:
Animation and Simulation

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²*China Petroleum Jilin Petrochemical Company, China*

Session H3- Poster IV
Image Processing and Virtual Reality:
Applications of Virtual Reality

- 1017 A Vision Based Multiple-user Small Arms Training Simulation System**
X Liu, Y T Wang, Y Liu, D D Weng
Beijing Institute of Technology, China
- 1022 Design and Implementation of Virtual Scene Based on VRML**
Y Kuang, J Jiang
Institute of Education, Jiang Xi Science and Technology Normal University, China
- 1026 Design of World Expo Tour Sites Guide System Based on RFID Technology**
Y Yin¹, J Zhou^{1,2}, J Yin³
¹*Shanghai Normal University, Shanghai, China*
²*Shanghai Zhen Zhuo Electrical Co., Ltd*
³*Wuxi Institute of Technology, China*
- 1031 The Implementation of Campus 3D Electronic Map Based on SketchUp and ArcGIS**
Q Wang, X J Zhu
Yangtze University, China
- 1035 A 3D Virtual Experiment Framework Based on X3D and ActiveX**
L Song, R J Pan
Shandong University, China
- 1040 Research and Implementation of Visualization Technology for Virtual Battlefield Environment**
L D Wu, L Kang
National University of Defense Technology
- 1046 Research of a Virtual Flight Simulator Based on EPX Image Generator in Operation Simulation System**
W Y Wang, J G Tang, X L Hou
Scientific Research Department of Naval Aviation Engineering Institute Yantai, China
- 1051 Multi-granularity Virtual Forest Information Model with Linkage Capability and its Application**
T Y Dong, Q H Chen, J Fan, W J Li
Zhejiang University of Technology, China
- 1056 3D Line Segment Detection Algorithm for Large-scale Scenes**
T W Chen, Q Wang
Northwestern Polytechnical University, China

- 1062 An Improved Interpolation Algorithm Using Nearest Neighbor from VTK**
Y N Wang, W G Wan, R Wang, X L Zhou
Shanghai University, China

Session A4 - Oral
Language and Speech Processing:
Language and Speech Understanding

- 1066 A Robust Transcription System for Soccer Video Database**
N M Pham, D A Duong, Q H Vu
University of Science, VNU-HCM, Vietnam
- 1073 Vision-aided Speech Recognition System for a Small Four-legged Robot**
X F Wu^{1,2}, R Nakatsu³
¹*Fudan University, China*
²*Kyoto Institute of Technology, Japan*
³*National University of Singapore, Singapore*
- 1079 Study of SVM Decision-tree Optimization Algorithm based on Genetic Algorithm**
X Q Yu, J W Liu, Y F Zhou, W G Wan
Shanghai University, China
- 1084 Ranknet Based English Stressed Syllable Detection**
X H Yang, Q C Chen, L Wan, X L Wang
Harbin Institute of Technology, Shenzhen Graduate School, China
- 1090 Dimension Reduction of Photolithography Data Based on PCA**
L Wang, X Y Wang, W G Wan, X D Yang, B Cui
Shanghai University, China
- 1094 Articulated 3D Human Pose Estimation with Particle Filter based Particle Swarm Optimization**
X Y Wang, X Zou, W G Wan, X Q Yu
Shanghai University, China
- 1100 A Project Study for Extracting Suspicious Packages from Surveillance Video Programs**
N N Zhang
Shanghai Jianqiao College, China
- 1106 An Initiative of Bangla-English Natural Language Translation using Case**
N Tarannum, M K Rhaman
Southeast University and BRAC University, Bangladesh
- 1112 Direction of Arrival Estimation Using Array Model in Time-Frequency Domain**
Q Li, Y Liu, H Chen
Northwestern Polytechnical University, China

