S4: **Marc-Henri Julien** (LNCMI-Grenoble)

“What is behind high Tc superconductivity? Answers from experiments in high magnetic fields.”

Understanding the unusual and intricate electronic properties of layered copper oxides has proven to be an exceedingly challenging task. This is why the origin of high-temperature superconductivity in these cuprates has remained one of the most perplexing issues in condensed matter physics for nearly four decades.

In this talk, I will review how the deliberate suppression of superconductivity, primarily using intense magnetic fields, has played a pivotal role in revealing the electronic states that underlie superconductivity in these fascinating cuprates.