

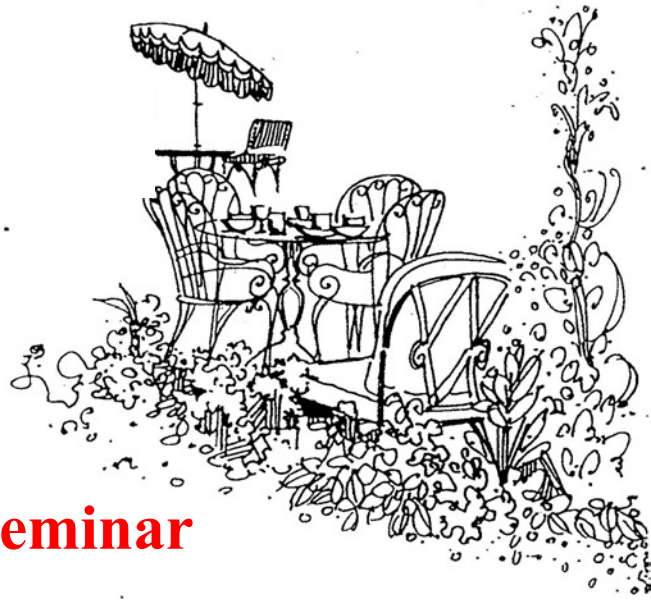
# *Chez Pierre*

Presents ...

**Monday, May 10, 2021**

**12:00pm Noon**

**Broadcast via Zoom**



## **Chez Pierre Seminar**

**Anton Akhmerov – Delft University of Technology**

"Transport properties of multiterminal Josephson circuits."

Hybrid devices combining superconducting physics with the tunability of mesoscopic semiconductors allow to realize a plethora of physical phenomena. This comes at a price of needing to precisely control the microscopic electronic behavior. I will focus on two loosely related phenomena, that can be realized in hybrid multiterminal Josephson junctions, and that are a subject of ongoing experimental search: topological energy-phase relationships, and supercurrent of charge  $4e$  particles—Cooper quartets. Instead of the known hybrid implementation, I will demonstrate how to realize these phenomena by using conventional Josephson junctions as a building block. This simpler approach demonstrates previously overlooked physics of Josephson circuits, and paves the way towards the experimental observation of these phenomena.