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<i>Young-Gun Lee, Jenq-Neng Hwang, University of Washington, United States</i>	
<b>IVMSP-P6.4: PRECISE REGRESSION FOR BOUNDING BOX CORRECTION FOR IMPROVED TRACKING BASED ON DEEP REINFORCEMENT LEARNING</b>	<b>1643</b>
<i>Yifan Jiang, Hyunhak Shin, Hanseok Ko, Korea University, Korea (South)</i>	
<b>IVMSP-P6.5: FAST ROBUST TRACKING VIA DOUBLE CORRELATION FILTER FORMULATION</b>	<b>1648</b>
<i>Ashwani Kumar Tiwari, Rahul Siripurapu, Yadhunandan U S, Wipro Technologies, India</i>	
 <b>IVMSP-P7: RETRIEVAL</b>	
<b>IVMSP-P7.1: QUERY EXPANSION WITH DIFFUSION ON MUTUAL RANK GRAPHS</b>	<b>1653</b>
<i>Xiaomeng Wu, Go Irie, Kaoru Hiramatsu, Kunio Kashino, NTT Corporation, Japan</i>	

<b>IVMSP-P7.2: CROSS-MODAL LEARNING TO RANK WITH ADAPTIVE LISTWISE CONSTRAINT</b> .....	<b>1658</b>
<i>Guangzhao Qu, Jing Xiao, Jia Zhu, Yang Cao, Changqin Huang, South China Normal University, China</i>	
<b>IVMSP-P7.3: TRACKED INSTANCE SEARCH</b> .....	<b>1663</b>
<i>Andreu Girbau, Universitat Politecnica de Catalunya, Spain; Ryota Hinami, Shin'Ichi Satoh, National Institute of Informatics, Japan</i>	
<b>IVMSP-P7.4: A DISCRIMINATIVELY LEARNED FEATURE EMBEDDING BASED ON MULTI-LOSS FUSION FOR PERSON SEARCH</b> .....	<b>1668</b>
<i>Hong Liu, Wei Shi, Weipeng Huang, Qiao Guan, Peking University, China</i>	
<b>IVMSP-P7.5: APHASH: ANCHOR-BASED PROBABILITY HASHING FOR IMAGE RETRIEVAL</b> .....	<b>1673</b>
<i>Junjie Chen, Hong Kong Baptist University, China; Anran Wang, Institute for Infocomm Research, A*STAR, China; William K. Cheung, Hong Kong Baptist University, China</i>	
<b>IVMSP-P7.6: MODALITY-SPECIFIC STRUCTURE PRESERVING HASHING FOR CROSS-MODAL RETRIEVAL</b> .....	<b>1678</b>
<i>Xingbo Liu, School of Computer Science and Technology, Shandong University, China; Xiushan Nie, School of Computer Science and Technology, Shandong University of Finance and Economics / School of Computer Science and Technology, Shandong University, China; Haoliang Sun, School of Computer Science and Technology, Shandong University, China; Chaoran Cui, School of Computer Science and Technology, Shandong University of Finance and Economics, China; Yilong Yin, School of Computer Science and Technology, Shandong University, China</i>	
<b>IVMSP-P7.7: DEEP UNIQUENESS-AWARE HASHING FOR FINE-GRAINED MULTI-LABEL IMAGE RETRIEVAL</b> .....	<b>1683</b>
<i>Dayan Wu, Institute of Information Engineering, Chinese Academy of Sciences; School of Cyber Security, University of Chinese Academy of Sciences, China; Zheng Lin, Bo Li, Institute of Information Engineering, Chinese Academy of Sciences, China; Jing Liu, Institute of Information Engineering, Chinese Academy of Sciences; School of Cyber Security, University of Chinese Academy of Sciences, China; Weiping Wang, Institute of Information Engineering, Chinese Academy of Sciences, China</i>	
<b>IVMSP-P8: IMAGE/VIDEO ESTIMATION AND APPLICATIONS</b>	
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<i>Xiao Yang, Shanghai Jiao Tong University, China; Hang Su, Tsinghua National Lab for Information Science and Technology, China; Qin Zhou, Xinzhe Li, Shibao Zheng, Shanghai Jiao Tong University, China</i>	
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<i>Shicheng Yang, Ying Wen, East China Normal University, China; Lianghua He, Tongji University, China</i>	
<b>IVMSP-P8.3: CONTOURLET BASED NATURAL SCENE STATISTICS USING STUDENT'S T DISTRIBUTION</b> .....	<b>1698</b>
<i>Antonis Mairgiotis, Technological Educational Institute of Thessaly, Greece; Lisimachos P. Kondi, University of Ioannina, Greece; Yongyi Yang, Illinois Institute of Technology, United States</i>	
<b>IVMSP-P8.4: ANSCOMBE MEETS HOUGH: NOISE VARIANCE STABILIZATION VIA PARAMETRIC MODEL ESTIMATION</b> .....	<b>1703</b>
<i>Mariano Tepper, Andrea Giovannucci, Eftychios Pnevmatikakis, Flatiron Institute, United States</i>	
<b>IVMSP-P8.6: FAST AND ROBUST RECURSIVE FILTER FOR IMAGE DENOISING</b> .....	<b>1708</b>
<i>Yiheng Chi, Stanley Chan, Purdue University, United States</i>	

