

CURRICULUM VITAE

Gian Gabriele Ori

Personal information

First name: Gian Gabriele

Last name: Ori

Born: September 11th, 1953, at Modena (Italy)

Citizenship: Italian

Work address: International Research School of Planetary Sciences

Universita' d'Annunzio

Viale Pindaro 42

65127 Pescara Italy

Education

1973 Maturita' Classica, High School degree in Classical Studies, Collegio S. Luigi, (Bologna, Italy)

1979 Dottore in Scienze Geologiche, Universita' di Bologna, (Italy).

Thesis on: Depositional systems of humid-region alluvial fans. Supervisor: Prof. F. Ricci Lucchi.

1981-1982: PostDoctoral CNR Fellowship, Department of Earth Sciences, University of Cambridge (UK).

Study of the formation of sedimentary basins in Scotland and Spain. Definition of the piggy-back basin type in the orogenic settings. Fluvial facies analysis. Supervisor: Prof. Peter Friend

Current positions

Chairman and Founder of the Course in Laurea Magistrale in Scienze della Terra e dei Pianeti. Universita' d'Annunzio

Chairman of the Course Laurea in Scienze Geologiche, Universita' d'Annunzio

Full Professor of Geology, Dipartimento di Ingegneria e Geologia, Universita' d'Annunzio, Pescara-Chieti, Italy

Founder and Director of the International Research School of Planetary Sciences, IRSPS, Pescara, Italy (nonprofit University Foundation)

Founder and Director of the Ibn Battuta Centre, Universite' Cadi Ayyad, Marrakech, Morocco (Joint Research Centre)

Academic experience

2015 – **to date**: Chairman and Founder of the Course in Laurea Magistrale in Scienze della Terra e dei Pianeti, Università d'Annunzio

2015 – **to date**: Chairman of the Course Laurea in Scienze Geologiche, Università d'Annunzio

2011: Visiting Professor, Université Paris Sud, Paris, France

2010 – 2011: Head of the Dipartimento di Scienze of the Università d'Annunzio, Pescara-Chieti, Italy

2005 – **to date** Director and Co-Founder of the Ibn Battuta Centre, Université Cadi Ayyad, Marrakech, Morocco (Joint Research Centre)

1999-**to date**: Director of the International Research School of Planetary Sciences, *Pescara, Italy*.

1999: Visiting Professor, Universitat Politecnica de Catalunya, Barcelona, Spain. *Analysis of planetary data. Organisation of doctoral course in planetary sciences.*

1997: Guest Lecturer, International Space University, Strasbourg, France.

2000 – **to date**: Full Professor (Professore Ordinario) of Geology Faculty of Sciences, Università d'Annunzio, Chieti, Italy

1996-1999: Associate Professor of Geology Faculty of Sciences, Università d'Annunzio, Chieti, Italy.

1994-1995: Visiting Scholar, Department of Geosciences and Lunar and Planetary Laboratory, University of Arizona, Tucson, (USA).

1992-1994: Associate Professor of Sedimentology, Dipartimento di Scienze Geologiche, Università di Bologna (Italy)

1986-1991: Senior Research Scientist, Dipartimento di Scienze Geologiche, Università di Bologna (Italy)

1984 -1986: Temporary Research Scientist, Branch of Oil and Gas Resources, US Geological Survey, Denver, Colorado (USA).

1983-1984: Research Scientist, Dipartimento di Scienze Geologiche, Università di Bologna (Italy). *Sedimentary basin analysis in Italy, Greece, Ireland, France. Fluvial and deltaic facies. Teaching associated to the undergraduate courses in Geology, Sedimentology and Physical Geography.*

1979-1982: Demonstrator, Istituto di Geologia e Paleontologia, Università di Bologna (Italy). *Analysis of the sedimentary facies of fluvial deposits.*

European Space Agency (ESA) services

- Member of the Senior Selection Committee for the M5 mission of ESA (2017 – 2019)

- Member of the Landing Site Selection Working Group of ExoMars 2018 (2013 – **Today**)
- Member of the Payload Review Committee of Juice, the ESA, mission to the Jupiter System (2012)
- ExoMars Project team member for 2016 and 2020 EDM Landing Site Characterisation (2009 – **to date**)
- Member of the Solar System and Exploration Working Group of ESA (2009 – 2011)
- Member of the ESA Working Group on Mars Soil Characterisation for Drilling and Sample Processing (2009 – 2010)
- Vice-Chairman of the Exploration, Science and Technology Advisory Board (2007 – 2009)
- Member of the Payload Review Committee of the mission to Mercury BepiColombo (2004)
- Member of the Science Definition Team of the mission Mars Sample Return - MSR (2003).
- Interdisciplinary Scientist (IDs) for the Mars Express mission (2002-present).
- Member of the ESA Topical Team on Electromagnetic and other geophysical techniques for in-situ and orbital planetary exploration (2001 – 2003)
- Member of the Solar System Working Group, SSWG (1999 – 2001)
- Member of the Science Definition Team (SDT) of Mars Express (1997- 1998)..
- Leader of the Team Mars Surface Environment of the ESA Exobiology Study Group (1998).

