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Chu-Song Chen · Jiwen Lu  
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# Computer Vision – ACCV 2016 Workshops

ACCV 2016 International Workshops  
Taipei, Taiwan, November 20–24, 2016  
Revised Selected Papers, Part III

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## Preface

It is our great pleasure to present the workshop proceedings of three LNCS volumes, which contain the papers carefully reviewed and selected from the 17 workshops that were held in conjunction with the 13th Asian Conference on Computer Vision (ACCV), during November 20–24, 2016, in Taipei, Taiwan. There are 134 papers selected from 223 papers submitted to all the 17 workshops as listed below.

1. New Trends in Image Restoration and Enhancement (NTIRE): 14 papers
2. Workshop on Assistive Vision: 6 papers
3. ACCV 2016 Workshop on Hyperspectral Image and Signal Processing: 6 papers
4. Computer Vision Technologies for Smart Vehicle: 7 papers
5. Spontaneous Facial Behavior Analysis: 8 papers
6. 3D Modelling and Applications: 16 papers
7. 4th ACCV Workshop on e-Heritage: 4 papers
8. Multiview Lip-Reading Challenges: 5 papers
9. Workshop on Facial Informatics (WFI): 11 papers
10. Discrete Geometry and Mathematical Morphology for Computer Vision: 4 papers
11. Workshop on Mathematical and Computational Methods in Biomedical Imaging and Image Analysis: 15 papers
12. International Workshop on Driver Drowsiness Detection from Video: 6 papers
13. Workshop on Meeting HCI with CV: 6 papers
14. Workshop on Human Identification for Surveillance (HIS) Methods and Applications: 8 papers
15. Benchmark and Evaluation of Surveillance Task (BEST): 9 papers
16. The Third Workshop on Computer Vision for Affective Computing (CV4AC): 3 papers
17. Workshop on Interpretation and Visualization of Deep Neural Nets: 6 papers

The workshop topics are related to computer vision and its applications, interdisciplinary themes with other application areas, as well as challenges or competitions. Every workshop handles its own paper submission system, and each paper is reviewed by two to three reviewers. We thank all the workshop organizers for their great efforts in holding these successful workshops. We also thank the help of the publication chairs in making this publication possible.

November 2016

Chu-Song Chen  
Jiwen Lu  
Kai-Kuang Ma

# Organization

## W01: 3D Modelling and Applications

|                |                                                                 |
|----------------|-----------------------------------------------------------------|
| Chia-Yen Chen  | National University of Kaohsiung, Taiwan                        |
| Min-Chun Hu    | National Cheng Kung University, Taiwan                          |
| Li-Wei Kang    | National Yunlin University of Science and Technology,<br>Taiwan |
| Chih-Yang Lin  | Asia University, Taiwan                                         |
| Tang-Kai Yin   | National University of Kaohsiung, Taiwan                        |
| Guo-Shiang Lin | Da-Yeh University, Taiwan                                       |
| Chia-Hung Yeh  | National Sun Yat-Sen University, Taiwan                         |

## W02: 4th ACCV Workshop on e-Heritage

|                      |                                            |
|----------------------|--------------------------------------------|
| Katsushi Ikeuchi     | Microsoft Research Asia, China             |
| El Mustapha Mouaddib | Université de Picardie Jules Verne, France |
| Takeshi Masuda       | AIST, Japan                                |
| Takeshi Oishi        | The University of Tokyo, Japan             |

## W03: ACCV 2016 Workshop on Hyperspectral Image and Signal Processing

|              |                                         |
|--------------|-----------------------------------------|
| Keng-Hao Liu | National Sun Yat-sen University, Taiwan |
| Wei-Min Liu  | National Chung Cheng University, Taiwan |

## W04: Benchmark and Evaluation of Surveillance Task (BEST)

|                  |                                                                           |
|------------------|---------------------------------------------------------------------------|
| Xiaokang Yang    | Shanghai Jiao Tong University, China                                      |
| Chong-Yang Zhang | Shanghai Jiao Tong University, China                                      |
| Bingbing Ni      | Shanghai Jiao Tong University, China                                      |
| Lin Mei          | The Third Research Institute of the Ministry of Public<br>Security, China |

## W05: Computer Vision Technologies for Smart Vehicle

|                  |                                                                          |
|------------------|--------------------------------------------------------------------------|
| Li-Chen Fu       | National Taiwan University, Taiwan                                       |
| Pei-Yung Hsiao   | National University of Kaohsiung, Taiwan                                 |
| Shih-Shinh Huang | National Kaohsiung First University of Science<br>and Technology, Taiwan |

**W06: Discrete Geometry and Mathematical Morphology for Computer Vision**

|                  |                                           |
|------------------|-------------------------------------------|
| Jean Cousty      | Université Paris-Est, ESIEE Paris, France |
| Yukiko Kenmochi  | Université Paris-Est, CNRS, France        |
| Akihiro Sugimoto | National Institute of Informatics, Japan  |