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### **IVMSP-P9.1: SOFT DECODING OF LIGHT FIELD IMAGES USING POCS AND FAST GRAPH SPECTRAL FILTERS ..... 1713**

*Shuai Yang, Peking University, China; Gene Cheung, National Institute of Informatics, Japan; Jiaying Liu, Zongming Guo, Peking University, China*

### **IVMSP-P9.2: GRAPH-BASED TRANSFORMS FOR PREDICTIVE LIGHT FIELD COMPRESSION BASED ON SUPER-PIXELS ..... 1718**

*Mira Rizkallah, Xin Su, Thomas Maugey, Christine Guillemot, Institut National de Recherche en Informatique et en Automatique, France*

### **IVMSP-P9.3: A LOW-COMPLEXITY VIDEO ENCODER FOR EQUIRECTANGULAR PROJECTED 360 VIDEO CONTENT ..... 1723**

*Bappaditya Ray, University of Poitiers, France; Joel Jung, Orange Labs, France; Mohamed-Chaker Larabi, University of Poitiers, France*

### **IVMSP-P9.4: FAST TEXTURE INTRA SIZE CODING BASED ON BIG DATA CLUSTERING FOR 3D-HEVC ..... 1728**

*Hamza Hamout, Abderrahmane Elyouf, Ibn-Zohr University, Morocco*

### **IVMSP-P9.5: LOW COMPLEXITY JOINT RDO OF PREDICTION UNITS COUPLES FOR HEVC INTRA CODING ..... 1733**

*Maxime Bichon, Ericsson / INSA de Rennes, France; Julien Le Tanou, Michael Ropert, Ericsson, France; Wassim Hamidouche, Luce Morin, Lu Zhang, INSA de Rennes, France*

### **IVMSP-P9.6: FAST 3D-HEVC DEPTH MAPS INTRA-FRAME PREDICTION USING DATA MINING ..... 1738**

*Mário Saldanha, Federal University of Pelotas, Brazil; Gustavo Sanchez, César Marcon, Pontifical Catholic University of Rio Grande do Sul, Brazil; Luciano Agostini, Federal University of Pelotas, Brazil*

### **IVMSP-P9.7: RECURSIVE DISTORTION ESTIMATION FOR HYBRID DIGITAL-ANALOG VIDEO TRANSMISSION ..... 1743**

*Jing Zhang, Anhong Wang, Taiyuan University of Science and Technology, China; Jie Liang, Simon Fraser University, Canada*

### **IVMSP-P9.8: AN EFFICIENT DEEP CONVOLUTIONAL LAPLACIAN PYRAMID ARCHITECTURE FOR CS RECONSTRUCTION AT LOW SAMPLING RATIOS ..... 1748**

*Wenxue Cui, Heyao Xu, Harbin Institute of Technology, China; Xinwei Gao, Wechat Business Group, China; Shengping Zhang, Feng Jiang, Debin Zhao, Harbin Institute of Technology, China*

### **IVMSP-P9.9: CLUSTER-BASED POINT CLOUD CODING WITH NORMAL WEIGHTED GRAPH FOURIER TRANSFORM ..... 1753**

*Yiqun Xu, Institute of Computing Technology, Chinese Academy of Sciences, China; Wei Hu, Shanshe Wang, Peking University, China; Xinfeng Zhang, University of Southern California, United States; Shiqi Wang, City University of Hong Kong, China; Siwei Ma, Wen Gao, Peking University, China*

