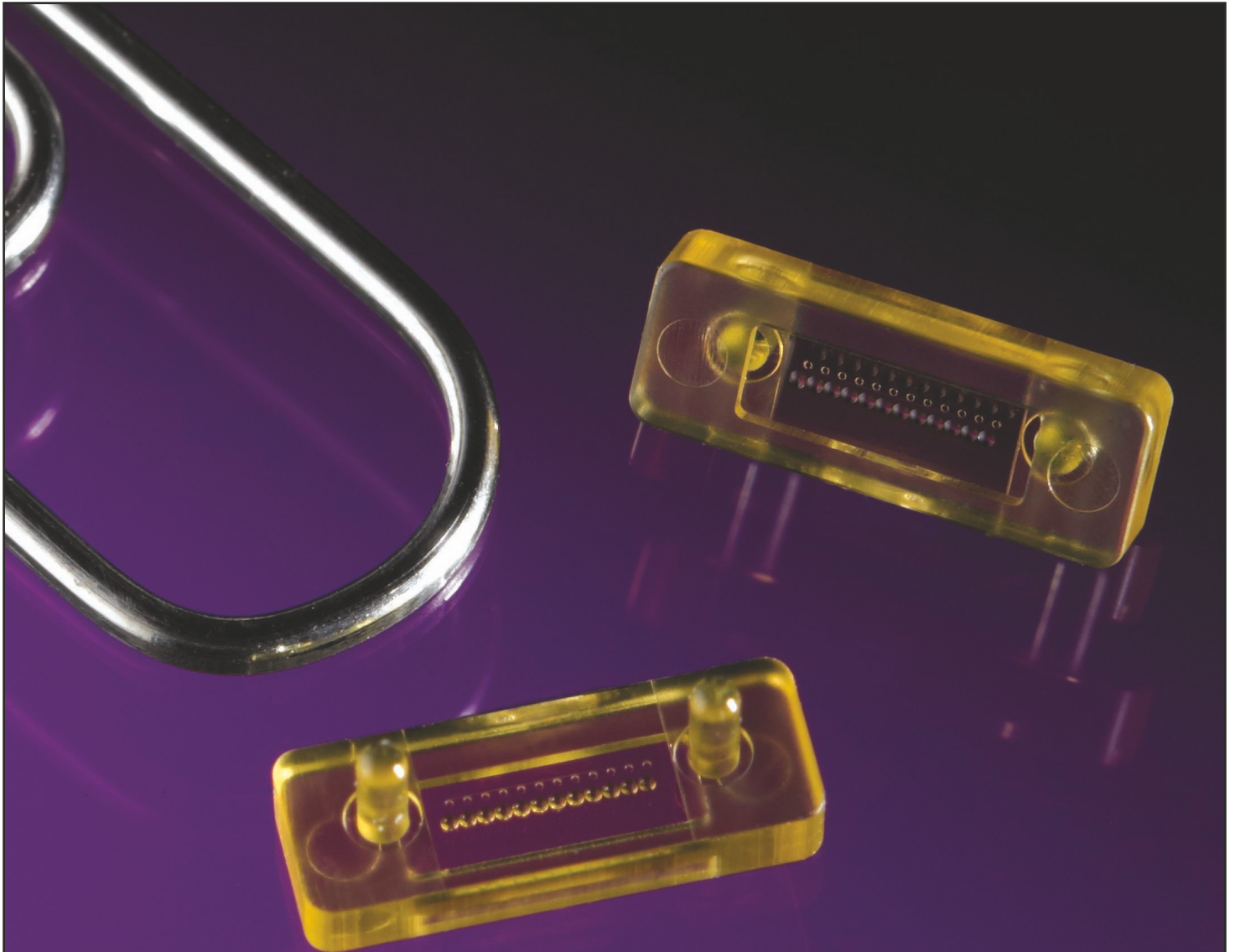


# CMM

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## IN THIS ISSUE

Laser beam delivery and focus best practices in microwelding

Photochemical etching in the automotive industry

2020 MEMS industry commercialisation report card

COMSWORLD 2021

10  
21

## Sessions

### Semiconductor supply chain and infrastructure

**Moderator and keynote speaker: Doug Sparks**

**Keynote:** A decade of semiconductor and MEMS supply chain improvements in China

**Summary:** The opening keynote presentation was given by Doug Sparks. It covered the major players, technology, investment and challenges relating to semiconductors and MEMS capabilities in China. There has been a surge in the growth of infrastructure for semiconductors and MEMS manufacturing in the last decade. Semiconductor equipment suppliers have installed significant resources to support the industry in China and the surrounding region. A significant portion of this will be going to the sensors and MEMS segment. A MEMS manufacturing transition from 100 and 150 to 200 mm wafers as well as a transition from government institute fabs to commercial MEMS fabs and foundries are taking place.

The keynote talk was followed by talks given by five invited international speakers who highlighted the latest impact and causes of semiconductor and MEMS supply chain problems, some of which are related to infrastructure issues in China, Vietnam and India. The problems associated with the growth of wafer fabs across Asia in China, South Korea and Taiwan are well known. Several speakers discussed new wafer fabrication processes, which are key to the commercialisation of new technologies based on silicon wafer micromachining.

**Speaker:** Tom Nguyen

**Talk:** MEMS, semiconductor and sensor development in Vietnam

**Summary:** A discussion on how the Vietnam government has prioritised investment and development to create a high-tech industry for advancement of the country's economic growth.

**Speaker:** Chetan Arvind Patil

**Talk:** The status of semiconductor manufacturing in India

**Summary:** An overview of the past and present status of semiconductor manufacturing in India, as well as the opportunities for making the country a global destination for semiconductor manufacturing. India must increase its semiconductor manufacturing to share the US\$500 billion global market.



### MEMS

**Speaker:** Leonardo Sala

**Talk:** COVID 19 impact on MEMS applications: shift in products, new directions and new opportunities

**Summary:** A summary of the different ways that COVID has affected the global MEMS market. For example, the impact on medical and telecommunications has been positive, whereas automotive and transport have been adversely impacted. During the pandemic, some MEMS products used in thermal cameras or contactless thermometers have seen a huge surge in demand, driven by temperature monitoring. In parallel, microfluidic devices for DNA sequencing PCR diagnostic tests are coming to market prominence, propelled by the need to accurately detect the presence of the virus. Also, there is a huge demand for pressure and flow meters for ventilators from hospital intensive care units (ICUs).

**Speaker:** Taguhi Yeghoyan

**Talk:** Lithography and bonding equipment in growing MEMS and sensors market for consumer and automotive application

**Summary:** A look at how MEMS and sensors represent a vast number of device technologies that are present in all megatrends, including consumer and automotive. COVID had a profound influence on these two end-markets. In 2020, the consumer end-market size decreased by 2.6 percent and the automotive end-market size decreased by 27.5 percent. Nevertheless, by 2025, the COVID influence should fade away and the MEMS device market should increase by 7.4 percent compound annual growth rate (CAGR). Despite the strong MEMS market size decrease, the lithography and bonding equipment market serving it is stable.

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