

Family name, First name: **Illuminati, Fabrizio**
Researcher unique identifier: **ORCID 0000-0002-2273-0421**
Date of birth: **30/05/1963**
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Fabrizio Illuminati is a full professor of theoretical physics, principal investigator, and leader of the Quantum Physics research group at the University of Salerno. He has contributed to various aspects of the theory of quantum information and quantum collective phenomena, establishing seminal results in the theory of entanglement and quantum correlations in quantum optical, atomic, and condensed matter systems. Prof. Illuminati has been and currently is European Coordinator of several FP7 and HORIZON2020 Research Projects of the European Union, and is active in several national and international Evaluation Committees.

RESEACH FIELDS

Fundamental Quantum Physics, Quantum Information, Quantum Optics, Quantum Open System Dynamics, Quantum Simulations, Quantum Metrology, Quantum Statistical Mechanics, and Quantum Phase Transitions.

PUBLICATION AND CITATION TOTAL NUMBERS:

- Circa 150 total publications in scientific journals, including:
18 Physical Review Letters, 1 Nature Physics, 1 Physics Reports
- Circa 3600 citations according to the Web-of-Science (WoS) (Circa 5200 according to Google Scholar)
- H-index = 32 in WoS (= 38 in Google Scholar)

LEADERSHIP AND MANAGEMENT OF INTERNATIONAL SCIENTIFIC PROJECTS

2013-2017: European Coordinator – FP7 FET Open STREP Project EQuaM – “Emulators of Quantum Frustrated Magnetism”

2011-2015: European Coordinator – FP7 FET Open STREP Project iQIT – “Integrated Quantum Technologies”

2008-2012: European Coordinator – FP7 FET Open STREP Project HIP – “Hybrid Information Processing”

EDUCATION

1987-1991 *PhD in Physics*, University of Padua, Italy

1982-1987 *Laurea degree (Master’s degree) in Physics*, with grade 110/110 *cum laude*
Università di Roma “La Sapienza”, Italy

CURRENT ACADEMIC POSITION

Since 2015 **Full Professor** of theoretical physics,
Dipartimento di Ingegneria Industriale, Università degli Studi di Salerno

PREVIOUS ACADEMIC POSITIONS

2007 - 2015 **Associate Professor** of theoretical physics,

Dipartimento di Fisica, Università degli Studi di Salerno

1996 – 2007 **Researcher** of condensed matter physics,

Dipartimento di Fisica, Università degli Studi di Salerno

2003-2004 **Visiting Professor**, Universitaet Potsdam, Potsdam, Germany.

1997-2000 **Fellow** of the Alexander von Humboldt Stiftung, Universitaet Konstanz, Germany.

1993-1996 **Post-Doctoral Fellow**, Università degli Studi di Padova, Padua, Italy.

1991-1993 **Fellow** of the Royal Norwegian Academy of Sciences, University of Oslo, Oslo, Norway.

OFFERED INTERNATIONAL ACADEMIC POSITIONS

2013: Tenured Professorship (Full Professor) - Quantum Physics and Quantum Optics – University of Sussex (Brighton), United Kingdom.

2011: Tenured W-3 Professorship (Full Professor) - Theoretical Physics - Universitaet Siegen (Frankfurt), Germany.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2001 - current 16 Postdocs

2001 - current 13 PhD students

1999 - current 25 Master students

SCIENTIFIC ASSOCIATIONS

Since 01/01/2007: Senior Research Scientist, ISI Foundation (Institute for Scientific Interchange), Turin (IT).

Since 01/11/2011: Principal Investigator, CNISM (National Italian Consortium of Condensed Matter Physics).

MANAGEMENT OF NATIONAL RESEARCH FUNDS

2013 – 2016: Principal Investigator - Salerno Unit - National Research Project PRIN – Quantum Simulators of Strongly Correlated Systems

2006 – 2008: Principal Investigator - Salerno Unit - National Research Project PRIN – Cooperative Quantum Phenomena in Atomic Systems: from Chips to Optical Lattices

EVALUATION ACTIVITIES - PEER REVIEW

Member of various evaluation panels and committees for personnel hiring at all levels (PhD, Post-doctoral fellows, tenured positions).

Evaluator of grant proposals for the European Union, the European Science Foundation, MIUR, and CNR.

Referee for various top international scientific journals, including Reviews of Modern Physics, Nature Physics, Nature Communications, Physical Review Letters, New Journal of Physics, Physical Review A, Physical Review B, Europhysics Letters, Annals of Physics (NY), Journal of Physics A, Journal of Physics B, Journal of Physics: Condensed Matter, Physics Letters A, Optics Communications, Optics Express, Physica Scripta.

TEACHING ACTIVITIES

Undergraduate and graduate courses at all levels. These include introductory quantum mechanics for third year undergraduate. Elements of quantum optics for fourth year undergraduate. Fundamentals of quantum information for first year graduate. Atomic and molecular physics for third year undergraduate. Elements of advanced quantum mechanics for second year graduate. Mathematical methods of quantum mechanics for third year undergraduate. Advanced mathematical methods of quantum mechanics for first year graduate. Quantum statistical mechanics and many-body physics for fourth year undergraduate. Each course is on a semester basis, with a typical number of four to six hours per week, and fifty contact hours for a typical course.

ORGANISATION OF RECENT SCIENTIFIC MEETINGS

2016 *Co-Chair* of the QBEC International Conference on Ultracold Quantum Gases, Salerno.

2014 *Chair* of the IQIS International Conference on Quantum Information, Salerno.