### **IVMSP-P9.10: TOWARDS PERCEPTUALLY GUIDED RATE-DISTORTION OPTIMIZATION FOR HEVC ..... 1758**

*Kais Rouis, National School of Engineering of Tunis, University of Tunis El Manar, Tunisia; Mohamed-Chaker Larabi, University of Poitiers, France; Jamel Belhadj Tahar, Innov'Com Laboratory, Sup'Com, University of Carthage, Tunisia, Tunisia*

## **IVMSP-P10: IMAGE/VIDEO CODING III**

### **IVMSP-P10.1: OCTAGONAL-AXIS RASTER PATTERN FOR IMPROVED TEST ZONE SEARCH MOTION ESTIMATION ..... 1763**

*Paulo Goncalves, Marcelo Porto, Bruno Zatt, Luciano Agostini, Guilherme Correa, Federal University of Pelotas, Brazil*

<b>IVMSP-P10.2: A JOINT SOURCE CHANNEL ARITHMETIC MAP DECODER USING PROBABILISTIC RELATIONS AMONG INTRA MODES IN PREDICTIVE VIDEO COMPRESSION</b>	<b>1768</b>
<i>Hossein Kourkchi, William E. Lynch, M. Omair Ahmad, Concordia University, Canada</i>	
<b>IVMSP-P10.3: A MOTION AIDED MERGE MODE FOR HEVC</b>	<b>1773</b>
<i>Hao Li, Kui Fan, Ronggang Wang, Ge Li, Wenmin Wang, Peking University, China</i>	
<b>IVMSP-P10.4: A ROBUST HIERARCHICAL QP SETTING FOR SCREEN CONTENT CODING</b>	<b>1777</b>
<i>Tong Tang, Institute of Information Science and Technology, University of Science and Technology of China, China; Ling Li, Institute of Software, Chinese Academy of Science, China; Donglin Wang, Institute of Automation, Chinese Academy of Sciences, China</i>	
<b>IVMSP-P10.5: RATE CONTROL FOR HEVC INTRA-CODING BASED ON PIECEWISE LINEAR APPROXIMATIONS</b>	<b>1782</b>
<i>Victor Sanchez, University of Warwick, United Kingdom</i>	
<b>IVMSP-P10.6: COMPLEXITY REDUCTION ALGORITHM FOR OPTIMUM QUANTIZER DESIGN BASED ON AMPLITUDE SPARSENESS</b>	<b>1787</b>
<i>Yukihiro Bandoh, Seishi Takamura, Atsushi Shimizu, Nippon Telegraph and Telephone Corporation, Japan</i>	
<b>IVMSP-P10.7: HIGH EFFICIENCY COMPRESSION FOR OBJECT DETECTION</b>	<b>1792</b>
<i>Hyomin Choi, Ivan V. Bajic, Simon Fraser University, Canada</i>	
<b>IVMSP-P10.8: ASYMMETRIC DCT-JND FOR LUMINANCE ADAPTATION EFFECTS: AN APPLICATION TO PERCEPTUAL VIDEO CODING IN MV-HEVC</b>	<b>1797</b>
<i>Sami Jaballah, NOCCS Laboratory, National School of Engineering of Sousse, University of Sousse, Tunisia, Tunisia; Mohamed-Chaker Larabi, CNRS, Univ. Poitiers, XLIM, UMR 7252, France; Jamel Belhadj Tahar, National School of Engineering of Tunis, University of Tunis El Manar, Tunisia</i>	
<b>IVMSP-P10.9: DIGITAL-ANALOG SUPERPOSITION CODING FOR OFDM CHANNELS WITH APPLICATION TO VIDEO TRANSMISSION</b>	<b>1802</b>
<i>Pradeepa Yahampath, University of Manitoba, Canada</i>	
<b>IVMSP-P10.10: U-FRESH: AN FRI-BASED SINGLE IMAGE SUPER RESOLUTION ALGORITHM AND AN APPLICATION IN IMAGE COMPRESSION</b>	<b>1807</b>
<i>Xin Deng, Junjie Huang, Mengying Liu, Pier Luigi Dragotti, Imperial College London, United Kingdom</i>	
<b>IVMSP-P11: IMAGE/VIDEO PROCESSING</b>	
<b>IVMSP-P11.2: A NATURAL SHAPE-PRESERVING STEREOSCOPIC IMAGE STITCHING</b>	<b>1812</b>
<i>Haoqian Wang, Yaling Zhou, Xingzheng Wang, Lu Fang, Tsinghua University, China</i>	
<b>IVMSP-P11.3: IMAGE FUSION USING BELIEF PROPAGATION</b>	<b>1817</b>
<i>Paul Hill, David Bull, The University of Bristol, United Kingdom</i>	
<b>IVMSP-P11.4: BLIND IMAGE DEBLURRING VIA REWEIGHTED GRAPH TOTAL VARIATION</b>	<b>1822</b>
<i>Yuanchao Bai, Peking University, China; Gene Cheung, National Institute of Informatics, Japan; Xianming Liu, Harbin Institute of Technology, China; Wen Gao, Peking University, China</i>	
<b>IVMSP-P11.5: SYMMETRIC UPWIND SCHEME FOR DISCRETE WEIGHTED TOTAL VARIATION</b>	<b>1827</b>
<i>Sonia Tabti, Julien Rabin, Abderrahim Elmoataz, Caen University, France</i>	
<b>IVMSP-P11.6: IMPROVING DISPARITY MAP ESTIMATION FOR MULTI-VIEW NOISY IMAGES</b>	<b>1832</b>
<i>Shiwei Zhou, Zhengyang Lou, Yu Hen Hu, Hongrui Jiang, University of Wisconsin-Madison, United States</i>	