Session B4 - Oral
Image Processing:
Image Filtering and Enhancement

1117 Counterpoint Harmony Search: An Accurate Algorithm for the Blind Deconvolution of Binary Images

J Fourie¹, R Green¹, S Mills²

¹University of Canterbury Christchurch, New Zealand

²Areograph Limited, New Zealand

1123 Graph-based Semi-supervised Weighted band Selection for Classification of Hyperspectral Data

L Chen, R Huang, W Huang

Shanghai University, China

1127 Cognition-based Approach to Parameter Setting of Directional Difference Filter Using Neural Network based Face Recognition System

M Matsumoto

University Of Electro-Communications, Japan

1134 An Improved Poisson Surface Reconstruction Algorithm

X Li, W G Wan, X Cheng, B Cui

Shanghai University, China

1139 Homography Matrix Genetic Consensus Estimation Algorithm

D Yao^{1,2}, J Zhou^{1,2}, Z Xue¹

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²Shanghai Key Laboratory of Digital Media Processing and Transmissions, China

1144 An Image Enhancement Method for Noisy Image

C W Sun^{1,2}, H Liu¹, J G Liu¹

¹East China Normal University, China

²University of Jinan, China

1148 Triangle Meshes Segmentation and Its Application to Region of Interest in 3D Model

X Cheng¹, Y Wan², L C Jin¹, C L Shi¹, X Zou¹, X Q Yu

¹Shanghai University, China

²City University of Hong Kong, Hong Kong

1155 Analysis of Wavelet Family with Frobenius Norm for the Removal of Impulse Noise

A Tayal, S S Raj, P Jain, D Babbar

GGS IP University, India

Session C4 - Oral
3DTV and Computer Graphics:
3D Video Coding, Scene Synthesis and Rendering

1160 Fast 3D Image Depth Map Estimation Using Wavelet Analysis

Y H Lin¹, T W Chiang², T Tsai³, M J Hsiao⁴

¹Dept. of Multimedia Design, Chihlee Institute of Technology, Taiwan

²Dept. of Accounting Information Systems, Chihlee Institute of Technology, Taiwan

³Dept. of Information Management, Chihlee Institute of Technology, Taiwan

⁴Dept. of Computer Science and Engineering, Tatung University, Taiwan

1164 Sub-sampling Elemental Images for Integral Imaging Compression

Y Piao^{1,2}, X Y Yan¹

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²University of Washington, USA

1169 A Novel Depth Coding Scheme for Multiview Video plus Depth Compression

Q W Zhang¹, P An^{1,2}, Y F Zuo¹, Z Y Zhang^{1,2}

¹Shanghai University, China

²Key Laboratory of Advanced Displays and System Application, Ministry of Education, China

1175 Stereoscopic Quality Assessment Model with Three-Component Weighted Structure Similarity

X Y Mao¹, M Yu^{1,2}, X Wang¹, G Y Jiang¹,

Z J Peng¹, J M Zhou¹

¹Ningbo University, China

²Nanjing University, China

1180 Evaluation for Random Access performance of Multi-view View Coding

M M Cheng, P An, F Lu, Y W Sun

Shanghai University, China

1184 Discrete-Quaternion-Fourier-Transform-Based Registration Method for Color Images

C Yang¹, J Q Zhang¹, D Yang², Q Li¹, J Wu¹

¹Xidian University, China

²Hebei University, China

1190 Simulation of Doppler Ultrasound Blood Flow Signals from Stented Sidewall Aneurysm

H Zhou, Z Zhang, Y Y Wang

Fudan University, China

1195 Relative-Target-Complexity-Based Clutter Metric for Human Visual Systems

Q Li, C Yang, J Q Zhang

Xidian University, China

1200 A Novel Frame Rate Conversion Algorithm Based on Adaptive Motion Search

J J Zhao, E Yang, X W Chen

Shanghai University, China

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Multimedia SOC Design and Bio-informatics

