ROBERTO CINGOLANI (RC) – Updated March 2023

Roberto Cingolani was born in Milan on December 23rd, 1961. Married with

In **1978, 1979** and **1980** he was National winner and European finalist of the 10th,11th and 12th European Philips Contest for Young Scientists and Inventors. In **1980** he was awarded by the Certificate of Distinction at the European final of the 12th Contest held in Amsterdam.

In **1985** he graduated in Physics at University of Bari. He got his PhD ("Diploma di Perfezionamento") in Physics at Scuola Normale Superiore in Pisa in 1989 (Thesis on Frequency and density dependent optical transitions in quantum heterostructures).

From **1988 to 1991** he was staff member at the Max Planck Institute in Stuttgart, Germany.

Since **1991** he has been professor of Physics at University of Salento, where he was appointed Full Professor of Experimental Physics in the year 2000.

In **1996** he was Visiting Professor at Virginia Commonwealth University, Richmond, USA (ref. Prof Hadis Morcoc).

In **1997** he was Visiting Professor at Tokyo University, Japan (Ref. Prof. Yasuhiko Arakawa).

In **2001**, he founded the National Nanotechnology Laboratory (NNL) of the National Institute for Physics of Matter (INFM) in Lecce (Italy). NNL became one of the largest interdisciplinary nanotechnology centers in Europe at the beginning of the century, developing joint R&D program with several European companies (> 200 staff members from 15 countries).

In **2006** he was appointed scientific director and CEO of the Fondazione Istituto Italiano di Tecnologia (IIT). IIT is a public/private Foundation constituted jointly in 2004 by the Ministry of Finance and Ministry of University and Research to develop applied research and technology transfer programs of strategic interest for the national industry. To this aim, from **2006 and 2018** he developed the interdisciplinary research strategy of IIT merging robotics, artificial intelligence, neuroscience, and nanotechnology. In this period IIT reached a staff of approximately 1900 people from 60 countries and built lab facilities exceeding 60000 sqm in the headquarter of Genova and in 10 satellite laboratories in Italy and abroad. A patent portfolio of more than 800 national and international patents and more than 30 start-up companies were built by IIT after the completion of the start phase (2011-2018). In the same period IIT established about 30 joint industrial R&D facilities with several national and international companies such as Nikon, Sony, Danieli Automation, Camozzi Group, INAIL, Moog and many others.

Roberto Cingolani's scientific activity has covered different fields over the years:

- Material science, quantum technologies (1985-1995),
- Nanofabrication technologies for electronic and optical quantum (1990-2000),
- Molecular nanotechnologies for plastic photonics, LED technologies, organic-LED and plastic electronic devices (1998-2003),
- Biosensors, bio-electronic devices (2003-2008),
- Nanochemistry, new composite materials, biodegradable materials, multifunctional materials (since 2009),

- Robotics, artificial intelligence, human machine interactions (since 2006).

Roberto Cingolani is author and co-author of more than 1100 papers on international journals and holds more than 100 patents in the fields of Material Science, Semiconductor Technologies, Nanotechnologies, Chemistry of Materials, Sensor Technologies, Optoelectronics and Photonics, Robotics (Bibliometric indexes quoted by Google scholar about 40000 citations, Hirsch index H=100 @ February 2023).

In **2019** he was appointed the Chief Technology & Innovation Officer of Leonardo, the Italian multinational Aerospace and Defense Company. There, he coordinated (i) the corporate Research & Development, (ii) the Innovation strategies, (iii) the Digitalization of the company and the ICT, and (iv) of the global Sustainability strategy. In Leonardo RC has launched the new RD facilities denominated Leonardo's Labs (around 200 R&D researchers) and the new High Performance Computing Facility (the Supercomputer davinci-1, 5 Petaflop machine) for the digital transformation of Leonardo.

In **February 2021** he was appointed Technical Minister for the Ecological Transition in the Mario Draghi's Government. He has been responsible for the Environment, Climate and Energy policy of the government and of the related Mission 2 within the National Plan of Recovery and Resiliency. As minister of the Ecological Transition Roberto Cingolani **has chaired the G20 summit on Environment Climate and Energy (Napoli-July 2021)** and the **Youth for Climate World Convention (Milan-September 2021)**, and he has **Co-chaired the COP-26 (Glasgow-November 2021).** In 2022 he was in charge of the **National Energy Emergency Plan** during the Russian Ukraine war, and of the national drought emergency Plan.

Main Awards:

- In **2006** the "Guido Dorso" prize by the Senate of the Republic for Science
- In **2010** the "Grande Ippocrate" prize by Novartis and the federation of scientific journalists for Research
- In **2015** the "Premio Roma for the Development of the Country (section science and Technology)
- In **2018** the "Tech for Good" – Thinker Award prize by IBM

He was also awarded of three titles of the "Order of Merit of the Italian Republic":

- "**Alfiere del Lavoro** "in **1981** (President Pertini),
- "**Commendatore della Repubblica**" in **2006** (President Napolitano),
- "**Grand Ufficiale al merito della Repubblica Italiana**" in **2021** (President Mattarella)

Other activities
Since **2019** he has been appointed member of:

- Board of **Pontifical Academy of Life**
- Board of directors (Consiglio di Amministrazione) of **Ferrari** SpA,
- Board of directors (Consiglio di Amministrazione) of **Illy-caffe** SpA
- Board of directors (Consiglio di Amministrazione) of **DeNora Chemicals** SpA,

Since **2023** he has been appointed senior board director of the NATO Investment Fund (a 1 Billion US$ fund for innovation and technologies in the field of defense and security, sponsored by the NATO countries).