Gigahertz Integrated Circuits Group

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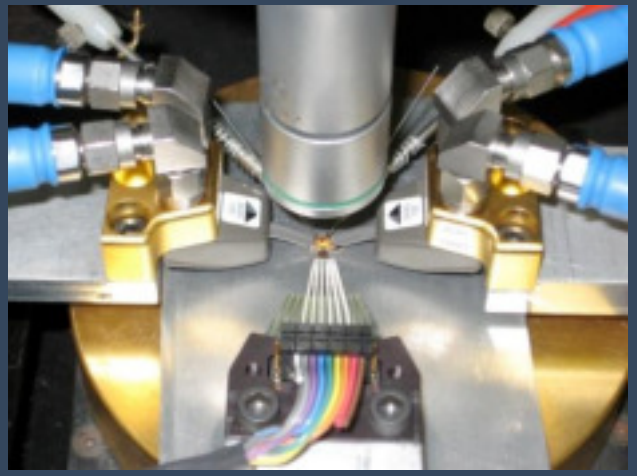
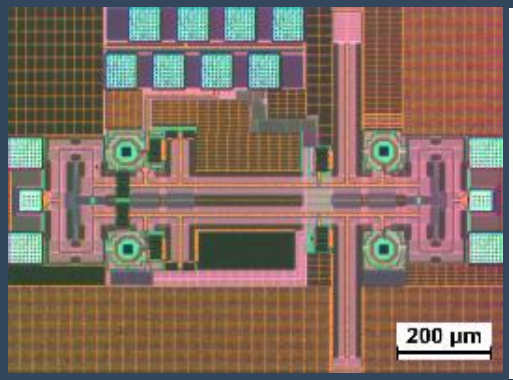
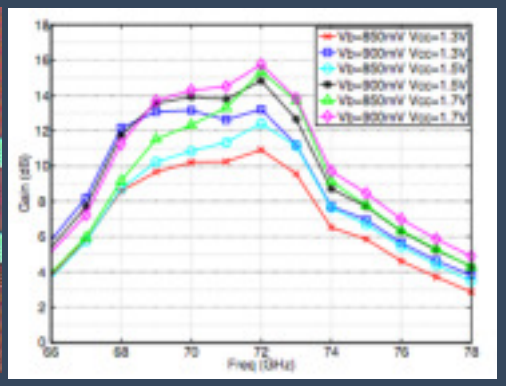
Research interests:

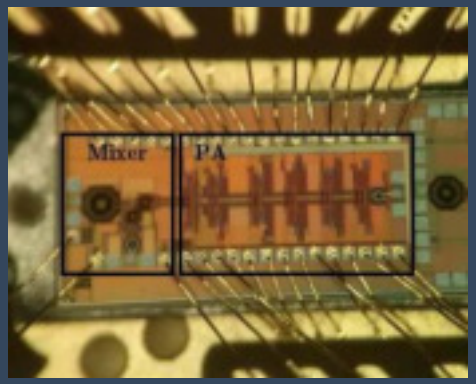
- millimeter-wave/terahertz circuits
- Digitally-assisted RF integrated circuits
- Gallium Nitride circuits
- Millimeter-wave microfluidics

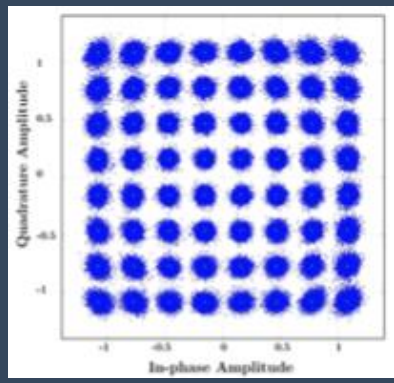


5G Millimeter-Wave Integrated Circuits (MMICs)

