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Titolo	Toward a Science Campus in Milan : A Snapshot of Current Research at the Physics Department Aldo Pontremoli / / edited by Pier Francesco Bortignon, Giuseppe Lodato, Emanuela Meroni, Matteo G.A. Paris, Laura Perini, Alessandro Vicini
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Nota di contenuto	Introduction -- Measuring the Universe with galaxy redshift surveys -- Theoretical spectroscopy characterization of deep electronic states of defects in silicon via Density Functional Theory with hybrid potentials -- Gas and Dust Dynamics during Planet Formation in HL Tau -- Quantum simulation of non-Markovian qubit dynamics by an all-optical setup -- Innovative instrumentation for the study of atmospheric aerosol optical properties -- Giotto unveiled: new developments in image and elemental analysis techniques for cultural heritage -- Quantitative analysis of gold nano-aggregates by combining electron and probe microscopy techniques -- The discovery of the Higgs boson and most significant measurements at the LHC -- Spectroscopy of Adsorbates and the Role of Interfacial Interactions -- The Founder of the First Institute of Physics of the Milan University: Aldo Pontremoli, a Physicist's Life between Adventure and Institutions -- The role of monitoring time and detectors efficiencies in time-continuous quantum magnetometry -- Recent developments and perspectives in nuclear structure by and particle spectroscopy -- Planet formation in the ALMA Era -- Generation and active control of coherent structures in partially-neutralized magnetized plasmas -- Feeding genetic

heterogeneity via a smart mutation operator in the Memetic Phase Retrieval approach -- Jack on a Devil's staircase -- A study of the phase diagram of symmetric binary Gaussian mixtures -- Tutorial: 5 in Dimensional Regularization -- The Neutrino: looking through its experimental world -- Towards a universal nuclear structure model -- Recent advances in scintillating optical fibre dosimeters -- R&D on Electronic Devices and Circuits for the HL-LHC -- Precise perturbative QCD predictions for Large Hadron Collider physics -- LASA Cs<sub>2</sub>Te Photocathodes: the electron source for XFELs -- LASA Superconducting RF cavities for particle accelerators.

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#### Sommario/riassunto

This book is a collection of multidisciplinary papers presented at the Department of Physics of Milan University's congress on 28 and 29 June 2017, which was also intended as a kick-off meeting for the design of a novel science campus at the Expo site in Milan. The congress presented a snapshot of the department's research to the academic community, the media, policymakers and authorities as well as the public at large, and also provided an opportunity to strengthen interdisciplinary collaborations between the members of the department and other communities. This book is a valuable resource for scientists looking for synergetic projects, policymakers wanting to grasp scientists' points of view and for prospective graduate students seeking expanding areas of research.

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