



53rd INTERNATIONAL SYMPOSIUM ON MICROELECTRONICS
A GLOBAL VIRTUAL EVENT | OCTOBER 5-8 | IMAPS2020.ORG

YOUR BENEFIT

System integration combines several components from different semiconductor technologies in order to use their best properties. Components for analog and digital signal and data processing, communication or sensors can be integrated into extremely small and powerful systems.

Aiming leading-edge products, this technology approach gives rise to numerous challenges: On the one hand, dissimilar technologies, sizes and materials have to be taken into account. On the other hand, handling, electrical and mechanical interconnection and protection from external influences have conflicting requirements.

Challenges, that can be overcome! Fraunhofer is designing a workshop to show you the countless advantages of this technology, but also the solution to the associated challenges.

TAKE PART IN THIS LIVE EVENT! THE PRESENTATIONS ARE PRE-RECORDED AND THE SPEAKERS WILL BE AVAILABLE FOR A LIVE Q&A.

REGISTRATION

This workshop is part of this year's IMAPS 2020, 53rd International Symposium on Microelectronics
For registration please go to: www.imaps2020.org

PARTICIPATION FEE

The workshop is free of charge

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PARTNERS



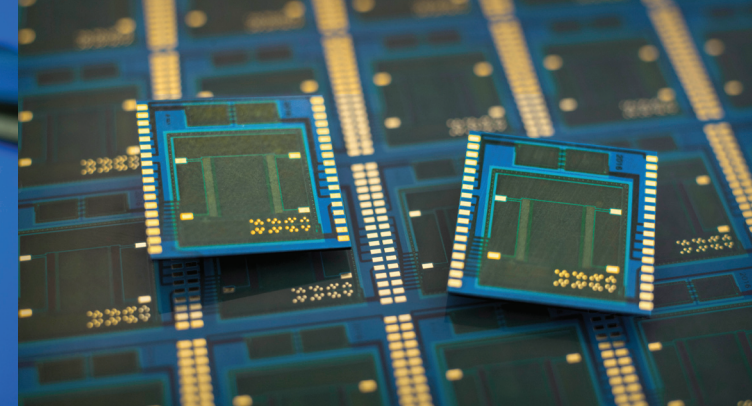
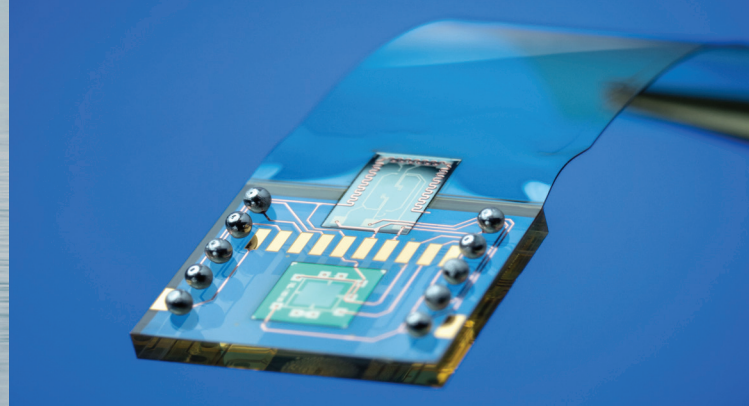
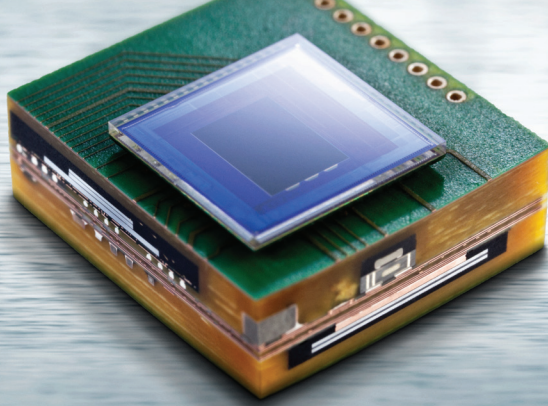
FRAUNHOFER INSTITUTE FOR RELIABILITY AND
MICROINTEGRATION IZM
FRAUNHOFER USA

SYMPOSIUM | OCTOBER 7, 2020 | 12 P.M.

SYSTEM INTEGRATION FRAUNHOFER CONNECTING THE U.S. WITH GERMANY

TECHNOLOGY | EQUIPMENT | COOPERATION





PROGRAM

12.00 Welcome and introduction

Symbiosis of Fraunhofer USA and IZM (Germany).

Overview of technology development and opportunities for cooperation.

Thomas Schülke



12.15 Keynote: Heterogeneous integration: A key enabler for electronic systems

Market needs, technology paths, difficult challenges and potential solutions

Rolf Aschenbrenner



12.45 Heterogeneous integration technologies for fan-out, embedding and interposer wafer level packaging

Research highlights for application specific solutions addressing particular areas of the integration technologies

Michael Schiffer



1.00 Panel level packaging - A high volume manufacturing platform for SiP

Overview on technology trends towards 3D integrated systems and introduction to cost and environmental opportunities and the high volume manufacturing status.

Tanja Braun



Short break

1.20 Heterogeneous photonics integration

Fine pitch bumping, high precision bonding, low temperature joining and cost effective assembly methods for reliable products

Hermann Oppermann



1.35 Embedding technologies for the realization of high-performance power modules

Technology overview of laminate based embedding for power electronic packages and modules. Improved electrical performance, miniaturization and reliability.

Lars Boettcher



1.50 Additively manufactured RF interconnects

Challenges facing dense, high-frequency interconnects in heterogeneous packages. Overview of technology status and recent advances in printing approaches.

John Albrecht



Short break

2.10 Multi-material aerosol-jet printing

Emerging technological advances in co-printing of ceramic, dielectric, and metal materials in a single process.

Examples of integrated electronic structures.

Michael Craton



2.25 Additively manufactured RF system-in-package integration

Die-level integration with printed interconnects. RF passive and active integration with examples of measured performance of integrated systems.

John Papapolymerou



2.40 Optical and THz applications achieved through advanced package integration

High-resolution printed passive structures. Integration of optical components with electronics packaging approaches.

Premjeet Chahal



2.55 Wrap-up and closing