- 1205 A Study of an FPGA Synthesizer**
S Yoshida, Y Yamaguchi
University of Tsukuba, Japan
- 1211 Rasterization of Geometric Primitive in Graphics based on FPGA**
Y R Ma, X Z Wang, M Y Zhu, W G Wan
Shanghai University, China
- 1217 A Real-time Anomaly Intrusion and Theft Items Detecting System for Surveillance Videos**
X F Lu^{1,2}, M X Jin², S Y Yu¹, L N Wang², H L Lu²
¹*Shanghai Jiao Tong University, China*
²*Shanghai University, China*
- 1222 A Robust Phase Zero Estimator for Ultrasonic Elastography Using Quality-guided Seeding Strategy**
S G Cui^{1,2}, C B Peng³, M Li¹, P Ke¹, J Bao¹, X Wang¹
¹*Yunyang Medical College, China*
²*Sichuan University, China*
³*Affiliated Taihe Hospital of Yunyang Medical College, China*
- 1227 Multi-view Video Coding Based on Sequence Correlation**
F Lu¹, P An^{1,2}, Z Y Zhang^{1,2}, L Q Shen^{1,2}
¹*Shanghai University, China*
²*Key Laboratory of Advanced Displays and System Application, Ministry of Education, China*
- 1233 An Improved Ultrasound Field Simulation of Photoacoustic Tomography**
Y Zhang, Y Y Wang
Fudan University, China
- 1238 Ultrasound Elastography Performance Enhancement Using Wavelet Denoising**
S G Cui^{1,2}, C B Peng³, X L Chen¹, X Y Liu¹, Y Yu¹, Q Wang¹
¹*Yunyang Medical College, China*
²*Sichuan University, China*
³*Affiliated Taihe Hospital of Yunyang Medical College, China*
- 1244 Arithmetic Means of Accuracies: A Classifier Performance Measurement for Imbalanced Data Set**
I K Timotius¹, S G Miaou²
¹*Satya Wacana Christian University, Indonesia*
²*Chung Yuan Christian University, Taiwan*

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Image Processing and Virtual Reality: Modeling and Rendering

- 1252 A surface Approximation Algorithm for Complex Shapes**
S Lin, G Dang, Z Q Cheng, H H Li, K Xu, S Y Jin
National University of Defense Technology, China
- 1257 An Integrated Surgical Planning and Virtual Training System Using a Force Feedback Haptic Device for Dental Implant Surgery**
X J Chen¹, Y P Lin¹, C T Wang¹, Y Q Wu², X D Wang², G F Shen²
¹*Shanghai Jiao Tong University, China*
²*Shanghai Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, China*
- 1262 A Study of Web-based 3D Interactive Product Demo Design**
R Y Wang, Y J Shi, D J Yu
Hohai University, China
- 1268 Virtual Urban—A Scientific Tool and Platform for Urban Research**
J Deng, X Q Zheng, L N Lv
China University of Geosciences, China
- 1274 Constructing Digital Museum Grid for Science Popularization Exhibition**
Y L Liu, X W Chen, B Zhou, X X Luo
Beihang University, China
- 1279 Integration of 3D Registration Methods Based on Multiple Natural Features**
M M Chen, X W Chen, Y L Liu
Beihang University, China
- 1284 Applications of Virtual Reality Technology in the Equipment Maintenance**
Y Z Zou^{1,2}, C Lv^{2,3}, R Liu³
¹*Beijing Institute of Strength and Environment, China*
²*The State Key Laboratory of Virtual Reality Technology and System, China*
³*Beihang University, China*
- 1289 Instruction Level Motion Control of Virtual Human for Maintenance Process Simulation**
D Zong¹, C P Li², S H Xia², Z Q Wang²
¹*Graduate School, Chinese Academy of Sciences, China*
²*Institute of Computing Technology, Chinese Academy of Sciences, China*
- 1295 Research on Method of Virtual Modeling Based on Reconstruction of Virtual Assembly Feature**
T Wang, Q D Yan, H C Li
Beijing Institute of Technology, China

- 1301 A Fast Approach to Simulate Fracture of Rigid Body**
J F Ning, S K Li
National University of Defense Technology, China
- 1306 Layer-Scan Optimization Model of Virtual Reality Simulation in the Generator**
H P Sun
Changchun Institute of Technology, China

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Image Processing and Virtual Reality:
Visualization and Interactive Environments