<b>IVMSP-P11.7: SALIENCY-BASED FEATURE SELECTION STRATEGY IN STEREOSCOPIC PANORAMIC VIDEO GENERATION</b>	<b>1837</b>
<i>Haoyu Wang, Daniel Sandin, Dan Schonfeld, University of Illinois at Chicago, United States</i>	
<b>IVMSP-P11.8: SPARSE DISPARITY ESTIMATION USING GLOBAL PHASE ONLY CORRELATION FOR STEREO MATCHING ACCELERATION</b>	<b>1842</b>
<i>Takeshi Shimada, Masayuki Ikebe Ikebe, Prasoon Ambalathankandy, Shinya Takamaeda-Yamazaki, Masato Motomura, Tetsuya Asai, Hokkaido University, Japan</i>	
<b>IVMSP-P11.9: ACTIVE CAMERA RELOCALIZATION WITH RGBD CAMERA FROM A SINGLE 2D IMAGE</b>	<b>1847</b>
<i>Dongxu Miao, Feipeng Tian, Wei Feng, Tianjin University, China</i>	
<b>IVMSP-P12: IMAGE ANALYSIS II</b>	
<b>IVMSP-P12.1: MAN-MADE OBJECT RECOGNITION FROM UNDERWATER OPTICAL IMAGES USING DEEP LEARNING AND TRANSFER LEARNING</b>	<b>1852</b>
<i>Xian Yu, Xiangrui Xing, Han Zheng, Xueyang Fu, Yue Huang, Xinghao Ding, Xiamen University, China</i>	
<b>IVMSP-P12.2: IMAGE-BASED PM2.5 ESTIMATION AND ITS APPLICATION ON DEPTH ESTIMATION</b>	<b>1857</b>
<i>Jian Ma, Kun Li, Yahong Han, Pufeng Du, Jingyu Yang, Tianjin University, China</i>	
<b>IVMSP-P12.3: GENERALIZED LINEAR MIXING MODEL ACCOUNTING FOR ENDMEMBER VARIABILITY</b>	<b>1862</b>
<i>Tales Imbiriba, Ricardo Augusto Borsoi, Jose Carlos Moreira Bermudez, Federal University of Santa Catarina, Brazil</i>	
<b>IVMSP-P12.4: SALIENCY DETECTION VIA MULTI-CENTER CONVEX HULL PRIOR</b>	<b>1867</b>
<i>Zhi-Jie Wang, Sun Yat-sen University; Guangdong Key Laboratory of Big Data Analysis &amp; Processing, China; Lizhuang Ma, Shanghai Jiao Tong University, China; Xiao Lin, Shanghai Normal University, China; Hui Zhong, Shanghai Yingcheng Image Tech. Co., Ltd, China</i>	
<b>IVMSP-P12.5: HOUGH TRANSFORM GUIDED DEEP FEATURE EXTRACTION FOR DENSE BUILDING DETECTION IN REMOTE SENSING IMAGES</b>	<b>1872</b>
<i>Qingpeng Li, Yunhong Wang, Qingjie Liu, Beihang University, China; Wei Wang, China Ministry of Civil Affairs, China</i>	
<b>IVMSP-P12.6: FAST POISSONIAN-GAUSSIAN NOISE ESTIMATION</b>	<b>N/A</b>
<i>Said Homidov, Center for Integrated Smart Sensors, Korea (South); Hyun Sang Park, Chong-Min Kyung, Kongju National University, Korea (South)</i>	
<b>IVMSP-P12.7: REAL-TIME PEDESTRIAN DETECTION IN CROWDED SCENES USING DEEP OMEGA-SHAPE FEATURES</b>	<b>1882</b>
<i>Yuting Xu, Xue Zhou, Pengfei Liu, Hongbing Xu, University of Electronic Science and Technology of China, China</i>	
<b>IVMSP-P12.8: OPTIMAL SELECTION OF SUBSET OF IMAGES WITH HIGHEST INTRA-CLASS SIMILARITY FOR 3D SCENE RECONSTRUCTION</b>	<b>1887</b>
<i>Mahdi Salarian, Rashid Ansari, University of Illinois at Chicago, United States</i>	
<b>IVMSP-P12.9: AN ITERATIVE APPROACH FOR SHADOW REMOVAL IN DOCUMENT IMAGES</b>	<b>1892</b>
<i>Vatsal Shah, Vineet Gandhi, International Institute of Information Technology, Hyderabad, India</i>	
<b>IVMSP-P13: VIDEO ANALYSIS II</b>	
<b>IVMSP-P13.1: SUPER WIDE REGRESSION NETWORK FOR UNSUPERVISED CROSS-DATABASE FACIAL EXPRESSION RECOGNITION</b>	<b>1897</b>
<i>Na Liu, Baofeng Zhang, Tianjin University of Technology, China; Yuan Zong, Southeast University, China; Li Liu, Jie Chen, Guoying Zhao, University of Oulu, China; Junchao Zhu, Tianjin University of Technology, China</i>	

