SSIAI 2014—Program Schedule

IEEE Southwest Symposium on Image Analysis and Interpretation

April 6-8, 2014 | Humphreys Half Moon Inn | San Diego, California USA
http://www.ssiai.org

Sunday, April 6, 2014

**5:00-6:30pm Reception poolside
at Humphreys Half Moon Inn** (appetizers provided)

Monday, April 7, 2014

7:30-8:00 Registration
8:00-8:05 Opening
8:05-9:05 Plenary
9:05-10:20 MA1 (5)
10:20-10:40 Break
10:40-11:55 MA2 (5)
11:55-1:35 Lunch
1:35-2:35 Plenary
2:35-4:05 Posters/Break
4:05-5:20 MP1 (5)
6:30-8:00 Banquet

Tuesday, April 8, 2014

7:30-8:00 Registration
8:00-9:00 Plenary
9:00-10:15 TA1 (5)
10:15-10:35 Break
10:35-11:50 TA2 (5)
11:50-1:30 Lunch
1:30-2:30 Plenary
2:30-3:45 TP1 (5)
3:45-4:05 Break
4:05-5:05 TP2 (4)
5:05-5:10 Closing

Monday, April 7, 2014

7:30 – 8:00 Registration

8:00 – 8:05 Opening

8:05 – 9:05 Plenary: Prof. Alan Bovik, University of Texas, Austin

9:05 – 10:20 MA1 (5), Session Chair: Scott Acton

9:05 – 9:20   1019: **FEATURE WISE REPRESENTATION FOR BOTH STILL AND MOTION 3D MEDICAL IMAGES**

Xiaohong Gao, *Middlesex University, United Kingdom*

9:20 – 9:35   1014: **ORDERED SPATIAL SUBSETS FOR FASTER RECONSTRUCTION IN SPECT**

Wenyuan Qi, *Illinois Institute of Technology, United States*

Yongyi Yang, *Illinois Institute of Technology, United States*

9:35 – 9:50   1035: **A CONVOLUTIONAL NEURAL NETWORK APPROACH FOR CLASSIFYING LEUKOCORIA**

Ryan Henning, *Baylor University, United States*

Greg Hamerly, *Baylor University, United States*

Pablo Rivas-Perea, *Baylor University, United States*

Bryan Shaw, *Baylor University, United States*

9:50 – 10:05   1040: **FINDING THE SMALLEST CIRCLE CONTAINING THE IRIS IN THE DENOISED WAVELET DOMAIN**

Pablo Rivas-Perea, *Baylor University, United States*

Greg Hamerly, *Baylor University, United States*

Ryan Henning, *Baylor University, United States*

Bryan Shaw, *Baylor University, United States*

10:05 – 10:20   1048: **NOISE REDUCTION IN PET SINOGRAMS USING NON-LOCAL TOTAL VARIATION REGULARIZATION**

Jose Mejia, *Universidad Autonoma de Ciudad Juarez, Mexico*

Boris Mederos, *Universidad Autonoma de Ciudad Juarez, Mexico*

Sergio Cabrera, *University of Texas at El Paso, United States*

Humberto Ochoa-Dominguez, *Universidad Autonoma de Ciudad Juarez, Mexico*

Osslan Vergara-Villegas, *Universidad Autonoma de Ciudad Juarez, Mexico*

10:20 – 10:40 Break

10:40 – 11:55 MA2 (5), Session Chair: Sergio Cabrera

10:40 – 10:55   1050: **FAST AND EFFICIENT LOSSLESS IMAGE COMPRESSION BASED ON CUDA PARALLEL WAVELET TREE ENCODING**

Jingqi Ao, *Texas Tech University, United States*

Sunanda Mitra, *Texas Tech University, United States*

Brian Nutter, *Texas Tech University, United States*

10:55 – 11:10 1013: **IMPLEMENTATION OF ERROR RESILIENCE TECHNIQUE FOR MULTIVIEW VIDEO CODING**

    Abdulkareem B Ibrahim, *Brunel University London, United Kingdom*

    Abdul H Sadka, *Brunel University London, United Kingdom*

11:10 – 11:25 1008: **A UNIFIED AND PIPELINED HARDWARE ARCHITECTURE FOR IMPLEMENTING INTRA PREDICTION IN HEVC**

    Yuebing Jiang, *University of New Mexico, United States*

    Daniel Llamocca, *University of New Mexico, United States*

    Marios Pattichis, *University of New Mexico, United States*

    Gangadharan Esakki, *University of New Mexico, United States*

11:25 – 11:40 1082: **SEGMENTATION OF DYNAMIC OBJECTS IN VIDEO SEQUENCES FUSING THE STRENGTHS OF A BACKGROUND SUBTRACTION MODEL, OPTICAL FLOW AND MATTING ALGORITHMS**

