NEMF 21: Nice team (Physique Mésoscopique)

Ulrich Kuhl

Olivier Legrand

Fabrice Mortessagne

PhD students for three year

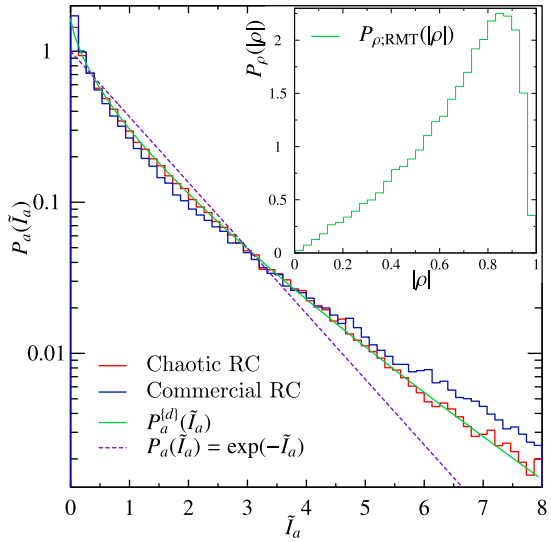
PostDoc for 2 years

Laboratoire Physique de la Matière Condensée (LPMC)

CNRS, UMR 7336, Université Nice Sophia-Antipolis, Nice, France

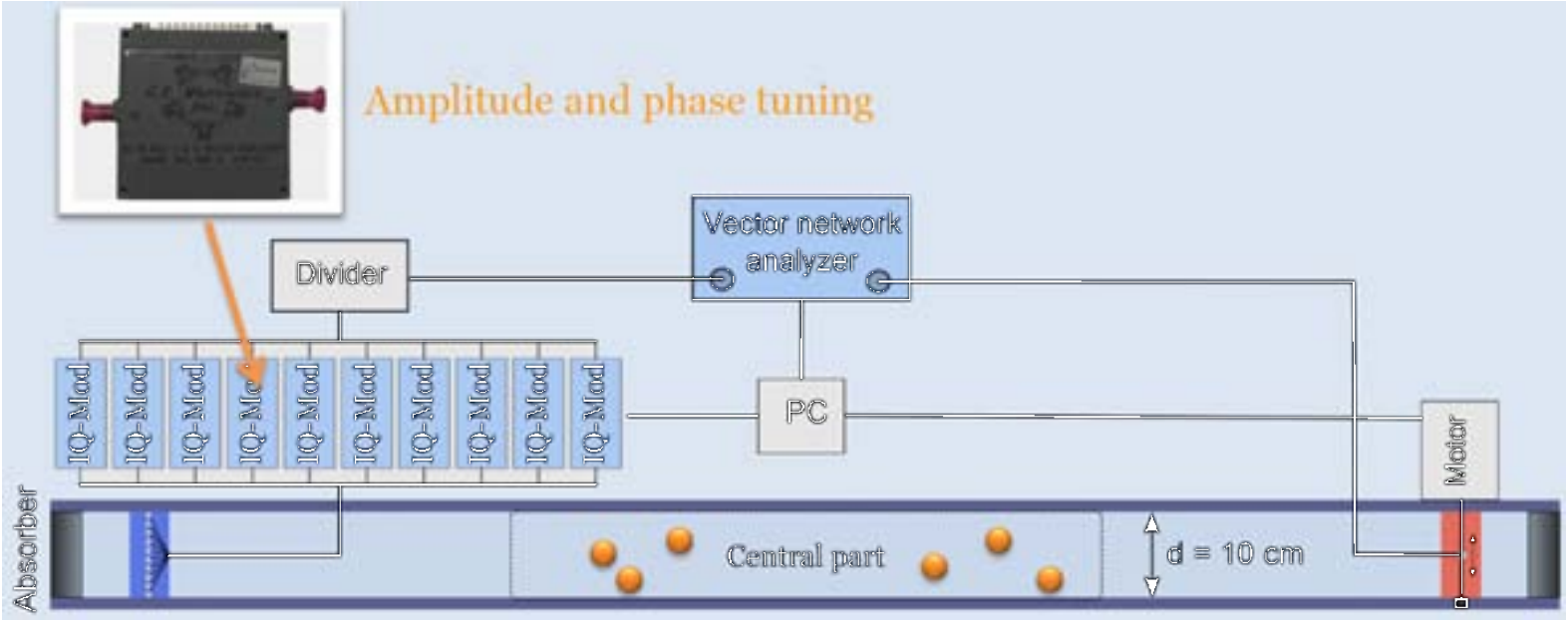
RMT and Noisy fields

- Characterization of PCB by noise cross correlation (passive) in a chaotic reverberation chamber (MHz-GHz domain, near and far field + Poynting vector)
- Creation of 'real' environment (upscaled)
- Description by means of direct processes and RMT
  - Reduction of parameters
  - Effective channel number
  - Equivalent channels $\Leftrightarrow$ Distribution of couplings



Antenna design and transmission

- Antenna array close to walls in open space
- Noisy environment
- Directional emission
- Test using IQ-Modulator (around 10 GHz, upscaled)



- Design test setups (partly reverberating environment)
- Delay lines for real system (around 60 GHz)

Responsibility and Questions

Responsibility

- WP 5: C2C antenna modelling and signal processing
  TUM(15); LPMC(19); ISAE(15); IMST(9)

Questions

- Are the chips for C2C at the same board?
- Distance compared to wavelength λ=5 mm (60 GHz)?
- Signal to Noise ratio? (for direct process and RMT simulation)
- Further test measurements?