IC Design MCCI

Microelectronics Circuits Centre Ireland

MCCI Logo

Integrated Circuits Design at Tyndall

The vision for integrated circuits design research at Tyndall is to grow MCCI, into a world

leading industry led analogue-mixed-signal circuits research Centre by 2020. The mission is to increase the relevance to industry of circuit research carried out in HEIs, by making IP more accessible to industry, by increasing the quality of circuit research carried out by the HEIs and by increasing the scale of relevant research carried out in the HEIs, leading to increased exports revenue & employment.

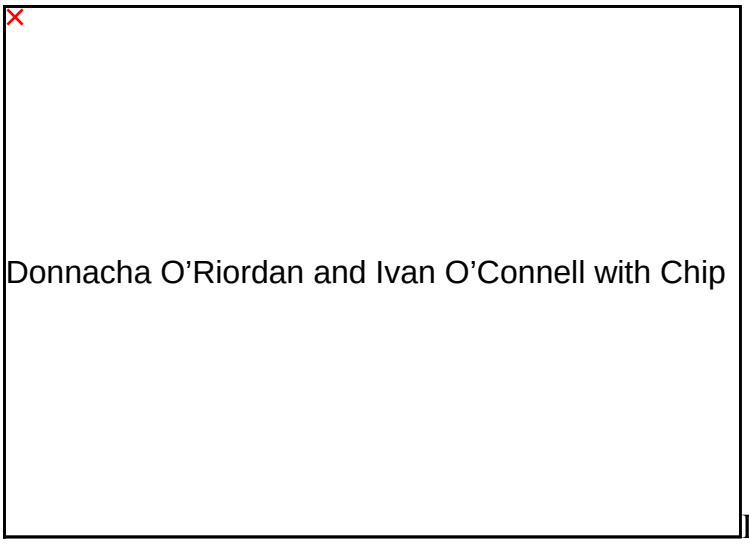
MCCI competes in terms of scale and quality with the top academics groups in analog and mixed-signal circuits worldwide. We are an exemplar for how industry can best lead and benefit from interaction with academic research groups in the field.

MCCI is focusing on applications that are of long term societal benefit in Med Tech, Smart Agri and future Communications, while maintaining a close alignment with multiple industry partners. We are working on building up a dynamic, recognisable research leadership team. And it's a great place to work!

Data Converters

The Data-Converters area focuses on calibration and self-test of data-converters including associated very low jitter clocking. We are carrying out research on ADCs with an emphasis on improved FOM for existing converters as well as pushing the data throughput envelope for converters aimed at very wide bandwidth applications. MCCI very low jitter clocking research looks at LCVCO PLL and All-Digital PLLs for use with RF and high speed data-converters.

Power Management



Donnacha O'Riordan and Ivan O'Connell with Chip

The Power Management area focuses on novel power supply design for use in multi-rail SoCs emphasising efficiency increases with BOM cost reduction. It includes new charge pump and regulator architectures, adapting the power supply to current environment, advanced digital control loops for multi-rail switching converters and high frequency switching converters for Power-Supply-on-Chip.

Transceivers

The High Frequency Transceivers area focuses on mmWave radio SoC, highly digitized multi-mode RF transceivers and high speed optical communications transceivers. MCCI mmWave radio research covers topics such as E-band and radiometers at 95GHz in deep-sub-micron CMOS. Multi-mode radio addresses challenges in multi-standard RF Front-ends, synthesizers, LNA and PA on CMOS. High speed optical transceivers looks at circuits for optical communications above 25Gbps.

Contact enquiry (at) tyndall (dot) ie for all Business Development enquiries

---

Core Team

- Ivan O'Connell
  MCCI - MCCI
  +353-21-490-3000
  ivan.oconnell (at) tyndall (dot) ie
- Seamus O'Driscoll
  MNS (Circuits and Systems) - ICT 4 Energy Efficiency
  +353 (0)21 2346085
  seamus.odriscoll (at) tyndall (dot) ie
- Moises Jezzini
  Photonics - Photonic Packaging
  +353 (0)21 2346875
  moises.jezzini (at) tyndall (dot) ie
- Peter Kennedy
  MNS (Circuits and Systems) - Circuits and Systems
  +353 (0)21 2346602
  peter.kennedy (at) tyndall (dot) ie
- Gerry McGlinchey
  MCCI - MCCI
  gerry.mcglinchey (at) tyndall (dot) ie

Contact

- Donnacha O'Riordan
  MCCI - MCCI
  +353 (0)21 2346164
  donnacha.oriordan (at) tyndall (dot) ie