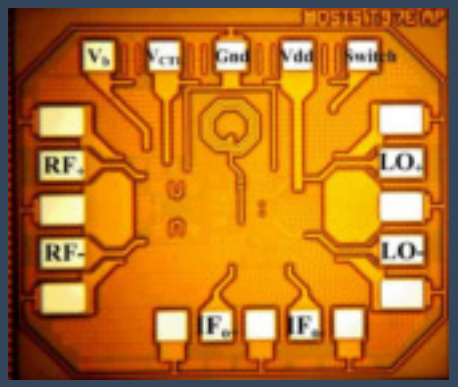


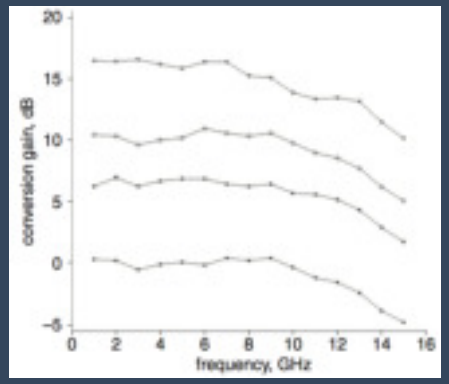


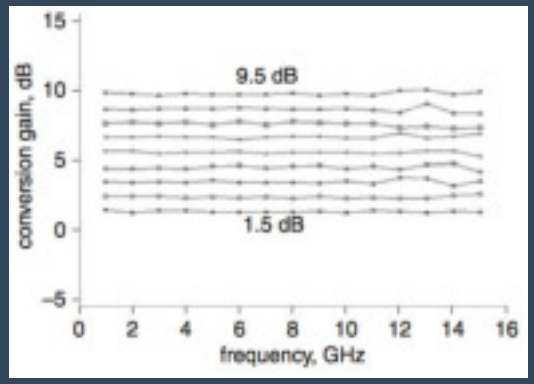


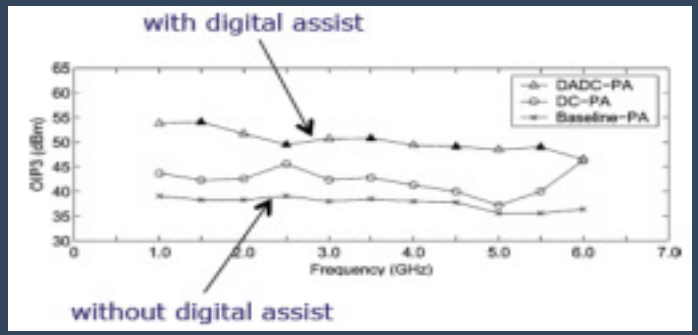


Digitally-assisted MMICs

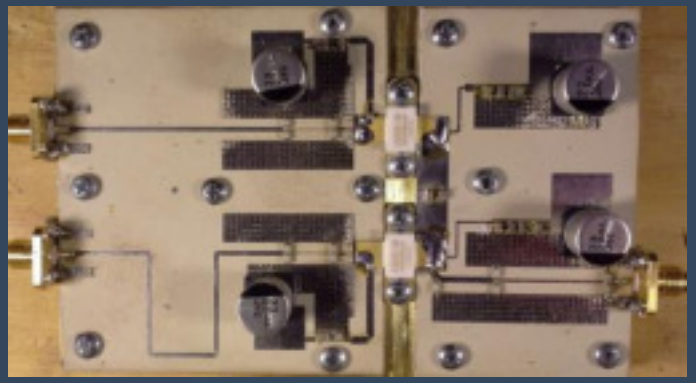


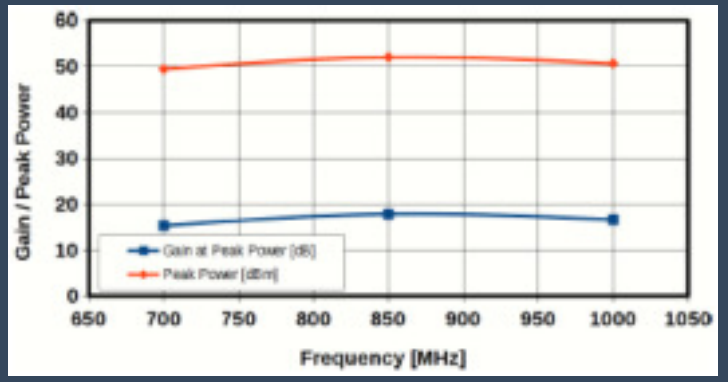




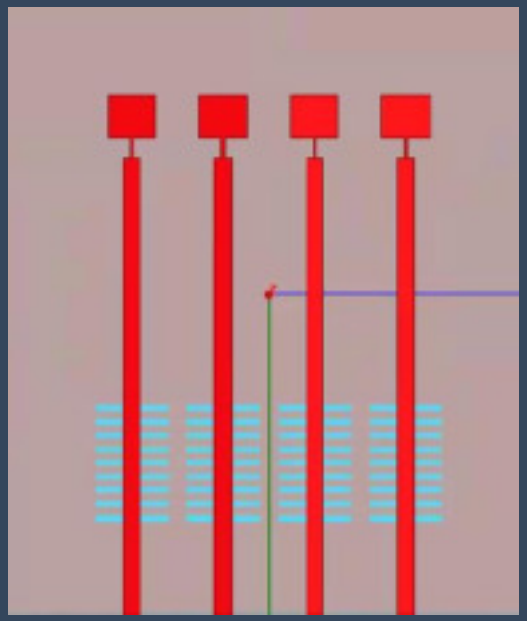


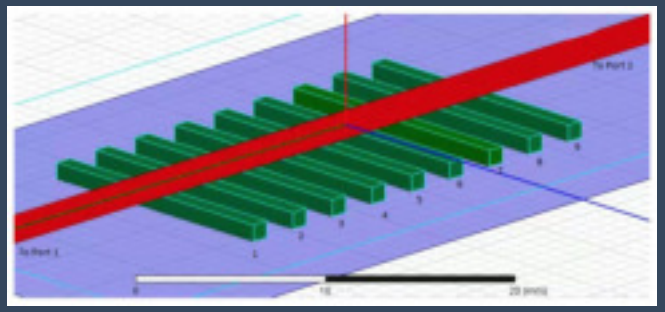
Gallium Nitride Circuits

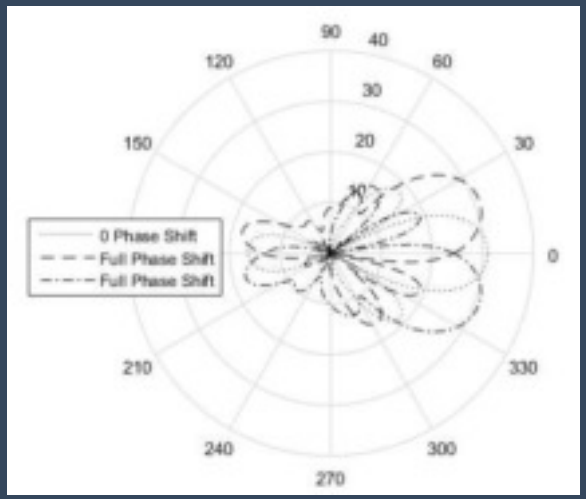




Millimeter-wave microfluidics







Selected publications

- I. Goode, C. E. Saavedra, “A Four Element Phased Patch Antenna Array Using Fluidic Phase Shifter,” *2017 URSI General Assembly and Scientific Symposium*, to appear.

- D. del Rio, I. Gurutzeaga, A. Rezola, J. F. Sevillano, I. Velez, S. Gunnarson, N. Tamir, C. E. Saavedra, J. L. Gonzalez-Jimenez, A. Siligaris, C. Dehos, R. Berenguer, "A Wideband and High-Linearity E-Band Transmitter Integrated in a 55 nm SiGe Technology for Backhaul Point-to-Point 10 Gbps Links'', *IEEE Transactions on Microwave Theory and Techniques*, to appear.

- C. E. Saavedra, D. del Rio and R. Berenguer, "68-73 GHz Common Base HBT Amplifier in 55 nm SiGe Technology," *Global Symposium on Millimeter Waves*, Montréal, Quebec, May 2015.

- S. Mondal, J. Xu and C. E. Saavedra, "Digitally assisted CMOS mixer with tight conversion-gain flatness," *Electronics Letters*, vol. 51, no. 25, pp. 2119-2121, 2015.

- A. M. El-Gabaly, D. Stewart and C. E. Saavedra, "2-Watt Broadband GaN Power Amplifier RFIC using the fT Doubling Technique and Digitally-Assisted Distortion Cancellation'', *IEEE Transactions on Microwave Theory and Techniques*, vol. 61, no. 1, pp. 525-532, 2013.