NASA services

- Member of the Executive Committee of Mars Exploration Program Analysis Group of NASA (2009 – 2019)
- Member of the Joint Science Working Group (NASA/ESA) for the Joint Mars Exploration Program (2011)
- Member of the International Study Analysis Group End2End for the definition of the Mars Sample Return missions, (2010 – 2011)
- Member of the Steering Committee of the Future Mars Landing Site Committee (2010 – present)
- Member of the 2Rover International SAG of MEPAG (2009 – 2010)
- Member of the Future Mars landing Site Selection Committee of NASA (2008 -2009)

- Member and responsible for the Deep Drilling mission concept of Mars Mid-Range Rover SAG of MEPAG to define the 2018 NASA mission (2008 – 2009)
- Member of IMARS, the International Mars Sample Return Working Group. (2007 – present)
- Member of the Human Exploration of Mars SAG (March 2007 – February 2008).
- Member of the Special regions SAG of the Mars Exploration program Analysis Group (MEPAG) (December 2005 – April 2006).
- Member of the LITA test of next generation of Martian rover (September – October 2004).
- Member of the NRC Mars Committee Preventing the Forward Contamination of Mars) (2004 - present)
- Member of the Science Team of the Marsokhod Rover Field Experiment (1999)

Research activity

Research on Earth Geology

- Basin Analysis and clastic sedimentology
- Fluvial dynamics and deposits in ancient and modern environments
- Analysis of compressional and extensional sedimentary basins: their filling and hydrocarbon evaluation
- Desert sedimentary environments and global changes
- Geological evidence of climatic changes in quaternary and older continental deposits
- Antarctic environments and lakes

Research in Planetology

- Landing site EDL hazard and trafficability
- Geological evolution and paleoclimatology of Mars
- Sedimentary processes on the surface of Mars and their Earth analogues
- Orogenic belts and sag basins on Venus: crustal behaviour and geological effects
- Environments and hydrodynamic of the liquid on Titan

Space missions

Cosmo-SkyMed (ASI, Earth Observation) 2016 – to date

- Analysis of the fluvial and depositional systems of the Sahara humid record

Mars Sample Return (NASA, ESA) 2018 - 2019

- Preliminary analysis for the Fetching Rover trafficability

ExoMars (ESA) 1997 – to date

- ExoMars Team member
- Characterisation of the landing site for 2016 and 2018 mission
- Sampling for testing the drilling operations
- Member of the informal definition science team

Cassini (NASA): 2004 - 2020

- Co-Investigator the Synthetic Aperture Radar (SAR) to investigate the surface of Titan

Mars Express (ESA): 2003 – to date

- InterDisciplinary Scientist for geology
- Member of the Science Definition Team (1997 – 1998)
- Co-Investigator of the High Resolution Stereo Camera - HRSC (developed by DLR).
- Co-Investigator the Subsurface Sounding Radar/Altimeter - MARSIS (developed by ASI and NASA).

ERS 1 – 2 (ESA, Earth Observation) 1995 - 1999

- Principal Investigator of the ESA project Quaternary climatic variations and hydrological implications in arid environments using SAR images

Mars Reconnaissance Orbiter (NASA) 2005 – to date

- Co-Investigator of SHARAD the high-resolution penetrating radar developed by ASI and NASA

Industry experience: space exploration

- 2018 – 2019 Mars Sample Return, Fetching Rover trafficability
- 2013 – **to date** ExoMars landing sites certification and hazard analysis
- 2012-2013 Analysis of the simulant for a breadboard of the sampling mechanism for a sample return mission from Asteroids (ESA/Selex Galileo)
- 2010 Scientific assessment of the Mars simulation indoor Chamber of Altec
- 2009 – 2010 Sample procurement and analysis for testing the 2018 ExoMars driller (ESA/Thales Alenia Space)
- 2009 – present Investigation of the ExoMars 2016 landing site (ESA/Thales Alenia Space)
- 2006 –2007 Precision Landing Test Facility with Gavazzi Space, European Space Agency
- 2006 Design of a Planetary Surface Emulator Facility with 4Con (France and Ireland), European Space Agency
- 2002 – 2004 Mars Express Geographical Information System, Agenzia Spaziale Italiana
- 1999 – 2000 Deep Drilling on Mars with Tecnospazio and Officine Galileo, European Space Agency, Division of Microgravity and Manned Space Flight