- 1311 A New Link Level to System Level Simulation Interface Method**
W Z Nie, H W Yang
Beijing University of Posts and Telecommunications, China
- 1315 A Preliminary Research on Behavior Simulation of Crowd with Personality Parameters**
Y Hong, Z Liu
Ningbo University, China
- 1319 Real-time Penetrative Simulation and Visual Analysis Based on Finite Element Analysis**
Y F Chen, F X Li, H Y Gu
Beijing Institute of Tech., China
- 1324 Modeling Methods and Simulation Design in the Virtual Laboratory**
Y M Yang, J C Zhao, Y L Li, L Zhang
Naval Aeronautical Engineering Institute Qingdao Branch Qingdao, China
- 1330 Efficient Realistic Simulation for Highway and Bridges Landscape**
C B Wang, Z Xiao, J B Sui, P Liu, P Li
East China Normal University, China
- 1335 Fire and Human Behavior Simulation System**
W Wei
Henan University of Technology, China
- 1340 A Preliminary Study of Suture Simulation in Virtual Surgery**
S Y Jia, Z K Pan
Qingdao University, China
- 1346 A Real-time Collision Detection between Virtual and Real Objects Based on Three-dimensional Tracking of Hand**
Y Li, X K Shen
Beihang University, China

- 1352 Virtual Human Control Technology for Immersed Virtual Maintenance System in DELMIA Environment**
G L Chen, C Lv, J Geng, L Huo, J M Shi
Beijing University of Aeronautics and Astronautics, China
- 1356 Research on Imaging Simulation of Airborne Fire Control Radar for Simulated Training**
Y Chen, G Ji, W Z Sun, Z Y Sun, Y X Liu
Naval Aeronautical Engineering Institute Qingdao Branch, China

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Image Processing and Virtual Reality:
Animation and Simulation

- 1361 Growth Simulation for a Desert Shrub Haloxylon Ammodendron**
Y Sheng^{1,2}, B G Li¹, C Y Zhao², W P Zhang³
¹*China Agricultural University, China*
²*Xinjiang Ecological Geography Research Institute of Chinese Academy of Sciences, China;*
³*Shanxi Agricultural University, China*
- 1366 A Visualization Method of Measuring the Effectiveness of Early Warning and Detection Network Based on Simulation**
F Wang, G Y Si, Z B Dong, Z Wang
The Department of Information Operation & Command Training, NDU of PLA, China
The Department of Logistics Mangement, Institute of Logistics and Command, China
- 1372 A Novel Model of Constructing Virtual Laboratory Environment**
L Tian¹, Q Chi¹, Y H Zhu²
¹*School of Computer Engineering and Science, Shanghai University, China*
²*Computer Center of Shanghai University, China*
- 1377 The Simulation of the Growing Process of Virtual Plant Leaves**
J Fan, K F Yang, Y Ye, Y Tang
Zhejiang University of Technology, China
- 1382 A Novel Method for Evaluating Facial Attractiveness**
Y L Chen, H Y Mao, L W Jin
South China University of Technology, China
- 1387 Apply Two Pass Aggregation to Real-Time Stereo Matching**
X F Chang, Z Zhou, Q P Zhao
Beihang University, China
- 1392 Research and Application on Plug-in Technology in OpenSim**

B Sun¹, H Wu¹, H Q Zhao^{1,2}, X Y Hu¹
¹Beijing Normal University, China;
²Shanxi Datong University, China

1397 The Design and Realization of Three-dimensional Visual Stimulator for Brain-computer Interface

R Shi¹, S Liang¹, Q H He²
¹Chongqing University, China
²Third Military Medical University, China

1403 Multi-Agent Technology Based Design of Hierarchy Model of Groups/Teams in Air Defense System

C B Zhang, L Q Luan, H Z Zhang
Air Defense Forces Command Academy, China

1407 Study on Building a 3D Interactive Virtual Learning Environment Based on OpenSim Platform

H Q Zhao^{1,2}, B Sun¹, H Wu¹, X Y Hu¹
¹Beijing Normal University, China
²Datong University of Shanxi, China

