



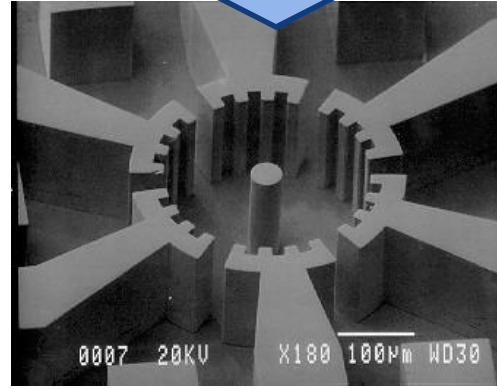
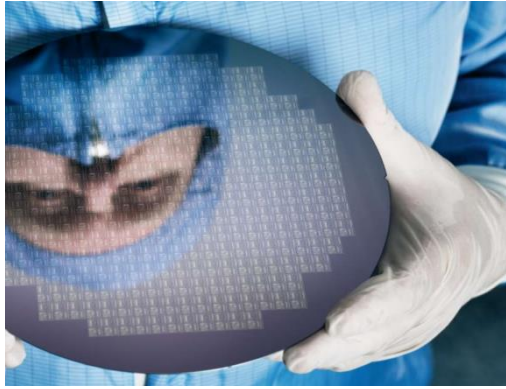
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Micro and Nano Systems, MEMS

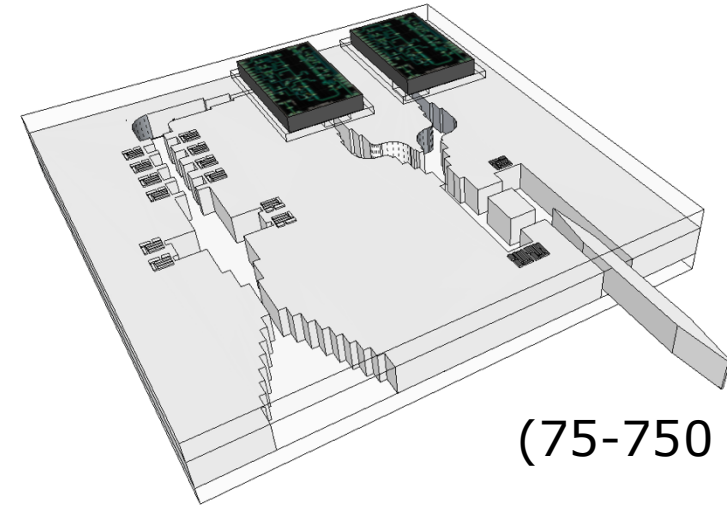
micro-electromechanical systems



Joachim Oberhammer
EECS-IS-MST



Microwave and Terahertz Microsystems



(75-750 GHz)

Semiconductor microelectronics: ontop of silicon wafers

3D-micromachining: inside silicon wafers



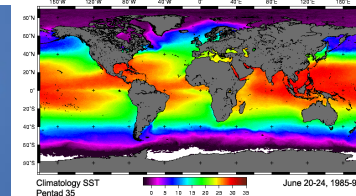
MEMS sensors are everywhere!
inertial sensors, microphones, ...



