2014 IEEE Southwest Symposium on Image Analysis and Interpretation

(SSIAI 2014)

San Diego, California, USA 6-8 April 2014



IEEE Catalog Number: ISBN:

CFP14401-POD 978-1-4799-4052-3

TABLE OF CONTENTS

SESSION MA1
1: FEATURE WISE REPRESENTATION FOR BOTH STILL AND MOTION 3D
2: ORDERED SPATIAL SUBSETS FOR FASTER RECONSTRUCTION IN SPECT
3: A CONVOLUTIONAL NEURAL NETWORK APPROACH FOR CLASSIFYING
4: FINDING THE SMALLEST CIRCLE CONTAINING THE IRIS IN THE DENOISED
5: NOISE REDUCTION IN PET SINOGRAMS USING NON-LOCAL TOTAL VARIATION
SESSION MA2
1: FAST AND EFFICIENT LOSSLESS IMAGE COMPRESSION BASED ON CUDA21 PARALLEL WAVELET TREE ENCODING Jingqi Ao, Sunanda Mitra, Brian Nutter, Texas Tech University, United States
2: IMPLEMENTATION OF ERROR RESILIENCE TECHNIQUE FOR MULTIVIEW25 VIDEO CODING Abdulkareem B Ibrahim, Abdul H Sadka, Brunel University London, United Kingdom
3: A UNIFIED AND PIPELINED HARDWARE ARCHITECTURE FOR IMPLEMENTING29 INTRA PREDICTION IN HEVC Yuebing Jiang, Daniel Llamocca, Marios Pattichis, Gangadharan Esakki, University of new mexico, United States
4: SEGMENTATION OF DYNAMIC OBJECTS IN VIDEO SEQUENCES FUSING THE33 STRENGTHS OF A BACKGROUND SUBTRACTION MODEL, OPTICAL FLOW AND MATTING ALGORITHMS. Graciela Ramírez-Alonso, Mario I. Chacón-Murguía, Chihuahua Institute of Technology, Mexico
5: SIMPLE, EFFECTIVE RATE CONTROL FOR VIDEO DISTRIBUTION IN

POSTER SESSION

2: COLOR IMAGE RECOVERY SYSTEM FROM PRINTED GRAY IMAGE
4: 4-DOF POSE ESTIMATION OF A PIPE CRAWLING ROBOT USING A COLLIMATED45 LASER, A CONIC MIRROR, AND A FISH-EYE CAMERA Abbasali Dehghan Tezerjani, Mehran Mehrandezh, Raman Paranjape, University of Regina, Canada
5: USING AFFINE FEATURES FOR AN EFFICIENT BINARY FEATURE DESCRIPTOR49 Alok Desai, Dah-Jye Lee, Craig Wilson, Brigham Young University, United States
6: HEAD OPERATED ELECTRIC WHEELCHAIR53 Farid Abedan Kondori, UMEÅ UNIVERSITY, Sweden; Shahrouz Yousefi, KTH ROYAL INSTITUTE OF TECHNOLOGY, Sweden; Li Liu, UMEÅ UNIVERSITY, Sweden; Haibo Li, KTH ROYAL INSTITUTE OF TECHNOLOGY, Sweden
7: TEMPORAL ANALYSIS AND PERCEPTUAL WEIGHTING FOR OBJECTIVE VIDEO57 QUALITY MEASUREMENT Jose Vinicius de Miranda Cardoso, Federal University of Campina Grande, Brazil; Italo de Pontes Oliveira, Carlos Danilo Miranda Regis, Federal Institute of Education, Science and Technology of Paraíba, Brazil; Marcelo Sampaio Alencar, Federal University of Campina Grande, Brazil
8: A PCA-BASED THRESHOLDING STRATEGY FOR GROUP STUDIES OF BRAIN
9: PREDICTION OF VISUAL DISCOMFORT IN WATCHING 3D VIDEO USING65 MULTIPLE FEATURES Sang-Hyun Cho, Hang-Bong Kang, The Catholic University of Korea, Republic of Korea
11: LOW-COST CAMERA ARRAY FOR MITIGATING LIGHTING RANGE EFFECTS69 Brian Fehrman, Jeff McGough, South Dakota School of Mines and Technology, United States
12: IMAGE-BASED GEOGRAPHICAL LOCATION ESTIMATION USING WEB CAMERAS73 Jeehyun Choe, Purdue University, United States; Thitiporn Pramoun, Thumrongrat Amornraksa, King Mongkut's University of Technology Thonburi, Thailand; Yung-Hsiang Lu, Edward J. Delp, Purdue University, United States
SESSION MP1
1: REMOVING JPEG BLOCKING ARTIFACTS USING MACHINE LEARNING
2: SPATIO-TEMPORAL MULTIMODAL MEAN
3: SKINCURE: A REAL TIME IMAGE ANALYSIS SYSTEM TO AID IN THE MALIGNANT85 MELANOMA PREVENTION AND EARLY DETECTION Omar Abuzaghleh, Buket D. Barkana, Miad Faezipour, University of Bridgeport, United States

