



MEETING NOTICE & INVITATION  
Pacific Northwest Chapter • Society for Information Display

## ***Light Field Imaging and Display – A System Perspective***

**Dr. Nikhil Balram**

President, and CEO of Ricoh Innovations Corporation

**Wednesday, July 15th at 6:00 P.M.**

Microsoft Campus, Building 86 (North Campus)  
4909 156<sup>th</sup> Avenue NE  
Redmond, WA 98052

### **Abstract**

Light fields provide a natural way of representing information that is captured and processed by the human visual system. Recently it has become possible to capture light fields using compact imaging systems and use the 3D information for useful purposes. Displaying information using light fields has also become possible, enabling true 3D displays that provide a natural and comfortable experience. But there are significant design choices that need to be made for different types of applications. In both cases – light field imaging and light field display – the overall system has to be designed considering a complex set of tradeoffs, some of which are still not fully understood. This seminar will provide a brief introduction to light fields, followed by an overview of state-of-the-art light field imaging and display systems and some promising early applications and discuss key tradeoffs that have to be considered for compact mobile systems. Demo videos will be shown in lieu of live demos.

### **Speaker Biography**



Dr. Nikhil Balram is President and CEO of Ricoh Innovations Corporation ([ric.ricoh.com](http://ric.ricoh.com)), a Silicon Valley company that develops innovative technologies and creates global new businesses for Ricoh Company Ltd. With over 20 years of experience, Dr. Balram is widely hailed throughout industry and academia as an expert and innovator in advanced information and display technologies and has been an officer of five publicly listed companies. He has won numerous awards including a 2012 Gold Stevie® Award for Executive of the Year in the Electronics category in

The 9<sup>th</sup> Annual International Business Awards, a 2012 Fellow Award by the Society for Information Display (SID) and the 2011 Alumni Achievement Award by Carnegie Mellon University. Dr. Balram is an adjunct professor of electrical engineering at Carnegie Mellon University, visiting professor of vision science at the University of California, Berkeley, a guest

professor of design and innovation at the Indian Institute of Technology (IIT) in Gandhinagar, India, and serves on the Industry Advisory Board (IAB) at the School of Engineering at Santa Clara University. He has over 100 US and international patents granted or pending, more than 40 technical publications, including two invited book chapters, and has given over 25 keynote speeches at major conferences and events worldwide, including the 2013 Silicon Valley Business App (SVBA) Awards and the International Business Forum at the 2013 Ricoh Women's British Open at St. Andrews, UK. He received his B.S., M.S. and Ph.D. in electrical engineering from Carnegie Mellon University.

## Seminar

The Seminar is free. Please join the speaker for a no-host dinner after the seminar. Directions to the restaurant will be provided at the seminar. Non-Members are welcome. RSVP to Gary Johnson at [Gary.Johnson@tek.com](mailto:Gary.Johnson@tek.com) or (503) 627-1985. Please indicate if you plan to participate in the dinner.

The Pacific Northwest Chapter of the Society for Information Display was established for the following purposes:

- To support the activities and purposes of SID.
- To encourage and contribute to the scientific and educational advancement in the field of information display and to promote its use.
- To provide forums for the exchange and dissemination of ideas and knowledge relating to the field of information display.

The Executive Committee of the Pacific Northwest Chapter consists of:

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