

**Vidyut Kaushal -
Technological Advances in
Trapped Ions Systems**

**Rapport sur les
contributions**

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Technological Advances in Trapped Ions Systems

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Abstract:

A trapped ions system is a key element of modern quantum technology. Universal quantum computers, quantum simulators, quantum sensing, and high-precision atomic clocks are some of the key promises of this scientific breakthrough[1]. In this talk, I will present the idea of the trapped ion system as a scalable quantum processor and focus on the recent technological advances in individual control of ions in the ion traps based on shuttling architecture [2] (a quantum processor).

[1] Ehud Altman et al. PRX Quantum 2, (2021) 017003

[2] Kaushal et. al. AVS Quantum Science 2.1 (2020) p.014101

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