Session H4 - Poster IV
Image Processing and Virtual Reality:
Applications of Virtual Reality

1412 Simulation of Structural Dynamics of Forage Grass of Alfalfa based on Dual-scale Automation

W P Zhang¹, W B Yue¹, J N Liu²
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²Shanxi Academy of Agricultural Science, China

1418 A New Three-View Graphics Designed to Assist Airplane Navigation

H X Hao¹, L D Wu^{2,1}
¹Science and Technology on Information Systems Engineering Laboratory of National University of Defense Technology, China
²The Key Laboratory of The Academy of Equipment Command & Technology, China

1423 Optimized Volumetric Visual Hull Reconstruction Method Based on CUDA

S J Zhang^{1,2}, W Wu²
¹Qingdao University of Science and Technology, China
²Beihang University, China

1430 Application Research of Clifford geometric algebra in Keyframe Skeletal Animation

J Y Song, R Wang, W G Wan, Y Liu, F F Fan
Shanghai University, China

1433 The Application of Ant Colony Algorithm and Artificial Neural Network in Tax Assessment

S L Mao, W G Wan, R Wang, Y Gao
Shanghai University, China

1437 Clifford Algebra for Rigid Transformation Blending

F F Fan, R Wang, W G Wan, J Y Song, Y Liu
Shanghai University, China

1441 Design of 3G Net Monitor System Based on DaVinci Technology

R L Liu, X D Cheng
College of Electronic Information Engineering IMU, China

1446 On Realization of Visualization System for Global Ocean Simulation

D L Ming, P F Gao, M Wang
Huazhong University of Science and Technology, China

1451 Research of Inter-domain Data Filtering Method for Distributed Interactive Simulation

L Liu^{1,2}, H Q Chen¹, L Tan¹
¹Beijing Technology and Business University, China
²Beihang University, China

1457 The Applications of Integrated Design in Brand Building and System Constructing of Virtual Pavilion

X X Wang
Beijing International Studies University, China

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Session A5 - Oral Image Processing: Image Representation and Modeling

- 1463 Multi Image Fusion based on Compressive Sensing**
J J Han, O Löffeld, K Hartmann, R Wang
University of Siegen, Germany
- 1470 A Novel Ray-Space Interpolation Method Based on Hierarchical Prediction**
Q Zhang¹, Y F Wu¹, P An^{1,2}, Z Y Zhang^{1,2}
¹*Shanghai University, China*
²*Key Laboratory of Advanced Displays and System Application, Ministry of Education, China*
- 1475 Similarity Quantization: Compressed Sensing Application**
J Wu, C Yang, J Q Zhang
Xidian University, China
- 1479 3D Reconstruction from Bifocus Imaging**
S S Xu¹, Y Q Wang¹, Z Y Zhang²
¹*Nanjing University, China*
²*Shanghai University, China*
- 1484 Image Magnification Method Using Compressed Sensing**
F Shang, H Q Du
Beijing Institute of Technology, China
- 1489 A Novel Hexagon Diamond Search Algorithm for Motion Estimation**
X Z Wang, W G Wan, Y R Ma
Shanghai University, China
- 1494 Diagonal Total Variation Regularization Criterion For Fast Convergence**
S Kiriya¹, T Usui¹, T Goto¹, S Hirano¹, M Sakurai¹, T Saito²
¹*Nagoya Institute of Technology, Japan*
²*Kanagawa University, Japan*

Session B5 - Oral Image Processing: Image Authentication and Watermarking

- 1499 Behavior of Multiple Data Hiding Techniques towards Noisy Channels**
J S Manoharan, K S Vijila, A Sathesh
Karunya University, India