    Graciela Ramirez-Alonso, *Chihuahua Institute of Technology, Mexico*

    Mario I. Chacon-Murguia, *Chihuahua Institute of Technology, Mexico*

11:40 – 11:55 1068: **SIMPLE, EFFECTIVE RATE CONTROL FOR VIDEO DISTRIBUTION IN HETEROGENEOUS INTELLIGENT TRANSPORTATION SYSTEM NETWORKS**

    Ekasit Vorakitolan, *University of Oklahoma, United States*

    Joseph Havlicek, *University of Oklahoma, United States*

    Ronald Barnes, *University of Oklahoma, United States*

    Alan Stevenson, *Oklahoma Department of Transportation, United States*

11:55 – 1:35 Lunch

1:35 – 2:35 Plenary: Prof. B.S. Manjunath, University of California, Santa Barbara

2:35 – 4:05 Posters/Break, Session Chair: Peter Tay

    1029: **COLOR IMAGE RECOVERY SYSTEM FROM PRINTED GRAY IMAGE**

        Jiqiang Lin, *Chiba University, Japan*

        Takahiko Horiuchi, *Chiba University, Japan*

        Keita Hirai, *Chiba University, Japan*

        Shoji Tominaga, *Chiba University, Japan*

    1039: **4-DOF POSE ESTIMATION OF A PIPE CRAWLING ROBOT USING A COLLIMATED LASER, A CONIC MIRROR, AND A FISH-EYE CAMERA**

        Abbasali Dehghan Tezerjani, *University of Regina, Canada*

        Mehran Mehrandezh, *University of Regina, Canada*

        Raman Paranjape, *University of Regina, Canada*

    1045: **USING AFFINE FEATURES FOR AN EFFICIENT BINARY FEATURE DESCRIPTOR**

        Alok Desai, *Brigham Young University, United States*

        Dah-Jye Lee, *Brigham Young University, United States*

        Craig Wilson, *Brigham Young University, United States*

1053: HEAD OPERATED ELECTRIC WHEELCHAIR

Farid Abedan Kondori, *UMEÅ University, Sweden*

Shahrouz Yousefi, *KTH Royal Institute of Technology, Sweden*

Li Lui, *UMEÅ University, Sweden*

Haibo LI, *KTH Royal Institute of Technology, Sweden*

1037: TEMPORAL ANALYSIS AND PERCEPTUAL WEIGHTING FOR OBJECTIVE VIDEO QUALITY MEASUREMENT

Jose Vinicius de Miranda Cardoso, *Federal University of Campina Grande, Brazil*

Italo de Pontes Oliveira, *Federal Institute of Education, Science and Technology of Paraíba, Brazil*

Carlos Danilo Miranda Regis, *Federal Institute of Education, Science and Technology of Paraíba, Brazil*

Marcelo Sampaio Alencar, *Federal University of Campina Grande, Brazil*

1061: A PCA-BASED THRESHOLDING STRATEGY FOR GROUP STUDIES OF BRAIN CONNECTIVITY – WITH APPLICATIONS TO RESTING STATE FMRI

Erik A Hanson, *University of Bergen, Norway*

Erling Westlye, *Volda Hospital Norway*

Arvid Lundervold, *University of Bergen, Norway*

1064: PREDICTION OF VISUAL DISCOMFORT IN WATCHING 3D VIDEO USING MULTIPLE FEATURES

Sang-Hyun Cho, *The Catholic University of Korea, Republic of Korea*

Hang-Bong Kang, *The Catholic University of Korea, Republic of Korea*

1043: LOW-COST CAMERA ARRAY FOR MITIGATING LIGHTING RANGE EFFECTS

Brian Fehrman, *South Dakota School of Mines and Technology, United States*

Jeff McGough, *South Dakota School of Mines and Technology, United States*

1081: IMAGE-BASED GEOGRAPHICAL LOCATION ESTIMATION USING WEB CAMERAS

Jeehyun Choe, *Purdue University, United States*

Thitiporn Pramoun, *King Mongkut's University of Technology, Thailand*

Thumrongrat Amornraska, *King Mongkut's University of Technology, Thailand*

Yung_hsiang Lu, *Purdue University, United States*

Edward J. Delp, *Purdue University, United States*

4:05 – 5:20 MP1 (5), Session Chair: Marios Pattichis

4:05 – 4:20   **1065: REMOVING JPEG BLOCKING ARTIFACTS USING MACHINE LEARNING**

Jonathan Quijas, *University of Texas at El Paso, United States*

Olac Fuentes, *University of Texas at El Paso, United States*

4:20 – 4:35   **1052: SPATIO-TEMPORAL MULTIMODAL MEAN**

Shoaib Azmat, *Georgia Institute of Technology, United States*

Linda Wills, *Georgia Institute of Technology, United States*

Scott Wills, *Georgia Institute of Technology, United States*

4:35 – 4:50   **1028: SKINCURE: A REAL TIME IMAGE ANALYSIS SYSTEM TO AID IN THE MALIGNANT MELANOMA PREVENTION AND EARLY DETECTION**

