SEMPARIS – Séminaires en région parisienne

`http ://string.lpthe.jussieu.fr/semparis/`

Cours

Mardi 18 Mai 2021, 10 :30
LPTMC, on-line, INSP(https ://zoom.us/j/3630156422?pwd=anVyV3BkUXQ5RDVwaGg2SFk0NzlnZz09)
Domaines : cond-mat.mes-hall

Titre : *An introduction to quantum computing by a skeptic : lecture 3*

Orateur : **Xavier Waintal (CEA Grenoble)**

Résumé : *This set of three lectures is essentially a basic introduction to quantum computing from a physicist point of view. For each theoretical concept, I will try to analyse what it would take for an actual hardware to work in practice and identify probable bottlenecks. The talks should be accessible to anyone with a working knowledge of quantum mechanics. The lectures will be organised around a few questions :*

Lecture 1) What's a quantum computer ? How can a quantum computer be exponentially faster than a classical one ? What would it take to get this to work ?

Lecture 2) How could one get rid of the ubiquitous and infamous decoherence with "quantum error correction" ? Is this feasible ?

Lecture 3) Where are we now ? Have we really reached quantum supremacy ? And what does supremacy mean by the way ?
