

## IEEE Components, Packaging and Manufacturing Technology Society – OC Chapter

Tuesday, February 11, 2014 Technical Meeting

### Micro-Transfer-Printing of Microscale Semiconductor Devices

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X-Celeprint Ltd

#### Abstract

Micro-Transfer-Printing ( $\mu$ TP) is an emerging process technology where engineered elastomer print-heads coupled to precision motion controllers are used to “pick-up” arrays of microscale devices from their native growth substrates and then deterministically “transfers” them onto non-native substrates. Devices compatible with  $\mu$ TP include lasers, LEDs, discrete transistors and silicon integrated circuits.

The first portion of the talk will focus on the science and technology of  $\mu$ TP. This will include strategies for making “printable” devices and a description of the physical mechanisms utilized during  $\mu$ TP. The second segment of the talk will focus on applications of  $\mu$ TP, including silicon photonics and heterogeneous integration of compound semiconductors with silicon.

#### Biography



Chris has over fifteen years’ experience in the fabrication and packaging of novel electronic and photonic devices, both at the nanoscale and the microscale. He received his PhD in 2000 from the University of North Carolina – Chapel Hill. From 2007 to 2013 he led the transfer-printing and wafer-level-packaging group at Semprius, Inc. He is currently the Chief Technology Officer at X-Celeprint Ltd., where he leads the effort to develop and transfer the micro-transfer-printing technology to potential end-users. His interests include three-dimensional integration of integrated circuits, heterogeneous integration of compound semiconductors onto non-native substrates and the fabrication of low-cost, large-format electronics using novel assembly methods. He is an active member of IEEE CPMT and serves on the ECTC Advanced Packaging subcommittee.

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Date: **Tuesday, February 11, 2014**

Location: **Broadcom Corporation, 5300 California Ave., Irvine, CA 92617 – Bldg. 2 Room 2-1037 Salt Creek**  
Check in at the Security Gate and proceed to Bldg. 2. You will be escorted into the building.

Time: **5:30-6:00pm: Social time, 6:00-7:00pm: Presentation, 7:00pm: Dinner (free for attendees!)**

RSVP: **IEEE members and non-members all are welcome. Please RSVP at <http://tinyurl.com/n4v4af1>**  
Please be at the Bldg. 2 entrance by 6:00 pm; no escorts after that. For questions regarding RSVP, please contact Zijie Cai ([zijiecai@broadcom.com](mailto:zijiecai@broadcom.com)).

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**For more information please contact the following officers of the IEEE CPMT OC Chapter:**

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