THz imaging & radar



THz telecom



Space-borne environmental sensing



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THz Lab @ EECS-IS-MST

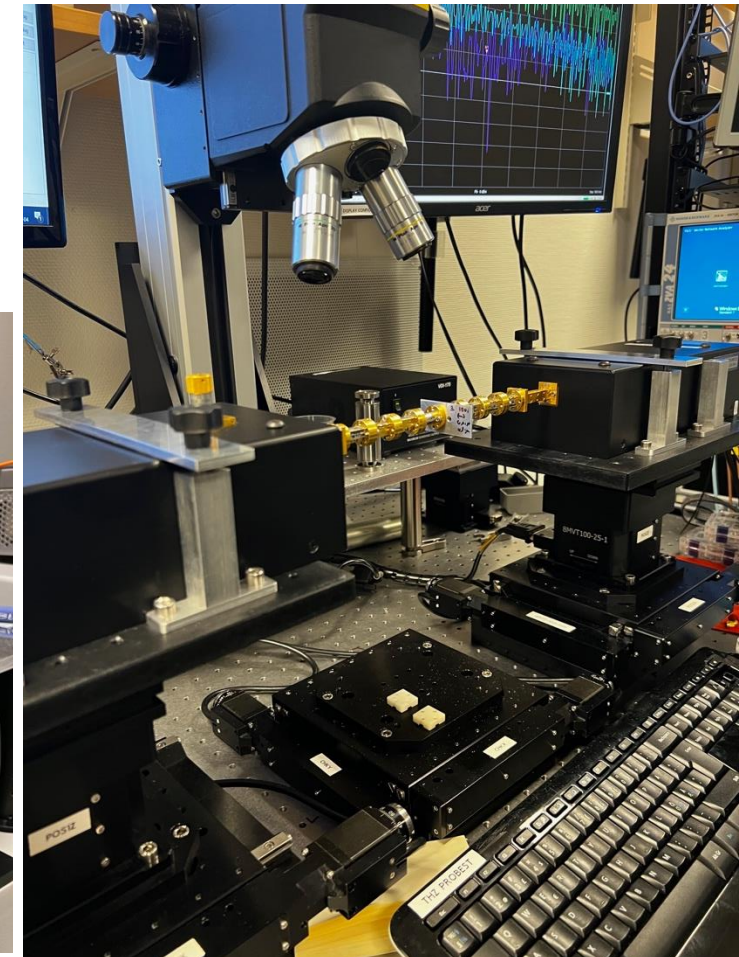
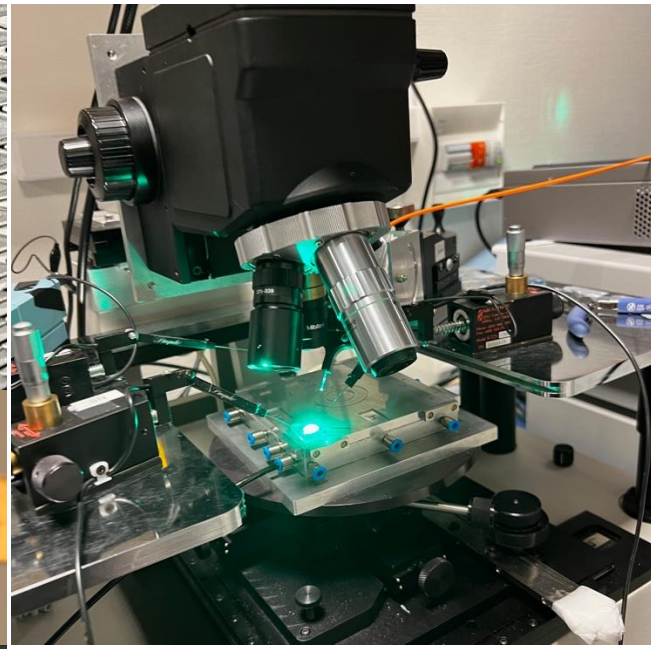
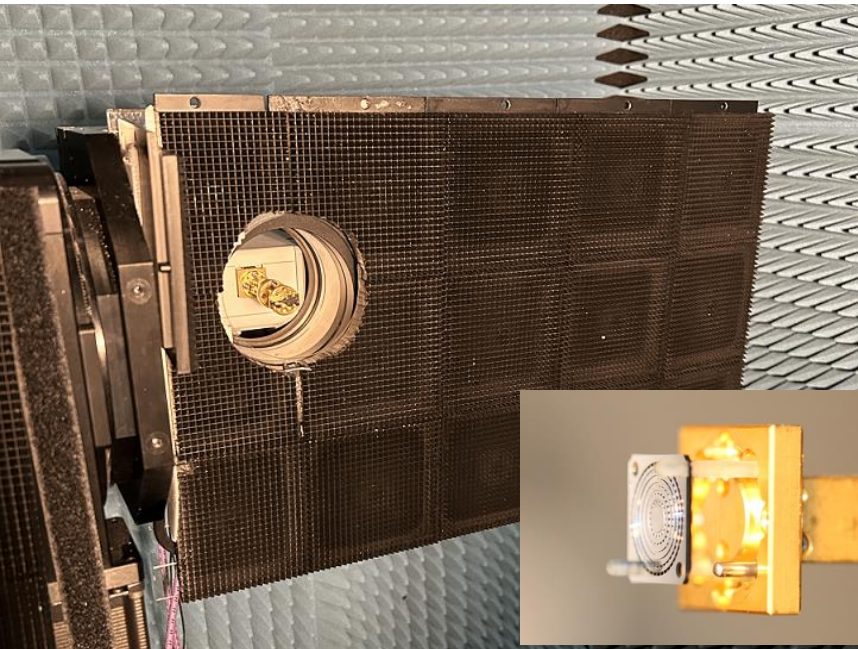
SEK 8.5 million total investment, currently 14 people



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THz device characterization lab:

- VNA up to 750 GHz
- Custom-built fully-automated 12-DoF THz probe station
- THz antenna/radar anechoic chamber (75-750 GHz)