**W07: International Workshop on Driver Drowsiness Detection from Video**

|                 |                                         |
|-----------------|-----------------------------------------|
| Chen-Kuo Chiang | National Chung Cheng University, Taiwan |
| Shang-Hong Lai  | National Tsing Hua University, Taiwan   |
| Michel Sarkis   | Qualcomm Technologies Inc., USA         |

**W08: Large-Scale 3D Human Activity Analysis Challenge in Depth Videos**

|                |                                             |
|----------------|---------------------------------------------|
| Gang Wang      | Nanyang Technological University, Singapore |
| Amir Shahroudy | Nanyang Technological University, Singapore |
| Jun Liu        | Nanyang Technological University, Singapore |

**W09: Multiview Lip-Reading Challenges**

|                |                                       |
|----------------|---------------------------------------|
| Ziheng Zhou    | University of Oulu, Finland           |
| Guoying Zhao   | University of Oulu, Finland           |
| Takeshi Saitoh | Kyushu Institute of Technology, Japan |
| Richard Bowden | University of Surrey, UK              |

**W10: New Trends in Image Restoration and Enhancement (NTIRE)**

|                 |                                         |
|-----------------|-----------------------------------------|
| Radu Timofte    | ETH Zurich, Switzerland                 |
| Luc Van Gool    | ETH Zurich, Switzerland                 |
| Ming-Hsuan Yang | University of California at Merced, USA |

**W11: Spontaneous Facial Behavior Analysis**

|                    |                             |
|--------------------|-----------------------------|
| Xiaopeng Hong      | University of Oulu, Finland |
| Guoying Zhao       | University of Oulu, Finland |
| Stefanos Zafeiriou | Imperial College London, UK |
| Matti Pietikäinen  | University of Oulu, Finland |
| Maja Pantic        | Imperial College London, UK |

## **W12: The Third Workshop on Computer Vision for Affective Computing (CV4AC)**

|                    |                                                                  |
|--------------------|------------------------------------------------------------------|
| Abhinav Dhall      | Abhinav Dhall, University of Waterloo, Canada                    |
| Roland Goecke      | University of Canberra/Australian National University, Australia |
| O.V. Ramana Murthy | Amrita University, India                                         |
| Jesse Hoey         | University of Waterloo, Canada                                   |
| Nicu Sebe          | University of Trento, Italy                                      |

## **W13: Workshop on Assistive Vision**

|                          |                                                                     |
|--------------------------|---------------------------------------------------------------------|
| Chetan Arora             | Indraprastha Institute of Information Technology, Delhi, India      |
| Vineeth N. Balasubmanian | Indian Institute of Technology, Hyderabad, India                    |
| C.V. Jawahar             | International Institute of Information Technology, Hyderabad, India |
| Vinay P. Namboodiri      | Indian Institute of Technology, Kanpur, India                       |
| Ramanathan Subramanian   | International Institute of Information Technology, Hyderabad, India |

## **W14: Workshop on Facial Informatics (WFI)**

|                      |                                                              |
|----------------------|--------------------------------------------------------------|
| Gee-Sern (Jison) Hsu | National Taiwan University of Science and Technology, Taiwan |
| Moi Hoon Yap         | Manchester Metropolitan University, UK                       |
| Xiaogang Wang        | Chinese University of Hong Kong, Hong Kong, SAR China        |
| Su-Jing Wang         | Chinese Academy of Science, China                            |
| John See             | Multimedia University, Malaysia                              |

## **W15: Workshop on Meeting HCI with CV**

|              |                                                                     |
|--------------|---------------------------------------------------------------------|
| Liwei Chan   | National Chiao Tung University, Taiwan and Keio Media Design, Japan |
| Yi-Ping Hung | National Taiwan University, Taiwan                                  |

## **W16: Workshop on Human Identification for Surveillance (HIS): Methods and Applications**

|               |                                                                       |
|---------------|-----------------------------------------------------------------------|
| Wei-Shi Zheng | Sun Yat-sen University, China                                         |
| Ruiping Wang  | Institute of Computing Technology, Chinese Academy of Sciences, China |

|              |                                                              |
|--------------|--------------------------------------------------------------|
| Weihong Deng | Beijing University of Posts and Telecommunications,<br>China |
| Shenghua Gao | ShanghaiTech University, China                               |

### **W17: Workshop on Interpretation and Visualization of Deep Neural Nets**

|                  |                                                             |
|------------------|-------------------------------------------------------------|
| Alexander Binder | Singapore University of Technology and Design,<br>Singapore |
| Wojciech Samek   | Fraunhofer Heinrich Hertz Institute, Germany                |

### **W18: Workshop on Mathematical and Computational Methods in Biomedical Imaging and Image Analysis**

|                  |                                       |
|------------------|---------------------------------------|
| Atsushi Imiya    | Chiba University, Japan               |
| Xiaoyi Jiang     | Universität Münster, Germany          |
| Hidetaka Hontani | Nagoya Institute of Technology, Japan |

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