

# Curriculum vitae Michele Parrinello



Computational Science  
Department of Chemistry and Applied Biosciences, ETH Zurich  
USI Campus

## Personal information

Date of birth: 7 September 1945  
Place of birth: Messina, Italy  
Nationality: Italian  
Marital status: Married, with one child

## Education

Italian *Laurea* in physics, University of Bologna, 1968

## Professional experience

Professor in Computational Sciences, ETH, Zurich, Switzerland (2001-present)  
Director, Swiss Center for Scientific Computing (CSCS), Manno, Switzerland (2001-2003)  
Director, Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany, 1994-2001  
Manager, IBM Research Laboratory, Zurich, Switzerland, 1991-1994  
Research Staff Member, IBM Research Laboratory, Zurich, 1989-1991  
Summer Visitor, IBM Research Laboratory, Zurich, 1987  
Full Professor, International School for Advanced Studies (SISSA), Trieste, Italy, 1986-1989  
Summer Visitor, University of Minnesota, Minneapolis, USA, 1986  
Summer Visitor, IBM Research Laboratory, Yorktown, USA, 1985  
Associate Professor, University of Trieste, 1982-1986  
Visiting Scientist, Argonne National Laboratory, Chicago, USA, 1980-1981  
Lecturer, University of Trieste, Italy, 1976-1982  
Visiting Scientist, Imperial College, London, England, 1975-1976  
Lecturer, University of Messina, Italy, 1972-1977  
*Borsista del Consiglio Nazionale delle Ricerche*, University of Messina, Italy, 1970-1971

*As of November 2004*

## **Awards**

Hewlett-Packard Europhysics Prize (with R. Car), European Physical Society (1990)  
Fellow, American Physical Society (1991)  
*Socio corrispondente, Accademia dei Pericolanti* (1992)  
Boys-Rahman Prize, Royal Society of Chemistry, UK (1994)  
Rahman Prize (with R. Car), American Physical Society (1995)  
*Honorary professor*, University of Stuttgart, Germany (1995)  
Award in Theoretical Chemistry, American Chemical Society (2001)  
Honorary Doctorate in Chemistry, University of Messina, Italy (2003)  
Schroedinger Medal of the World Association of Theoretically Oriented Chemists (2005)  
Fellow, World Association of Theoretically Oriented Chemists (WATOC) (2005)

## **Named lectures**

Eli Burstein Lecturer in Materials Science, University of Pennsylvania, USA (1993)  
Gilbert Newton Lewis Lecturer, University of California, Berkeley, USA (2001)  
DuPont-Marshall Lecturer, University of Pennsylvania, Philadelphia, USA (2001)  
Lise Meitner Lecturer, Lise Meitner-Minerva Center for Computational Quantum Chemistry, Jerusalem, Israel (2001/2002)  
Celsius Lecturer, Uppsala University, Sweden (2002)  
Falk-Plaut Lecturer, Columbia University, New York, USA (2002)  
Jean Perrin Lecturer, Chemical Physics Division, Physical and Chemical Societies, France (2003)

## **Academy and learned society memberships**

Member, International Academy of Quantum Molecular Science (1995)  
Honorary Member of the Materials Research Society of India (1999)  
Member, Berlin-Brandenburgische Akademie der Wissenschaften (2000)  
External Scientific Member, Max Planck Society (2001)  
Foreign Member of the Royal Society, UK (2004)  
Member, European Academy of Sciences (2004)

## **Society memberships**

American Physical Society  
American Chemical Society  
Institute of Physics  
Swiss Chemical Society

## **Research interests**

Computer simulations and modelling of condensed matter, chemical and biophysical systems:  
Ab-initio molecular dynamics  
Disordered systems and clusters  
Structural and chemical transformations in solids under the effect of pressure  
Water and hydrogen bonded systems  
Quantum effects in solids, liquids and clusters  
Chemical reactions in condensed phases  
Biochemical processes

## **Publications**

Over 350 research papers, review articles and edited books. His work has been cited more than 16,500 times, which makes him one of the most cited authors in physics and chemistry in the world. In particular, the first paper with Roberto Car is *Physical Review Letters*' 5<sup>th</sup> most cited paper of all time.

## **Advisory activities**

Joint Research Center for Atom Technology, Tsukuba, Japan  
Istituto Nazionale di Fisica della Materia, Genoa, Italy  
Steacie Institute for Molecular Sciences, Ottawa, Canada  
Applications Scientifiques du Calcul Intensif, CNRS, Paris, France  
International School for Advanced Studies (SISSA), Trieste, Italy  
Fondazione Silvio Tronchetti Provera, Milan, Italy  
Swiss National Supercomputing Centre (CSCS), Manno, Italy  
International Centre for Science and High Technology (ICS), Trieste, Italy  
Italian Ministry for Public Education, Rome, Italy

## **Editorial activities**

Has been or is a member of the editorial advisory board of:

*Chemical Physics*  
*Chemical Physics Letters*  
*ChemPhysChem*  
*Computational Materials Science*  
*Computing in Science and Engineering*  
*Journal of Computer-Aided Materials Design*  
*Journal of Physics*  
*Science*  
*Theoretical Chemistry Accounts*

## **Refereeing**

Proposals from Austria, Canada, Germany, Italy, Netherlands, Switzerland, United Kingdom, United States.

Scientific articles from *Europhysics Letters*, *Journal of Chemical Physics*, *Journal of Physical Chemistry*, *Journal of the American Chemical Society*, *Molecular Physics*, *Nature*, *Physical Review*, *Physical Review Letters*, *Science*, and many others.

## **Lectures**

Several hundred seminars and colloquia delivered throughout the world at major universities, research and industrial laboratories and professional meetings.