4: NO-REFERENCE TASK PERFORMANCE PREDICTION ON DISTORTED LWIR89 IMAGES Todd Goodall, Alan Bovik, University of Texas at Austin, United States
5: TRACKING SUNFLOWER CIRCUMNUTATION USING AFFINE PARAMETRIC
SESSION TA1
1: TARGETED L1L2: NATURALNESS-CONSTRAINED IMAGE RECOVERY FROM97 RANDOM PROJECTIONS Greg Freeman, Constantine Caramanis, Alan Bovik, The University of Texas at Austin, United States
2: DEPTH MAPPING USING A LOW-COST CAMERA ARRAY
Brian Fehrman, Jeff McGough, South Dakota School of Mines and Technology, United States
3: HANDLING OCCLUSION WITH AN INEXPENSIVE ARRAY OF CAMERAS
4: A COMPARISON OF TRACKING ALGORITHM PERFORMANCE FOR OBJECTS IN109 WIDE AREA IMAGERY Rohit C. Philip, Sundaresh Ram, Xin Gao, Jeffrey J. Rodriguez, University of Arizona, United States
5: MOTION ESTIMATION REVISITED: AN ESTIMATION-THEORETIC APPROACH
SESSION TA2
1: LINEAR ADAPTIVE INFRARED IMAGE FUSION
2: SINGLE IMAGE SUPER-RESOLUTION USING DICTIONARY-BASED LOCAL121 REGRESSION
Sundaresh Ram, Jeffrey J. Rodriguez, University of Arizona, United States
3: CLUSTER-BASED MULTI-TASK SPARSE REPRESENTATION FOR EFFICIENT FACE125 RECOGNITION
Soheil Shafiee, Farhad Kamangar, Laleh SH. Ghandehari, University of Texas at Arlington, United States
4: FREQUENCY GUIDED PHASE UNWRAPPING FOR IMPROVED AM-FM
5: PARTICLE SWARM OPTIMIZATION TO DETERMINE CONJOINTLY WELL