Industry experience: hydrocarbon exploration and environment

- 2007 – Consulting, Petrom oil company: exploration and reservoir characterization of Miocene deposits in the Romanian offshore (Black Sea)
- 2006 – Consulting, OMV oil company (Austria): exploration of Paleogene and Oligocene deposits in East Bulgaria and offshore
- 2004 – Consulting, OMV oil company (Austria): exploration of the Cenozoic deposits in Northeast Bulgaria and adjacent Black Sea

- 1994 - Consulting, Enterprise Oil Company (UK): sedimentary model of the Balkan Foredeep (Bulgaria)
- 1988 -1990 Consulting, AGIP Oil Company (Italy): analysis of the subsurface and surface geology of the Central Apenninic - Adriatic foredeep (Italy)
- 1987 -1990 Geophysical in-situ probe for the analysis of marine sediments, EU-MAST project in collaboration with Univ. Kiel (D), IFREMER (F), Univ. Gent (B), Univ. Utrecht (NL), Univ. Bologna (I)
- 1981 - Consulting, Agip Nucleare (Italy): Uranium exploration in Southern Alps (Italy).
- 1976 -1978 Field work in Southern Alps (Italy) for Pb – Zn exploration, Pennaroya

Scientific expeditions and field work

1986 -2019: Amazon River (Brazil), Western Africa (Algeria, Mali, Niger, Chad), Western Desert and Sinai (Egypt), Antarctica, Arctic (Canada, Svalbard), Neuken Basin (Argentina). Lake Eire, Pilabara and Northern Queensland (Australia), Southern Alps (New Zealand). Field work in Greece, Spain, Ireland, Scotland, Iceland, Colorado, Utah, Arizona, Lybia, Tunisia, Morocco, Austria, Bulgaria, Romania, Botswana, Ethiopia.

Honours and awards

- 2017 European Space Agency, recognition for the contribution to the ExoMars 2016 mission
- 2011 NASA Group Award for the participation to the iMars working group
- 2003 European Space Agency, Certificate of Outstanding Contribution for the Mars Express Mission
- 1999 European Teaching Fellowship, European Union Socrates/Erasmus Programme,
- 1991 Senior NATO Fellowship
- 1985 NATO Advanced Research Fellowship
- 1981 CNR (Consiglio Nazionale delle Ricerche) PostDoctoral Fellowship

Conference and field trip organisation

- 2019 Member of the Science Committee of the 34th International Meeting of Sedimentology of the International Association of Sedimentologists, 10 -13 September 2019
- 2016 Convener of the 32nd International Meeting of Sedimentology of the International Association of Sedimentologists, 23 -25 May 2016
- 2012 Organiser of the 3rd Conference on Terrestrial Mars Analogues, ESA, ASI and NASA, Marrakech
- 2011 Organiser of the Workshop on Geobiology in Space Exploration NASA ESA, Marrakech Morocco with field trip on Geology and geobiology from PreCambrian to Quaternary