- 1504 A Novel Semi-fragile Image Watermarking Scheme Based on Wavelet**
H B Song, Z H Qiu, J Gu
Ministry of Public Security Quality Supervision and Testing Center of Security Products for Computer Information System, China
- 1511 Image Encryption Research based on Chaotic Sequences and Wavelet Transform**
R H Qiu, Y Z Fu, Y Cao
Donghua University, China
- 1516 Time Reversal and Cross-Correlation Analysis for Damage Detection in Plates Using Lamb Waves**
H Y Zhang, Y P Cao, J B Yu, X H Chen
Shanghai University, China
- 1521 Rotation-Invariant Bivariate Features for Texture Image Retrieval**
X Wang, Z F Shao, X Q Zhu
Wuhan University, China
- 1526 SPIHT Algorithm for Color Images based on Multiwavelet**
J L Chen, D H Qing, X Li, W G Wan
Shanghai University, China
- 1531 An Evolved Buffer Status Aware Packet Scheduling Algorithm for Mixed Services in the Downlink of OFDM System**
R N Zhang, D D Zhao
Shanghai University, China
- 1537 The Evaluation of Ecological Environment Situation of Hezuo City Based on Remote Sensing**
J Z Jiao, N A Wang, Y W Xie
Lanzhou University, China

Session C5 - Oral Remote Sensing and GIS: Remote Sensing and GIS Application

- 1543 Research on the Ocean Primary Production Pattern Based Remote Sensing**
B L Xiao^{1,2}, S W Hu³, X H Qiang³
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³*Henan Polytechnic University, China*
- 1547 Cuda-Based H.264/AVC Deblocking Filtering**
T Liu, E Yang, R H Cheng, Y Fu
Shanghai University, China

1552 Extraction Method of Large-scale Linear Objects from SAR Images

Z Q Wei^{1,2}, H Lin², C J Shi³, J Peng³, F L Chen²
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1557 Algorithm of the K Nearest Neighbor for the Mobility Inquirer

J H Mao, L Ye

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1561 Adaptive Localization Algorithm in Distributed Asynchronous Wireless Sensor Network

H Xie, J Xu, J X Li

Shanghai Jiao Tong University, China

1566 Image Similarity Matching Retrieval on Synergetic Neural Network

H Li, X L Ma, W G Wan, X L Zhou

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1572 Slope Spectrum of Positive and Negative Terrains on Northern Shaanxi loess Plateau

F Y Li, G A Tang

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1577 Geospatial Data Services within Cloud Computing Environment

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Mobile and Wireless GIS**

1585 The Study on Critical Technique and Applying Solution of Smart Terminal Spatial Information Processing

X F Liu^{1,2}, J Zhang¹, J H Mao¹, Y G Liu², W C Lu¹, Y Liu¹

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²Yangtze University, China

1590 A New Real-time Downloading and Distributed Mobile GIS Model Based on Mobile Agent

G Tian

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1595 Research on the Formalization Description of User Requirement in GIS Demand-based Services

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1600 Research on 3D Geological Property Modeling and Its Visualization

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1604 A Modified PMHT Tracking Algorithm

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Xidian University, China

1610 Shadow Detection of Color Urban Aerial Images

S Lu, W Huang, R Huang

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1614 Extraction of Wetland Combing with RADARSAT and HJ Data of Yellow River Delta

L Chen, X G Liu, H J He, L Han

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1619 Fuzzy Information Exposure Paths Analysis in Wireless Sensor Networks

R Wang, Y Y Gao, W G Wan, S L Mao

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Session A6- Oral

DSP/FPGA Implementations

1624 An FPGA Implementation of Dynamic Reconfigurable Lifting-Based Wavelet Packet Processor for Real-Time Scalable Audio Coding

Alexey Petrovsky¹, M Rodionov¹, W G Wan², Alexander Petrovsky¹

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1631 Design of FPGA-based Video Tracking System and Application in 900T Transporting Girder Vehicle

Y M Bian, X L Jin, J Jiang, A H Li, X M Xu, X X Ning

Tongji University, China

1637 Studies on Virtual Assembly Process System

W H Zhu, H M Tan, P G Wei

Shanghai University, China

1643 Optimization and Implementation of AVS Encoder Based on TMS320DM6446

T Zhang, Z Chen, C B Chen, H Li

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1648 An Improved Multi-temporal Masking Classification Method for Winter Wheat Identification

