

**Name:** Alberto Morgante

**Education:**

1985 Degree in Physics Trieste University.  
1991 PhD in Physics Trieste University.

**Employment:**

- since March 2020 professor of Physics at Trieste University.
- February 2010 – February 2018 Director CNR-IOM Institute
- October 2009 – February -2010 Director of National TASC Laboratory INFN
- November 1999 - February 2020 associate professor of Physics at Trieste University.
- December 1995 – October 1999 researcher at Trieste University
- November 1992 – November 1995 researcher at Laboratorio TASC-INFN, Trieste
- March 1991 – October 1992 Researcher at Trieste University
- During the period 1988 – 1998 a total of 3 years of research activity at Fritz-Haber-Institut der MPG Berlin in collaboration with prof. [REDACTED]. Alexander von Humboldt Foundation fellowship.
- September 2006 - June 2007 Visiting scientist at the Nanoscience and Engineering Center of Columbia University New York USA
- December 2014 Invited professor to teach advanced courses at Politecnical University San Petersburg Russia

**Other activities:**

- October 2014 –June 2017 member of Board of Directors of Sincrotrone Trieste Company that runs the Elettra synchrotron and Fermi FEL
- Since 2017 member of the Scientific Council of ILL the European neutron source
- Member of the Executive committee of the Italian Academy at Columbia University.
- Referee of international scientific reviews, of research projects for DFG (Germany) and CNRS (France), Croatian Ministry of Research.
- Member for 3 years of the Review Committee of European Synchrotron Radiation facility (ESRF) in Grenoble.
- Referee for projects of the Italian Ministry of Research and University.
- Referee for the Canadian Light Source.

2017 Outstanding scientist Prize of the Italian Synchrotron Light Society

**Academic activities:**

- Since November 2019 Coordinator of the PhD course in Nanotechnology University of Trieste
- Teaching courses on “Electrodynamics and relativity” for physics students, “Surface physics” for PhD students, “General Physics” for Chemistry, Biology and Biotechnology students
- Member of PhD School in nanotechnology of Trieste University, from 2008 to 2013 deputy director of the School and member of the Scientific committee of the School.
- Supervisor of more than 16 PhD students and more than 20 undergraduate students.
- Member of final examination boards for PhD students at international and national PhD schools

**Project coordination:**

- 2000-2010 Scientific coordinator of the Aloisa project in the “Large Scale Facilities” program of the National Institute of Physics of Matter (total budget over 1.5 M€)
- Local coordinator Trieste research Unit of MURST COFIN 2001 project. “Experimental study of thin films by combined use of structural and spectroscopic techniques.”
- Local coordinator INFN project “Spectral properties of adsorbed systems on metal surfaces: Auger lineshape and metastable deexcitation spectroscopy” 2002-2003

- National coordinator MIUR PRIN Project 2003 “Electronic properties, structure, and growth of weakly bound films: towards an understanding of the organic-inorganic interface.” MIUR contribution 470.000 €
- Responsible of European Interreg Project for the Italian – Slovenian scientific cooperation
- Responsible 2005-2010 of the research chapter: Electronic and structural properties of low dimensional systems of CNR Department “Materials and Devices”
- Local Responsible of Trieste University Unit of MIUR PRIN 2006 “Geometrical and electronic characterization of organic layers on organic coatings”
- National coordinator of MIUR PRIN Project 2010-2011 “GRAF Frontiers in Graphene Research: understanding and controlling Advanced Functionalities” MIUR Contribution 1.095.855 €
- Eurofel Project MIUR Local responsible.
- 2014 -2015 International Project Italy – USA collaboration “Nanoscience for energy: a joint Italy-US laboratory”
- Local Responsible of Trieste University Unit of MIUR PRIN 2017 “ Fast Electron dynamics in novel hybrid organic-2D MATERIALS - FERMAT”

### **Research activity:**

Scientific coordinator of the ALOISA beamline 2000-2010. As scientific coordinator I was in charge of the management of the ALOISA beamline at Elettra. The beamline is open to external users since March 1998. Since then roughly 20 experiments per year in collaboration with a large number of Italian and foreign groups have been successfully carried out. The beamline has a multitechnique end-station and allows the Users to investigate both the chemistry and the structure of surfaces, adsorbates and ultra-thin films. ALOISA offers the possibility to perform in-situ both X-ray photoemission and absorption spectroscopies and surface x-ray diffraction.

From 1 February 2010 to 28 February 2018 I directed a new CNR Institute (Istituto Officina dei Materiali, IOM) founded in February 2010 based in Trieste and includes previous INFN (National Institute for the Physics of Matter) research centers like: the TASC National Laboratory, Democritos at SISSA Trieste, SLACS Regional Laboratory in Cagliari, a research center in Perugia and a research center in Grenoble (FR) that runs beamlines at the European Synchrotron radiation source ESRF and at the European neutron source ILL.