<b>IVMSP-P13.2: CALIBRATING CAMERAS IN POOR-CONDITIONED PITCH-BASED SPORTS GAMES</b>	<b>1902</b>
<i>Rui Zeng, Queensland University of Technology, Australia; Ruan Lakemond, Imagination Technologies, Australia; Simon Denman, Sridha Sridharan, Clinton Fookes, Queensland University of Technology, Australia; Stuart Morgan, La Trobe University, Australia</i>	
<b>IVMSP-P13.3: OBJECT-ORIENTED ANOMALY DETECTION IN SURVEILLANCE VIDEOS</b>	<b>1907</b>
<i>Xiaodan Li, Weihai Li, Bin Liu, Qiankun Liu, Nenghai Yu, University of Science and Technology of China, China</i>	
<b>IVMSP-P13.5: RCDFNN: ROBUST CHANGE DETECTION BASED ON CONVOLUTIONAL FUSION NEURAL NETWORK</b>	<b>1912</b>
<i>Chunlei Cai, Li Chen, Shanghai Jiao Tong University, China; Lei Zhou, University of shanghai for science and technology, China; Xiaoyun Zhang, Zhiyong Gao, Shanghai Jiao Tong University, China</i>	
<b>IVMSP-P13.6: SIGNBOARD SALIENCY DETECTION IN STREET VIDEOS</b>	<b>1917</b>
<i>Onkar Krishna, Kiyoharu Aizawa, The University of Tokyo, Japan; Saskia Reimerth, Technische Universität Wien, Austria</i>	
<b>IVMSP-P13.7: A NOVEL CROWD-RESILIENT VISUAL LOCALIZATION ALGORITHM VIA ROBUST PCA BACKGROUND EXTRACTION</b>	<b>1922</b>
<i>Zhuorui Yang, Marco Duarte, Aura Ganz, University of Massachusetts Amherst, United States</i>	
<b>IVMSP-P13.8: A PRACTICAL GUIDE TO MULTI-IMAGE ALIGNMENT</b>	<b>1927</b>
<i>Cecilia Aguerrebere, Fundacion Ceibal, Uruguay; Mauricio Delbracio, Universidad de la Republica, Uruguay; Alberto Bartesaghi, National Cancer Institute, United States; Guillermo Sapiro, Electrical and Computer Engineering, United States</i>	
<b>IVMSP-P13.9: MGN: MULTI-GLIMPSE NETWORK FOR ACTION RECOGNITION</b>	<b>1932</b>
<i>Chaoux Guo, University of Chinese Academy of Sciences, China; Tingzhao Yu, Huxiang Gu, Shiming Xiang, Chunhong Pan, Institute of Automation, Chinese Academy of Sciences, China</i>	
<b>IVMSP-P13.10: A LOW POWER HARDWARE IMPLEMENTATION OF MULTI-OBJECT DPM DETECTOR FOR AUTONOMOUS DRIVING</b>	<b>1937</b>
<i>Alaa Ali, Oladiran Olaleye, Bappaditya Dey, Kasem Khalil, Magdy Bayoumi, University of Louisiana at Lafayette, United States</i>	
 <b>IFS-L1: INFORMATION FORENSICS AND SECURITY IV</b>	
<b>IFS-L1.1: A DEEPLY-RECURSIVE CONVOLUTIONAL NETWORK FOR CROWD COUNTING</b>	<b>1942</b>
<i>Xinghao Ding, Zhirui Lin, Fujin He, Yu Wang, Yue Huang, Xiamen University, China</i>	
<b>IFS-L1.2: RECOGNITION OF FACES AND FACIAL ATTRIBUTES USING ACCUMULATIVE LOCAL SPARSE REPRESENTATIONS</b>	<b>1947</b>
<i>Domingo Mery, Pontificia Universidad Catolica de Chile, Chile; Sandipan Banerjee, University of Notre Dame, United States</i>	
<b>IFS-L1.3: RESIDUAL LEARNING FOR FACE SKETCH SYNTHESIS</b>	<b>1952</b>
<i>Junjun Jiang, Yi Yu, Zheng Wang, National Institute of Informatics, Japan; Jiayi Ma, Wuhan University, China</i>	
<b>IFS-L1.4: DEEP FEATURE EMBEDDING LEARNING FOR PERSON RE-IDENTIFICATION USING LIFTED STRUCTURED LOSS</b>	<b>1957</b>
<i>Zhangping He, Zhendong Zhang, Cheolkon Jung, Xidian University, China</i>	
<b>IFS-L1.5: FOOLING END-TO-END SPEAKER VERIFICATION WITH ADVERSARIAL EXAMPLES</b>	<b>1962</b>
<i>Felix Kreuk, Yossi Adi, Bar-Ilan University, Israel; Moustapha Cisse, Facebook A.I. Research, France; Joseph Keshet, Bar-Ilan University, Israel</i>	
<b>IFS-L1.6: A CAPTCHA DESIGN BASED ON VISUAL REASONING</b>	<b>1967</b>
<i>HaiPeng Wang, Feng Zheng, Zhuoming Chen, Yi Lu, Jing Gao, Renjia Wei, Tencent Inc., China</i>	