Omar Abuzaghleh, *University of Bridgeport, United States*

Buket D. Barkana, *University of Bridgeport, United States*

Miad Faezipour, *University of Bridgeport, United States*

4:50 – 5:05   1051: **NO-REFERENCE TASK PERFORMANCE PREDICTION ON DISTORTED LWIR IMAGES**

Todd Goodall, *University of Texas at Austin, United States*

Alan Bovik, *University of Texas at Austin, United States*

5:05 – 5:20   1057: **TRACKING SUNFLOWER CIRCUMNUTATION USING AFFINE PARAMETRIC ACTIVE CONTOURS**

Suvadip Mukherjee, *University of Virginia, United States*

Rituparna Sarkar, *University of Virginia, United States*

Joshua Vandenbrink, *University of Virginia, United States*

Scott Acton, *University of Virginia, United States*

Benjamin Blackman, *University of Virginia, United States*

6:30 – 8:00 Banquet: Bali Hai Restaurant
2230 Shelter Island Dr.
(walk 5 minutes northeast of hotel)

Tuesday, April 8, 2014

7:30 – 8:00 Registration

8:00 – 9:00 Plenary: Prof. Ed Delp, Purdue University

9:00 – 10:15 TA1 (5), Session Chair: JoeBob Havlicek

9:00 – 9:15   1033: **TARGETED L1L2: NATURALNESS-CONSTRAINED IMAGE RECOVERY FROM RANDOM PROJECTIONS**

Greg Freeman, *The University of Texas at Austin, United States*

Constantine Caramanis, *The University of Texas at Austin, United States*

Alan Bovik, *The University of Texas at Austin, United States*

9:15 – 9:30   1041: **DEPTH MAPPING USING A LOW-COST CAMERA ARRAY**

Brian Fehrman, *South Dakota School of Mines and Technology, United States*

Jeff McGough, *South Dakota School of Mines and Technology, United States*

9:30 – 9:45   1044: **HANDLING OCCLUSION WITH AN INEXPENSIVE ARRAY OF CAMERAS**

Brian Fehrman, *South Dakota School of Mines and Technology, United States*

Jeff McGough, *South Dakota School of Mines and Technology, United States*

9:45 – 10:00   1080: **A COMPARISON OF TRACKING ALGORITHM PERFORMANCE FOR OBJECTS IN WIDE AREA IMAGERY**

Rohit C. Philip, *University of Arizona, United States*

Sundaresh Ram, *University of Arizona, United States*

Xin Gao, *University of Arizona, United States*

Jeffrey J. Rodriguez, *University of Arizona, United States*

10:00 – 10:15   1075: **MOTION ESTIMATION REVISITED: AN ESTIMATION-THEORETIC APPROACH**

Rudolf Mester, *Linkoping University, Sweden*

10:15-10:35 Break

10:35-11:50 TA2 (5), Session Chair: Ed Delp

10:35 – 10:50   1036: **LINEAR ADAPTIVE INFRARED IMAGE FUSION**

> Chuong Nguyen, *University of Oklahoma, United States*
>
> Joseph Havlicek, *University of Oklahoma, United States*

10:50 – 11:05   1079: **SINGLE IMAGE SUPER-RESOLUTION USING DICTIONARY-BASED LOCAL REGRESSION**

> Sundaresh Ram, *University of Arizona, United States*
>
> Jeffrey J. Rodriguez, *University of Arizona, United States*

11:05 – 11:20   1073: **CLUSTER-BASED MULTI-TASK SPARSE REPRESENTATION FOR EFFICIENT FACE RECOGNITION**

> Soheil Shafiee, *University of Texas at Arlington, United States*
>
> Farhad Kamangar, *University of Texas at Arlington, United States*
>
> Laleh SH. Ghandehari, *University of Texas at Arlington, United States*

11:20 – 11:35   1049: **FREQUENCY GUIDED PHASE UNWRAPPING FOR IMPROVED AM-FM RECONSTRUCTION**

> Patrick Campbell, *University of Oklahoma, United States*
>
> Joseph Havlicek, *University of Oklahoma, United States*

