From imaging algorithms to quantum methods Seminar

Report of Contributions

Contribution ID : **1** Type : **not specified**

Potential new applications of synchrotron radiation, like emission coefficient mapping, radiotherapy or 2WQC

Monday, 2 June 2025 10:00 (60)

While naively laser only excites target, it can also cause its
deexcitation – as stimulated emission, backward ASE (amplified
spontaneous emission), or in Rabi cycle cyclically causing excitation and deexcitation. STED microscopy is a popular application of laser causing deexcitation - I would like to propose and discuss a few more, based on its properties suggested by CPT symmetry, with potential realization by synchrotron radiation. For example, while CT scanner makes 3D maps of absorption coefficient, CPT symmetry suggests how to
analogously measure/map emission coefficients, what should have much better transparency. Related medical applications could be causing deexcitation of autoluminescent molecules like NADH, e.g. to starve cancer tissue. I would also like to discuss potential application to stimulate nuclear decay. Finally, the original motivation was more symmetric and powerful two-way quantum computers (2WQC), for example with photonic chip between coupled laser resonators.

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Contribution ID : **2** Type : **not specified**

Discussion

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