## IFS-L2: INFORMATION FORENSICS AND SECURITY V

### IFS-L2.1: SECRECY CAPACITY UNDER LIST DECODING FOR A CHANNEL WITH A PASSIVE EAVESDROPPER AND AN ACTIVE JAMMER ..... 1972

*Ahmed Mansour, Technische Universität München, Germany; Rafael Schaefer, Technical University of Berlin, Germany; Holger Boche, Technische Universität München, Germany*

### IFS-L2.2: TIC-TAC, FORGERY TIME HAS RUN-UP! LIVE ACOUSTIC WATERMARKING FOR INTEGRITY CHECK IN FORENSIC APPLICATIONS ..... 1977

*Valentin-Adrian Nita, Amelia Ciobanu, University Politehnica of Bucharest, Romania*

### IFS-L2.3: TWO EMBEDDING STRATEGIES FOR PAYLOAD DISTRIBUTION IN MULTIPLE IMAGES STEGANOGRAPHY ..... 1982

*Xin Liao, Jiaojiao Yin, Hunan University, China*

### IFS-L2.4: INVISIBLE GEO-LOCATION SIGNATURE IN A SINGLE IMAGE ..... 1987

*Chau-Wai Wong, North Carolina State University, United States; Adi Hajj-Ahmad, GE Digital, United States; Min Wu, University of Maryland College Park, United States*