The IOM has a permanent staff of roughly 90 CNR employees, roughly 30 University research associates and a large number of post-docs and PhD students.

IOM is an interdisciplinary research center that combines material synthesis, advanced characterisations and numerical simulations, focusing on the study and development of innovative materials and devices at the micro- and nano-scale.

My research work concerns mainly with the experimental study of solid surfaces, thin films, 2D materials by using electron, X-ray and neutral atom scattering.

The main research subjects: thermodynamics of surface structures due to reconstructions and adsorbates studying in particular critical phenomena in 2-D phase transitions; thin film growth and inverse growth (removal); reordering kinetics of surfaces and thin films; gas-surface reaction dynamic; single molecule conductance; graphene and other 2D materials electronic and morphological properties.

### **Bibliometrics:**

I published more than 160 papers on international refereed journals. H-factor: ISI 37, Scopus 37 Google Scholar 43 Total citations: ISI > 4900 Google Scholar > 6200

### **Recent invited talks and seminars:**

- Invited talk: ACSIN 2016 13th International Conference on Atomically Controlled Surfaces, Interfaces and Nanostructures Italy – Rome, October 9-15, 2016
- Plenary talk 16th Joint Vacuum Conference (JVC-16), the 14th European Vacuum Conference (EVC-14) Slovenia “Ultrafast charge injection at complex interfaces: organic-organic, organic inorganic and organic-graphene”
- 7th EUROPEAN SCHOOL ON ORGANIC ELECTRONICS Lake Como School of Advanced Studies, 14-18 September 2015 Invited Tutorial Lecture “Charge transfer processes in organic nano- and hetero-structures”
- 28-1 luglio 2015 European Conference on Organised Films “Charge Transfer Processes in Organic Nano- and hetero-Structures” Genova Invited talk
- 10 nov 2014 Praga Institute of Physics of the Czech Academy of Sciences “Charge Transfer Processes in Organic Nano- and hetero-Structures” Invited seminar.
- 15 – 20 September 2014 International School of Physics and Technology of Matter Otranto Italy “New frontiers in down-scaled materials and devices: realization and investigation by advanced methods” Invited lecture “Intro to X-rays and Surface characterization”
- 23 aprile 2014 Workshop on the Star Radiation source Rome Invited talk
- 2-3 October 2013 International workshop “Nanotechnology and Sustainability: New Research in Italy and the United States” Italian Academy Columbia University Invited talk
- MAMA-Hybrids International workshop 22-24/10/2012 Ischia Italy “Charge transfer Processes in organic nano-and hetero-structures”
- Nanoenergetics International WS Trieste 15-16 ottobre 2011 "Charge transfer processes in organic thin films and organic heterostructures of interest for photovoltaic applications"
- SILS-SISN conference Trieste 1-3 settembre 2011
- Erice International Workshop Graphene 3-6 luglio 2011 Invited talk
- SPIN Università di Napoli 20 Giugno 2011 “Resonant photoemission spectroscopy in organic thin films.” Invited seminar.
- Università Milano Bicocca 23 giugno 2011 “Graphene structure and morphology” Invited seminar.
- NSEC Symposium Columbia University 10-11 Giugno 2011 Invited seminar.
- Columbia University “Resonant photoemission spectroscopy in organic thin films.” 10 dicembre 2010 Invited seminar.
- Università di Modena 9 luglio 2010 "Surface corrugation, morphology and electronic structure of exfoliated graphene: a LEEM, micro-LEED and micro-ARPES study" Invited seminar.
- Nanotecnologies for life sciences Trieste 21 giugno 2010
- BLN Brookhaven National Laboratory Upton NY USA “Resonant photoemission spectroscopy in organic thin films.” 23 febbraio 2010. Invited seminar.
- Società Italiana Luce di Sincrotrone Camerino “The structure of alkenthiols self assembled monolayers on Au(111)” 25 luglio 2009 Invited talk
- FritzHaber-Institut Max planck Gessellschaft Berlin “Resonant photoemission spectroscopy in organic thin films.” 14 07 2009 Invited seminar.
- Università Halle/Wittemberg “Resonant photoemission spectroscopy in organic thin films.” Luglio 2009 Invited seminar.
- Molecular Foundry Berkeley University CA USA “Resonant photoemission spectroscopy in organic thin films.” Dicembre 2008 Invited seminar.
- International Symposium: Emergent Nanoscience 4-5 Dicembre 2008 New York Columbia University “Spectromicroscopy of single and multilayer graphene” Invited talk
- International Conference Surface X-ray and Neutron Scattering 10 Parigi 2-5 Luglio 2008 “The Structure of Alkenthliols Self Assembled Monolayer on Au(111)”. Invited talk
- University of Pennsylvania December 2005 Invited seminar.
- Columbia University NSEC December 2005 Invited seminar.
- LBLN Brookhaven October 2006 Invited seminar.

- Rutgers University January 2006 Invited seminar.