- 2011 Member of the Scientific Organisation Committee of the Mars Polar Conference (Fairbanks)
- 2009 Organiser of the Workshop Geological Mapping of Mars, Institution: IRSPS, US Geological Survey, Agenzia Spaziale Italiana, Il Ciocco, Tuscany with field trip.
- 2009 Leader of the field trip on The Chott El Djerid (Southern Tunisia) and adjacent desert area, Regional Meeting of the International Association of Sedimentologists, Alghero,
- 2007 Co-organiser of the 2nd Workshop on Exploring Mars and its earth Analogues, ASI, CSA, IRSPS Trento June 2006
- 2006 member of the Scientific Committee of the 4th Conference on Mars Polar Science and Exploration, (Davos, October 2006)
- 2004 Leader of the field trip on Vesuvius volcano and Solfatara of the International Mars Conference organized by the Agenzia Spaziale Italiana (Ischia, September 2004)
- 2004 Member of the Italian official Delegation and co-conveener of the session Comparing Planetary Systems at the 32nd International Geological Congress, (Florence, August, 2004)
- 2002 Co-Conveener of the Workshop Exploring Mars Surface and its Terrestrial Analogue (Sicily and Mount Etna), organized by the Agenzia Spaziale Italiana and IRSPS, and Co-leader of the post-meeting field trip
- 2001 Co-Conveener of the Workshop Exploring Mars Surface and its Terrestrial Analogue (Chott el Djerid, Tunisia), organized by the Agenzia Spaziale Italiana and IRSPS, and Co-leader of the post-meeting field trip (Workshop and field trip has been cancelled due to the September 11th attack to the Twin Towers in New York)
- 2001 Co-conveener of the theme Session The Role of Natural Gas Hydrates in the Evolution of Planetary Bodies and Life of the Conference Earth System Processes organised by the Geological Society of America and the Geological Society, Edinburgh, Scotland
- 2001 Convener of the EuroWorkshop Geoxtreme: Geology and Exobiology of the Extreme Environments on earth and in the Solar Systems, Tremiti Islands, Italy
- 2000 Convener of the Special Symposium A-1 Terrestrial Planets of the 31st International Geological Congress, Rio de Janeiro, Brazil
- 2000 Member of the official Italian delegation to the 1st International Geological Congress, Rio de Janeiro, Brazil
- 1999 Member of the Program Committee of the Annual Meeting of the Division of Planetary Sciences (DPS), Padua, October 1999
- 1999 Member of the Scientific Committee of the International Conference on Mars Exploration, co-organised by CNES, Paris, February 1999
- 1998 Member of the Comitato Scientifico and leader of the splinter group Scienza in situ of the National Workshop on Prospettive di partecipazione italiana all'esplorazione di Marte, organised by ASI, the Italian space agency, Pantelleria, Settembre 1998.

- 1998 Lecturer at the Scuola Nazionale di Astrofisica, organised by the Italian Space Agency, (ASI), June 1998
- 1998 Organiser of the Short Course on Geochemical Evolution of the Solar System, organised by the European Space Agency and the Università d'Annunzio, May 1998
- 1997 Organiser of the Short Course in Planetary Geology, organised by the Università d'Annunzio, Pescara, May 1997
- 1996 Co-organiser of the 2nd European Research Conference on "Alluvial Basins: basin analysis and sediment budget" organised by the European Science Foundation, Giens (France) 10 - 15 September 1996
- 1994 Chairman of the 1st European Research Conference on "Alluvial Basins: present and past environments" organised by the European Science Foundation, Lunteren (The Netherlands) 10 - 15 September 1994
- 1991 Leader of the field trip in Apenninic Foredeep, Congress of the European Association of European Geoscientists Florence, (Italy) June 1991
- 1987 Convenor of a short course on Fluvial Deposits of the Consiglio Nazionale delle Ricerche, St. Ulrich (Italy) September 1987
- 1985 Co-leader of a field trip on the Apenninic Foredeep at the Foreland Basin Conference (International Association of Sedimentologists), Fribourg (Switzerland), September 1985
- 1985 - Co-leader of a excursion on Permian deposits in Southern Alps of the Conference on Permian and Permo-Triassic Boundary in Thetys and para-Thetys, Brescia (Italy) August 1985
- 1981 - Co-organiser of the 2nd Regional Meeting of the International Association of Sedimentologists, and co-leader of a field trip on Pliocene fan-delta deposits in Northern Apennines, Bologna (Italy) April, 1981.

Major Editorial activity

- Senior Associate Editor of Astrobiology – 2001 – **to date**
- Member of the Editorial Board of Sedimentology (Journal of the International Association of Sedimentologists) - 1986 - 1990.
- Review of papers and books: Journal of Geophysical Research, EOS Transaction of the American Geophysical Union, Planetary and Space Science, Journal of Sedimentary Research, Sedimentology, Sedimentary Geology, Cambridge University Press, Netherlands Journal of Geosciences, International Journal of Earth Sciences.

Academic honours

- University of Cambridge Alumni
- Old Darwinian of Darwin College, University of Cambridge (UK)
- Marie Curie Alumni Association

- Tartufari award of the Accademia Nazionali dei Lincei (the oldest Scientific Academy in the World founded by Galileo Galilei). Award presented by the President of the Italian Republic at the Presidential Palace on June 20, 2003

Affiliations

- SEPM (Society for Sedimentary Geology), 1976
- International Association of Sedimentologists (IAS), 1979
- Geological Society (UK) 1981
- Geological Society of America (GSA), 1982
- American Geophysical Union (AGU), 1988

Languages

Italian (mother language), English (fluent), French (fair), Castillian (fair)