

## 2nd International Symposium on Integrated Circuit Design and Integrated Systems

September 26-28, 2025, Singapore



"Sony Bipolar Transistor type Double Junction Solar Cell  
for Future AI Robot Vision Chip Applications"

Yoshiaki Daimon Hagiwara,  
Sojo University, Kumamoto-city, Japan

[萩原aips研究所](#)

### ABSTRACT

[ICDIS2025 Yoshiaki Daimon Hagiwara.pdf](#)

[ICDIS2025 Yoshiaki Daimon Hagiwara.mp4](#)

Key steps of development of silicon-based image sensors are reviews and explained chronologically. And different aspects of the image sensor chip design are discussed. Historical Sony Bipolar Transistor and Image Sensor Technology and Chip Design Efforts are explained in details, that gave a strong hint and motivation for the author's new challenge on the Sony P+PNPP+ Double Junction type Photodiode for Solar Cells.