11:35 – 11:50   1056: **PARTICLE SWARM OPTIMIZATION TO DETERMINE CONJOINTLY WELL LOCALIZED MLTS**

> Peter Tay, *Western Carolina University, United States*
>
> Yanjun Yan, *Western Carolina University, United States*

11:50-1:30 Lunch

1:30-2:30 Plenary: Prof. Pamela Cosman, University of California, San Diego

2:30-3:45 TP1 (5), Session Chair: Rudolf Mester

2:30 – 2:45   1020: **RECURSIVE ACTIVE CONTOURS FOR HIERARCHICAL SEGMENTATION OF WETLANDS IN HIGH-RESOLUTION SATELLITE IMAGERY OF ARCTIC LANDSCAPES**

> Alexei Skurikhin, *Los Alamos National Laboratory, United States*
>
> Anna Liljedahl, *University of Alaska, United States*
>
> Cathy Wilson, *Los Alamos National Laboratory, United States*
>
> Joel Rowland, *Los Alamos National Laboratory, United States*

2:45 – 3:00   1012: **IMPROVED IMAGE SEGMENTATION MODEL COMBINING REGION AND EDGE INFORMATION FOR INHOMOGENEOUS IMAGES**

> Yunyun Yang, *Harbin Institute of Technology Shenzhen Graduate School, China*;
>
> Yi Zhao, *Harbin Institute of Technology Shenzhen Graduate School, China*
>
> Boying Wu, *Harbin Institute of Technology, China*

3:00 – 3:15   1070: **SUPERPIXELS USING MORPHOLOGY FOR ROCK IMAGE SEGMENTATION**

> Sree Ramya Surya Prabha Malladi, *University of Arizona, United States*
>
> Sundaresh Ram, *University of Arizona, United States*
>
> Jeffrey J. Rodriguez, *University of Arizona, United States*

3:15 – 3:30　　1055: **A NOTE ON CONVEX IMAGE SEGMENTATION MODEL BASED ON LOCAL AND GLOBAL INTENSITY FITTING ENERGY**

　　　　　　　Yunyun Yang, *Harbin Institute of Technology Shenzhen Graduate School, China*

　　　　　　　Yi Zhao, *Harbin Institute of Technology Shenzhen Graduate School, China*

　　　　　　　Boying Wu, *Harbin Institute of Technology, China*

　　　　　　　Hongpeng Wang, *Harbin Institute of Technology Shenzhen Graduate School, China*

3:30 – 3: 45　　1018: **IMAGE SEGMENTATION THROUGH COMBINED METHODS: WATERSHED TRANSFORM, UNSUPERVISED DISTANCE LEARNING AND NORMALIZED CUT**

　　　　　　　Tiago Pinto, *Unicamp, Brazil*

　　　　　　　Marco Gonçalves Carvalho, *Unicamp, Brazil*

　　　　　　　Daniel Pedronette, *UNESP, Brazil*

　　　　　　　Paulo Martins, *Unicamp, Brazil*

3:45-4:05 Break

4:05-5:05 TP2 (4), Session Chair: Brian Nutter

4:05 – 4:20　　1024: **CHANNELING MR. POTATO HEAD - FACE SUPER-RESOLUTION USING SEMANTIC COMPONENTS**

　　　　　　　Anustup Choudhury, *Sharp Laboratories of America, United States*

　　　　　　　Andrew Segall, *Sharp Laboratories of America, United States*

4:20 – 4:35　　1062: **SOCIAL BEHAVIOR ANALYSIS OF DROSOPHILA LARVAE VIA MOTION ACTIVITY RECOGNITION**

　　　　　　　Micah Consylman, *University of Virginia, United States*

　　　　　　　Suvadip Mukherjee, *University of Virginia, United States*

　　　　　　　Dipti Prasad Mukherjee, *India Statistical Institute, India*

　　　　　　　Barry Condron, *University of Virginia, United States*

　　　　　　　Scott T. Acton, *University of Virginia, United States*

4:35 – 4:50　　1023: **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*

4:50 – 5:05　　1046: **THE FAST DISCRETE PERIODIC RADON TRANSFORM FOR PRIME SIZED IMAGES: ALGORITHM, ARCHITECTURE, AND VLSI/FPGA IMPLEMENTATION**

　　　　　　　Cesar Carranza, *University of New Mexico, United States*

　　　　　　　Daniel Llamocca, *University of New Mexico, United States*

　　　　　　　Marios Pattichis, *University of New Mexico, United States*

5:05-5:10 Closing