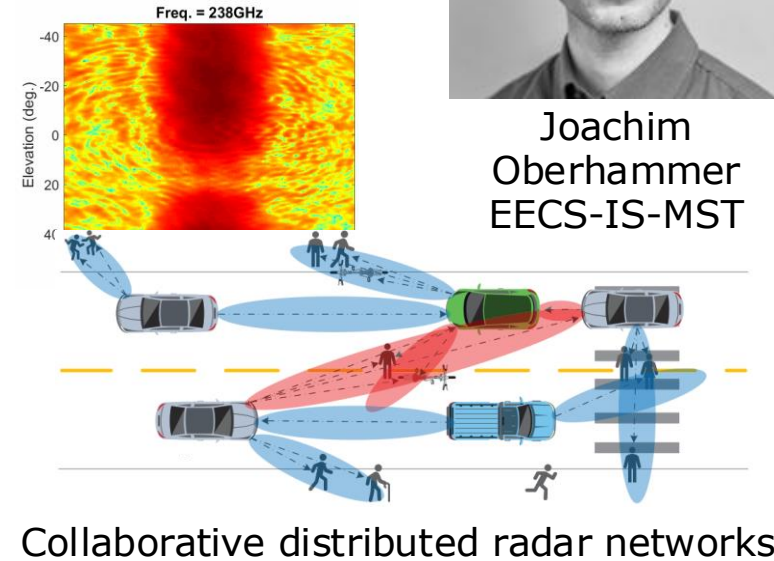
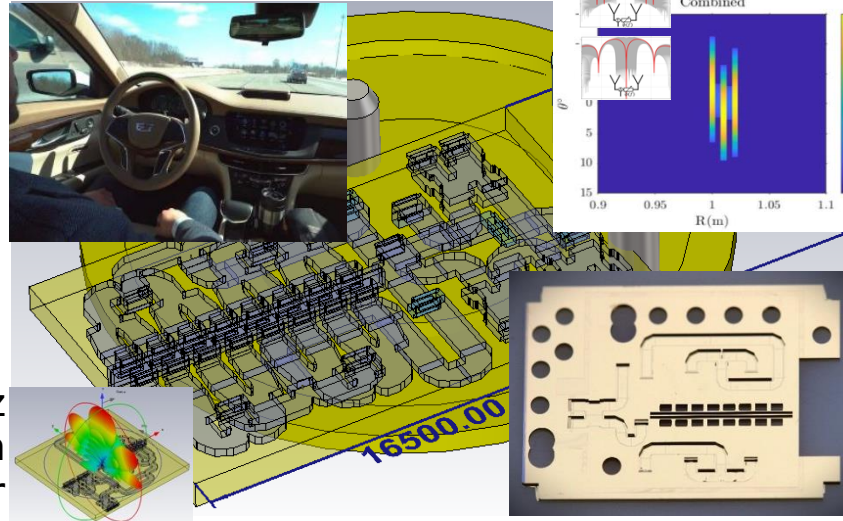
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THz Microsystems in various applications

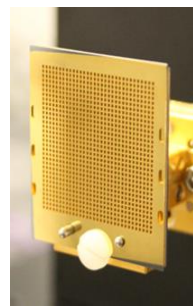


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Car radar



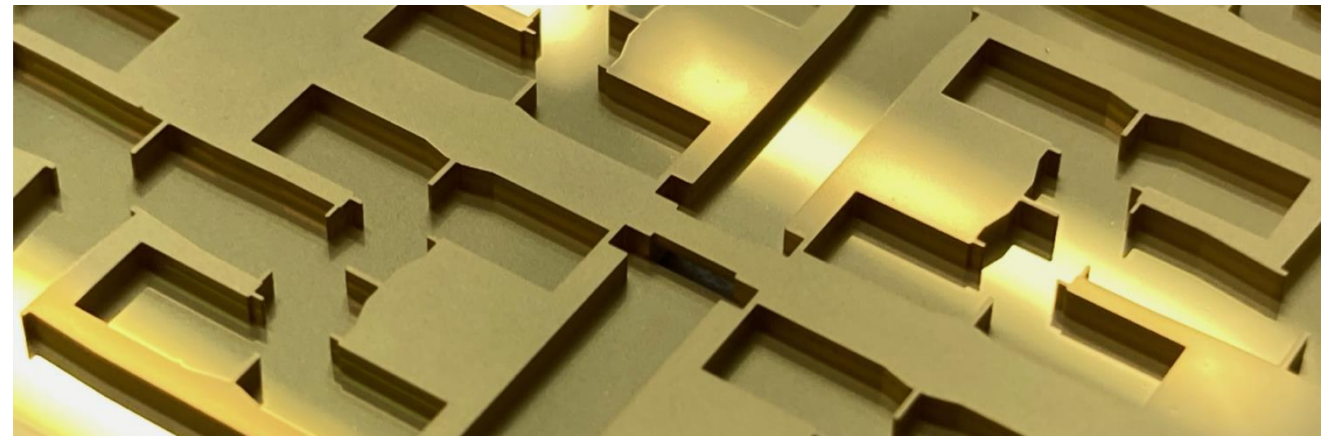
THz telecom



302 GHz
320-410 GHz



Micromachined-waveguide system-in-package



Space-borne environmental sensing