### IFS-L2.5: PRIVACY-PRESERVING OUTSOURCED MEDIA SEARCH USING SECURE SPARSE TERNARY CODES ..... 1992

*Behrooz Razeghi, Slava Voloshynovskiy, University of Geneva, Switzerland*

### IFS-L2.6: A DIVERSE LARGE-SCALE DATASET FOR EVALUATING REBROADCAST ATTACKS ..... 1997

*Shruti Agarwal, Wei Fan, Hany Farid, Dartmouth College, United States*

## IFS-P1: INFORMATION FORENSICS AND SECURITY I

### IFS-P1.1: AUGMENTED DATA AND IMPROVED NOISE RESIDUAL-BASED CNN FOR PRINTER SOURCE IDENTIFICATION ..... 2002

*Sharad Joshi, Mohit Lamba, Indian Institute of Technology Gandhinagar (IITGN), India; Vivek Goyal, Microsoft Global Service Center (India) Pvt. Ltd., India; Nitin Khanna, Indian Institute of Technology Gandhinagar (IITGN), India*

### IFS-P1.2: TOWARDS OPEN SET CAMERA MODEL IDENTIFICATION USING A DEEP LEARNING FRAMEWORK ..... 2007

*Belhassen Bayar, Matthew C. Stamm, Drexel University, United States*

### IFS-P1.3: LEARNED FORENSIC SOURCE SIMILARITY FOR UNKNOWN CAMERA MODELS ..... 2012

*Owen Mayer, Matthew C. Stamm, Drexel University, United States*

### IFS-P1.4: OPTIMAL ONLINE CYBERBULLYING DETECTION ..... 2017

*Daphney-Stavroula Zois, Angeliki Kapodistria, Mengfan Yao, Charalampos Chelmiss, University at Albany, SUNY, United States*

### IFS-P1.5: TRADE-OFFS IN DATA-DRIVEN FALSE DATA INJECTION ATTACKS AGAINST THE POWER GRID ..... 2022

*Subhash Lakshminarayana, Advanced Digital Sciences Center (ADSC), Illinois at Singapore, Singapore; Fuxi Wen, Chalmers University of Technology, Sweden; David Yau, Singapore University of Technology and Design, Singapore*

### IFS-P1.6: DEFENDING AGAINST PACKET-SIZE SIDE-CHANNEL ATTACKS IN IOT NETWORKS ..... 2027

*Sijie Xiong, Anand D. Sarwate, Narayan B. Mandayam, Rutgers University, United States*

### IFS-P1.7: USING DEEP LEARNING TO CLASSIFY POWER CONSUMPTION SIGNALS OF WIRELESS DEVICES: AN APPLICATION TO CYBERSECURITY ..... 2032

*Abdurhman Albasir, Robin Joe Prabhakar Soundar Raja James, Kshirasagar Naik, University of Waterloo, Canada; Amiya Nayak, University of Ottawa, Canada*

<b>IFS-P1.8: MODELLING JITTER IN WIRELESS CHANNEL CREATED BY PROCESSOR-MEMORY ACTIVITY</b>	<b>2037</b>
<i>Baki Berkay Yilmaz, Alenka Zajić, Milos Prvulovic, Georgia Institute of Technology, United States</i>	
 <b>IFS-P2: INFORMATION FORENSICS AND SECURITY II</b>	
<b>IFS-P2.1: LEARNING ON A BUDGET FOR USER AUTHENTICATION ON MOBILE DEVICES</b>	<b>2042</b>
<i>Bojan Kolosnjaji, Antonia Hüfner, Claudia Eckert, Technical University of Munich, Germany; Apostolis Zarras, Maastricht University, Netherlands</i>	
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<i>Imad Rida, Normandie Univ, UNIROUEN, UNIHAVRE, INSA Rouen, LITIS, 76 000 Rouen, France; Somaya Al Maadeed, Qatar University, Qatar; Xudong Jiang, School of Electrical and Electronics Engineering, Nanyang Technological University, Singapore; Fei Lunke, School of Computer, Guangdong University of Technology, China; Abdelaziz Bensrhair, Normandie Univ, UNIROUEN, UNIHAVRE, INSA Rouen, LITIS, 76 000 Rouen, France</i>	
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*Antonio Canclini, Dejan Markovic, Politecnico di Milano, Italy; Martin Schneider, International Audio Laboratories Erlangen / Fraunhofer Institute for Integrated Circuits, Germany; Fabio Antonacci, Politecnico di Milano, Italy; Emanuel A. P. Habets, International Audio Laboratories Erlangen / Fraunhofer Institute for Integrated Circuits, Germany; Andreas Walther, Fraunhofer Institute for Integrated Circuits, Germany; Augusto Sarti, Politecnico di Milano, Italy*