

## Special Issue on Multicamera Information Processing: Acquisition, Collaboration, Interpretation, and Production

### Call for Papers

Video sensors have gained in resolution, quality, cost-efficiency, and ease of use during the last decade, thus fostering the deployment of rich acquisition settings, to cheaply and effectively capture scenes at high spatiotemporal resolution, in multiple locations and directions. By providing extended and redundant coverage, multicamera imaging provides a practical approach to support robust scene interpretation, integrated situation awareness, as well as rich interactive and immersive experience in many different areas of industry, health-care, education, and entertainment. Tools and algorithms that aim to recognize high-level semantic concepts and their spatiotemporal and causal relations directly depend on the robustness and reliability of the underlying detection and tracking methods. These tasks related to scene interpretation have a strong impact on many real-life applications and are also fundamental to understand how to render a scene, for example, in a sport event summarization context or while browsing multiview video surveillance content. Finally, multiview imaging allows for immersive visualization by adapting rendered images to display capabilities and/or viewer requests. The goal of this special issue is to present the recent theoretical and practical advances that take advantage of multiview processing to improve 3D scene monitoring, immersive rendering, and (semi-)automatic content creation. Topics of interest include, but are not limited to:

- Acquisition of multiview and 3D images
- Multicamera information fusion
- Automated extraction of calibration or geometry information
- Distributed scene representation and communication
- Depth estimates and arbitrary view synthesis
- Multiview object detection and tracking
- Multiview video stream events/activities mining
- Multiview event detection and recognition
- Assistance to interactive video browsing in a distributed surveillance camera network
- Immersive rendering, and 3D scene virtual navigation

- Automatic and/or personalized summarization of sports events
- Plants or impaired people monitoring applications
- Advanced application case studies

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