SESSION TP1

2: IMPROVED IMAGE SEGMENTATION MODEL COMBINING REGION AND EDGE	1: RECURSIVE ACTIVE CONTOURS FOR HIERARCHICAL SEGMENTATION OF13' WETLANDS IN HIGH-RESOLUTION SATELLITE IMAGERY OF ARCTIC LANDSCAPES
INFORMATION FOR INHOMOGENEOUS IMAGES Yunyun Yang, Yi Zhao, Shenzhen Graduate School, Harbin Institute of Technology, China; Boying Wu, Harbin Institute of Technology, China; Boying Wu, Harbin Institute of Technology, China 3: SUPERPIXELS USING MORPHOLOGY FOR ROCK IMAGE SEGMENTATION	Alexei Skurikhin, Los Alamos National Laboratory, United States; Anna Liljedahl, University of Alaska, United States; Cathy Wilson, Joel Rowland, Los Alamos National Laboratory, United States
4: A NOTE ON CONVEX IMAGE SEGMENTATION MODEL BASED ON LOCAL AND	Yunyun Yang, Yi Zhao, Shenzhen Graduate School, Harbin Institute of Technology, China; Boying Wu, Harbin
GLOBAL INTENSITY FITTING ENERGY Yunyun Yang, Yi Zhao, Shenzhen Graduate School, Harbin Institute of Technology, China; Boying Wu, Harbin Institute of Technology, China; Hongpeng Wang, Shenzhen Graduate School, Harbin Institute of Technology, China Stitute of Technology, China; Hongpeng Wang, Shenzhen Graduate School, Harbin Institute of Technology, China Stitute of Technology, China; Hongpeng Wang, Shenzhen Graduate School, Harbin Institute of Technology, China Stitute of Technology, China; Hongpeng Wang, Shenzhen Graduate School, Harbin Institute of Technology, China Stitute Graduate States Institute, India; Barry Condron, Department of Biology, University of Virginia, United States; Scott T. Acton, Charles L. Brown Department of Electrical and Computer Engineering United States; Dipti Prasad Mukherjee, Electronics and Communication Sciences Unit, India Statistical Institute, India; Barry Condron, Department of Biology, University of Virginia, United States; Scott T. Acton, Charles L. Brown Department of Electrical and Computer Engineering United States Septical and Computer Engineering, United States SREFERENCELESS PERCEPTUAL IMAGE DEFOGGING	3: SUPERPIXELS USING MORPHOLOGY FOR ROCK IMAGE SEGMENTATION14: Sree Ramya Surya Prabha Malladi, Sundaresh Ram, Jeffrey J. Rodriguez, University of Arizona, United States
TRANSFORM, UNSUPERVISED DISTANCE LEARNING AND NORMALIZED CUT Tiago Pinto, Marco Antonio Garcia de Carvalho, Unicamp, Brazil; Daniel Pedronette, UNESP, Brazil; Paulo Martins, Unicamp, Brazil SESSION TP2 1: CHANNELING MR. POTATO HEAD - FACE SUPER-RESOLUTION USING	Yunyun Yang, Yi Zhao, Shenzhen Graduate School, Harbin Institute of Technology, China; Boying Wu, Harbin Institute of Technology, China; Hongpeng Wang, Shenzhen Graduate School, Harbin Institute of Technology,
1: CHANNELING MR. POTATO HEAD - FACE SUPER-RESOLUTION USING	Tiago Pinto, Marco Antonio Garcia de Carvalho, Unicamp, Brazil; Daniel Pedronette, UNESP, Brazil; Paulo
SEMANTIC COMPONENTS Anustup Choudhury, Andrew Segall, Sharp Laboratories of America, United States 2: SOCIAL BEHAVIOR ANALYSIS OF DROSOPHILA LARVAE VIA MOTION ACTIVITY16 RECOGNITION Micah Consylman, Suvadip Mukherjee, Charles L. Brown Department of Electrical and Computer Engineering United States; Dipti Prasad Mukherjee, Electronics and Communication Sciences Unit, India Statistical Institute, India; Barry Condron, Department of Biology, University of Virginia, United States; Scott T. Acton, Charles L. Brown Department of Electrical and Computer Engineering, United States 3: REFERENCELESS PERCEPTUAL IMAGE DEFOGGING	SESSION TP2
RECOGNITION Micah Consylman, Suvadip Mukherjee, Charles L. Brown Department of Electrical and Computer Engineering United States; Dipti Prasad Mukherjee, Electronics and Communication Sciences Unit, India Statistical Institute, India; Barry Condron, Department of Biology, University of Virginia, United States; Scott T. Acton, Charles L. Brown Department of Electrical and Computer Engineering, United States 3: REFERENCELESS PERCEPTUAL IMAGE DEFOGGING	
Lark Kwon Choi, The University of Texas at Austin, United States; Jaehee You, Hongik University, Republic of Korea; Alan Bovik, The University of Texas at Austin, United States 4: THE FAST DISCRETE PERIODIC RADON TRANSFORM FOR PRIME SIZED16: IMAGES: ALGORITHM, ARCHITECTURE, AND VLSI/FPGA IMPLEMENTATION	Micah Consylman, Suvadip Mukherjee, Charles L. Brown Department of Electrical and Computer Engineering United States; Dipti Prasad Mukherjee, Electronics and Communication Sciences Unit, India Statistical Institute, India; Barry Condron, Department of Biology, University of Virginia, United States; Scott T. Acton,
IMAGES: ALGORITHM, ARCHITECTURE, AND VLSI/FPGA IMPLEMENTATION	3: REFERENCELESS PERCEPTUAL IMAGE DEFOGGING
	·