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# Computer Vision and Image Processing

## 6th International Conference, CVIP 2021 Rupnagar, India, December 3–5, 2021 Revised Selected Papers, Part II

Springer

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# Preface

The sixth edition of the International Conference in Computer Vision and Image Processing (CVIP 2021) was organized by the Indian Institute of Technology (IIT) Ropar, Punjab, India. CVIP is a premier conference focused on image/video processing and computer vision. Previous editions of CVIP were held at IIIT Allahabad (CVIP 2020), MNIT Jaipur (CVIP 2019), IIIT Jabalpur (CVIP 2018), and IIT Roorkee (CVIP 2017 and CVIP 2016). The conference has witnessed extraordinary success with publications in multiple domains of computer vision and image processing.

In the face of COVID-19, the conference was held in virtual mode during December 3–5, 2021, connecting researchers from different countries around the world such as Sri Lanka, the USA, etc. The team—composed of Pritee Khanna (IIIT DMJ), Krishna Pratap Singh (IIIT Allahabad), Shiv Ram Dubey (IIIT Sri City), Aparajita Ojha (IIIT DMJ), and Anil B. Gonde (SGGSIET Nanded)—organized an online event with flawless communication through Webex. Moreover, the publicity for the submission of research articles by Shiv Ram Dubey (IIIT Sri City), Deep Gupta (VNIT Nagpur), Sachin Chaudhary (PEC Chandigarh), Akshay Dudhane (MBZUAI, Abu Dhabi, UAE), and Prashant Patil (Deakin University, Australia) made CVIP 2021 a great success, with the overwhelming participation of about 110 researchers. Also, the efficient teamwork by volunteers from IIT Ropar and PEC Chandigarh helped to overcome the challenges of virtual communication, thus resulting in the smooth running of the event.

CVIP 2021 received 260 regular paper submissions that went through a rigorous review process undertaken by approximately 500 reviewers from different renowned institutes and universities. The technical program chairs, Puneet Goyal (IIT Ropar), Abhinav Dhall (IIT Ropar), Narayanan C Krishnan (IIT Ropar), Mukesh Saini (IIT Ropar), Santosh K. Vipparthi (MNIT Jaipur), Deepak Mishra (IIST Trivandrum), and Ananda S. Chowdhury (Jadavpur University), coordinated the overall review process which resulted in the acceptance of 97 research articles.

The event was scheduled with one plenary talk and two keynote talk sessions each day. On the very first day, the event commenced with a plenary talk on "AI for Social Good" by Venu Govindaraju (State University of New York at Buffalo, USA) followed by the keynote talks by Shirui Pan (Monash University, Australia) and Victor Sanchez (University of Warwick, UK). On second day, Tom Gedeon (Curtin University, Australia) guided the audience with a plenary talk on "Responsive AI and Responsible AI". The keynote talks by Vitomir Štruc (University of Ljubljana, Slovenia) and Munawar Hayat (Monash University, Australia) enlightened the audience with informative discussion on computer vision. The last day of the conference, with the informative plenary talk on "Cognitive Model Motivated Document Image Understanding" by Santanu Chaudhury (IIT Jodhpur) and the keynote talk by Sunil Gupta (Deakin University), gave a deep insight to the audience on AI and its applications.

CVIP 2021 presented high-quality research work with innovative ideas. All the session chairs were invited to vote for four different categories of awards. For each award, three papers were nominated depending on the novelty of work, presentation

skills, and the reviewer scores. Four different awards were announced: the IAPR Best Paper Award, the IAPR Best Student Paper Award, the CVIP Best Paper Award, and the CVIP Best Student Paper Award.

Also, CVIP 2021 awarded Prabir Kumar Biswas (IIT Kharagpur) with a CVIP Lifetime Achievement Award for his remarkable research in the field of image processing and computer vision. The awards were announced in the valedictory ceremony by General Co-chair Balasubramanian Raman (IIT Roorkee).

All the accepted and presented papers from CVIP 2021 are published in this volume in Springer's Communications in Computer and Information Science (CCIS) series. The proceedings of all previous editions of CVIP have also been successfully published in this series, and the papers are indexed by ISI Proceedings, EI-Compendex, DBLP, SCOPUS, Google Scholar, Springer link, etc. The organizers of the next event have given us a glimpse of their plan for CVIP 2022 at VNIT Nagpur: https://vnit.ac.in/cvip2022/.

December 2021

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