



Contribution ID: 68

Type: not specified

Changes in secondary students' pseudoscientific conceptions of quantum mechanics after a summer school on quantum information science.

Countering pseudoscientific misinformation is an important goal for outreach initiatives, especially when directed to young students. Quantum physics and quantum technology are especially prone to being communicated, intentionally or otherwise, in a deformed way which may induce severe misconceptions, make the public vulnerable to scams and deceptions, or even pave the way to anti-scientific beliefs. We report on the results of a summer school on quantum information science for secondary school students, held with the support of the Italian NQSTI – National Quantum Science and Technology Institute. We concentrate only on results demonstrating the changes in students' attitudes toward pseudoscientific conceptions of quantum science and technology, as measured by a specially tailored questionnaire – the PSEUDO-QM scale. Our results show that meaningful conceptual instruction about quantum technology may not only be beneficial for the need for a future quantum workforce, but also significantly reduce the extent of pseudo-scientific conceptions.

Primary authors: MACCHIAVELLO, CHIARA; Dr SUTRINI, Claudio (Istituto Superiore "Taramelli – Foscolo" Via Mascheroni 53, 27100 Pavia); Dr ZUCCARINI, Giacomo (Department of Mathematics and Physics, University of Udine, via delle Scienze, 206 33100 Udine); MALGIERI, MASSIMILIANO

Presenter: MALGIERI, MASSIMILIANO

Session Classification: Caffè e poster (dal N. 9 al N. 51)