

Biosketch



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Dr. Govind Kaigala is a Research Staff Member at the Research Laboratory of IBM in Zurich. Previously, he was an NSERC postdoctoral fellow at the microfluidics laboratory in Mechanical Engineering and Urology at Stanford University, USA. Dr. Kaigala received his Ph.D (Electrical Engineering and Oncology) and M.Eng from the University of Alberta, Canada, and B.Eng from the University of Mumbai, India.

He is passionate about translational clinical/medical research to bring quantitation in biology by leveraging micro- and nanosystems for microchip-based chemical and biomolecular analysis.

He is currently leading activities on liquid-based non-contact scanning probe technologies including the microfluidic probe technology and is championing concepts on “open space” microfluidics and “tissue microprocessing”. These concepts have enabled a new class of molecular methods implemented for tissue analysis: micro-immunohistochemistry (μ IHC), micro- Fluorescence *in situ* hybridization (μ FISH) and Spatialyse. The research activities are strongly driven by the needs of molecular basis of personalized medicine.

Dr. Kaigala has authored and co-authored 57 scientific publications, 90 conference papers, 1 book, and 42 patent families. In addition to IBM and other industrial entities, his work is supported by the European Research Council (ERC), the European Union, SystemsX.ch - Swiss National Science Foundation. Dr. Kaigala is the recipient of several IBM awards, including Research Division Accomplishment Awards in 2014 and 2017, was named by IBM “Master Inventor” in 2018 and he received the Horizon Alumni Award from the University of Alberta, and he is a Senior Member of IEEE.

Keywords:

Technology: Microfluidics | Lab-on-a-Chip | Microscale assays | Liquid scanning probes | Microfluidic probe |

Applications: Molecular diagnostics | Anatomical pathology | Tissue analysis | Multi-omic analysis | Diagnostic workflows | Tumor heterogeneity |