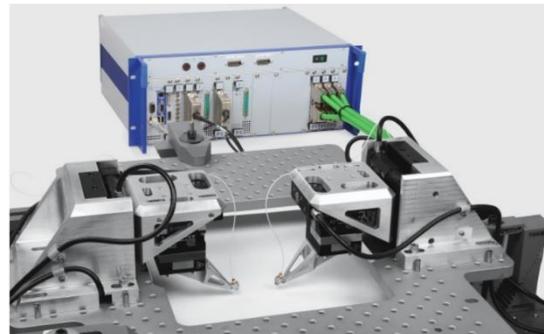


OSA and the Optical Society of Southern California are hosting a joint event in conjunction with OFC

Nano-alignment as challenge and enabler for "Silicon Photonics"

Scott Jordan, Head of Photonics, Physik Instrumente

Abstract: Engineers are confronted with challenges in planning for repetitive manufacturing of Silicon Photonics devices: needed is fast, nanoscale alignment of optical fibers, small optical elements and the actual SiP devices in test and packaging. These cannot be aligned adequately via passive approaches or using machine vision, and drift must often be corrected in real time. Prior approaches have not been suitable for the multiple, interacting inputs and outputs commonly encountered in today's SiP devices, nor was their speed sufficient for economic application in these applications.



We provide a concise review of prior approaches and discuss their applicability and shortcomings in the face of today's emerging SiP architectures. The unmet challenges have led to the introduction of a novel, multichannel-capable active alignment technology that has been integrated into wafer probers and volume packaging systems. It performs global optimization across the inputs and outputs of complex SiP devices in one rapid step, facilitating functional and parametric testing and packaging operations with high throughput. Speed improvements can exceed two orders of magnitude.



About our speaker: Scott is a manager and physicist by training, with an MBA in Finance and New Venture Management. He has driven multiple business development and turnaround endeavors. Scott's patents for fast interfacing and DAC resolution enhancement helped advance nanopositioning performance

more than a hundredfold, enabling capabilities for applications as diverse as nanopatterning, atomic force microscopy, MEMS, microlithography, x-ray interferometry and photonics. He developed the first digital gradient search, fundamental to photonics test and packaging, and established a successful business upon it. He has repeatedly driven the field forward as device designs have advanced. His most recent work enables one-step, global alignment optimization across multiple inputs, outputs and degrees of freedom of today's Silicon Photonics devices. A confirmed technology evangelist, Scott publishes and presents frequently. He was named a PI Fellow and Head of Photonics in 2016.

Wednesday, March 22, 2017

6pm: Reception, Light hors d'oeuvres

7pm: Program, presentation

Food: \$25 for registration by March 15th,
\$30 after

(OSSC Student Members \$10 by March 15th, \$20 after)
Free for paid OFC Technical attendees

**Los Angeles Convention Center
The Club Lounge**

**1201 S. Figueroa St., Los Angeles, 90015
(213) 741-1151**

On-line Registration: www.osscc.org or
Contact: Nicholas Croglio
Events@osscc.org, (818) 331-4541

Parking: Park in South Hall Garage. (Enter behind Convention Center on Convention Center Drive.)

Directions: Exit garage on foot. Follow signs to South Lobby. The Club Lounge (formerly the Compass Café) is off the South Lobby, to right of main entrance.