Y Li¹, X W Chen¹, H W Duan², L K Meng²

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²Wuhan University, China

1652 Two Stage Concatenation Speech Synthesis for Embedded Devices

D J Yue

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1657 FPGA-based Real-Time Object Tracking for Mobile Robot

X F Lu^{1,2}, D Q Ren², S Y Yu¹

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²Shanghai University, China

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**Image Processing:
Image Filtering and Enhancement**

1663 An improved BP Algorithm for High-Resolution MIMO Imaging Radar

A L Chen, D W Wang, X Y Ma

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1668 A Novel Algorithm Combined with Asymmetric and Adaptive Bayesian Feedback

X J Ji, Y T Feng

Shanghai University, China

1673 A Study of Image Completion for Reducing Filling Errors

G Wu, Q Wei

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1678 Retinal Vessel Tracking Using Bilateral Filter Based on Canny Method

X L Sun, Z H Chai, C Miao, Y H Jiang, Z Y Duan, L G Wang, S H Chang

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1683 Assistant Decision-making Modeling of Project Site Location and Its Application based on ArcGIS Processing

X F Liu^{1,2}, W C Lu¹, J H Mao¹, Y Liu¹, J Zhang¹
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²Yangtze University, China

1688 Remote Sensing Classification Based on Hybrid Multi-classifier Combination Algorithm

H B Yang, H L Zhao, Z M Wang

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1693 Correcting Radial Lens Distortion with Advanced Outlier Elimination

B K Kim, S W Chung, M K Song, W J Song

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1700 Robust Adaptive Coregistration of InSAR Images Using Multisource Information and Joint Data Fusion

Z J Mao^{1,2}, Z W Yang², X Wu¹, J Meng¹, R Li¹,

Y Song¹, C F Dong¹, Z J Yan¹

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Session C6 - Oral

**Image/Video Processing and Pattern Recognition:
Applications of Virtual Reality**

1705 Novel Step Search of Block-Size Selection for Variable Block-Size Motion Estimation

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²National Taipei University of Technol., Taiwan, China

1710 Moving Window Pyramid-Based Ridgelet Transform for Image Denoising

X Wang

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1714 Spectral Synergetic Network for Image Classification

X L Ma, W G Wan, R Wang

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1719 Two InSAR Procedures for Wide and Noise Interferograms

Z Q Wei^{1,2}, H Lin², C J Shi³, J Peng³

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²The Chinese University of Hong Kong, China

³Shanghai Maritime University, China

1724 HDMI Interface based Video Post Processing Platform Design

L Wu, E Yang, R H Cheng, J J Zhao

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1729 Ultrasonic Guided Wave Tomography of Pipes

H Y Zhang, X H Chen, J B Yu, Y P Cao

Shanghai University, China

1734 Middleware for Progressively Transmitted 3D Models over Lossy Networks

X Q Yu, C L Shi, W G Wan, X Zou, X Cheng

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Remote Sensing and GIS**

**1739 Fuzzy Geometric Localization for Triangular Grid
Deployment in Passive Sensor networks**

R Wang¹, W M Cao², W G Wan¹, Y P Li²

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²Shenzhen University, China

**1744 A Neural Network Algorithm for Fast Blind Image
Restoration Using a Novel 2D-ARMA Parameter
Estimation**

Z P Deng, Y S Xia

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**1749 Spatial Analysis on SQL Geography and Geometry
Data**

L Ye, J H Mao

Shanghai University, China

**1753 Detecting the Longest Periodic Timescale in
Normal Vowels**

H H Zhang, Y Zhao, T F Weng

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Technology, China*

**1758 Utilizing Auditory Masking in Automatic Speech
Recognition**

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1765 Audio Keywords Detection in Basketball Video

C Y Zeng, W B Dou

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**1771 Spectral Analysis of Vowels /a/ and /ε/ in Tunisian
context**

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Faculty of Sciences of Tunis, Tunisia*

**1776 Binaural and Better Ear Listening Predictions for
Spatially Distributed Sources**

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Technology, Germany*

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