PAOLO VERONESI graduated summa cum laude in materials Engineering in 1998 at the Università degli Studi di Modena (Italy). He obtained the PhD title in Materials Engineering in 2001 and occupied post-doctoral positions for 3 years. Starting from 1998 he has been teaching courses at the Engineering faculty of the Università degli Studi di Modena e Reggio Emilia (now Dept of engineering "Enzo Ferrari"). He has been employed as assistant professor in Metallurgy (ING-IND/21) and in 2013 he became associate professor of Materials science and engineering (ING-IND/22), moving back to the metallurgy sector, as full professor since 2021. He has been president of the "Materials Engineering" degree for 6 years, and he is currently deputy director of the Department of Engineering "Enzo Ferrari", Modena University. Starting from 2024 he is director of the Phd School "E4E: Engineering For Economics – Economics for Engineering"

He currently teaches the courses of "Technology of metallic materials" and "Material science for vehicles" at the Dept of engineering "Enzo Ferrari". For the Advanced Automotive Engineering degree, he teaches "Manufacturing and Assembly Technologies/Science and Technology of Metallic and Composite Materials". He is a teacher for seminars, summer schools and courses dedicated to microwave heating applications, held by AMPERE (the European organization for microwave research and education) and for the Italian Association of Metallurgy (AIM). He is currently member of the CEI technical committee 27- "Industrial Electroheat and electromagnetic processing + Equipment for electric welding" and of TC 26-27 "Electroheat and electric welding" of IEC-CENELEC as well as of the "Powder metallurgy and additive techniques" committee of AIM (Italy). He is member of the editorial board of the "Journal of Microwave Power and Electromagnetic Energy", "Technologies" and of "Trattamenti e finiture".

During last decade he has been Visiting Scientist at the Dept. of Material Science and Metallurgical Engineering, Sunchon National University (Korea); Visiting Scientist at the Universität Bayreuth (D), Fakultat for Angewandte Naturwissenschaften, Lehrstuhl fur Werkstoffverarbeitung, in the framework of COST Action D10; Visiting Scientist at the Department of Materials, Imperial College, London (U.K.), in the framework of the "Joint Project Grant scheme" financed by the Royal Society.

He is author of more than 250 publications, either international or national (200 are indexed by SCOPUS), prepared in collaboration with 130 different co-authors. He is author or co-author of 9 patents involving microwave applications to materials processing and sterilization and microwave applicators design. He has presented his research activity in a large number of national and international congresses, as invited speaker, in the field of microwave applicator design and of microwave applications to powder metallurgy.

During last decade he has been involved as co-beneficiary of many LIFE+ projects: LIFE10 ENV/IT/000419 - WASTE3, involving the recycling of copper metallurgy waste using also microwave heating and for microwave applications; LIFE11 ENV/IT/036 - Low Resources Low Energy, involving the manufacturing of eco-friendly ceramic products (responsible of Unit); LIFE12 ENV/IT/000678- ReTSW-SINT, regarding the recycling of thermal spray waste in sintered products; LIFE13 ENV/IT/000593 - Titanium life in titanium hands, regarding the recycling of Ti turnings using microwave assisted combustion synthesis (responsible of Unit). He is currently technical coordinator of the EU -funded project "Metawave", aiming at the decarbonization of energy-intensive industrial activities, using microwave heating

His research activity is mainly focused in the metallurgy field, and in particular in the study and development of new materials and processes, preferably involving thermal applications of microwaves. During last decade, he started using commercial electromagnetic modeling software in order to design new microwave applicators for high temperature and low temperature heat treatments, as well as to gain a deeper understanding of microwave-matter interactions.

In parallel, this activity involved the characterization of the microwave-synthesized materials and the comparison of results with conventional heating techniques, as well as the assessment of energy consumption of the investigated dielectric heating processes. Recently the main research activities are in the metallurgy field, and in particular in the synthesis of intermetallic compounds, magnetocaloric materials and high entropy alloys, as well as in the heat treatment of steels and powder metallurgy in general. In the latter field, he has

been active for many years in the field of rapid prototyping and metal additive manufacturing, focusing on post-processing and characterization of parts manufactured by PBF and DED.