Letter from the editors

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As our readers know, *Lettera Matematica International Edition* is always attentive to the cultural phenomena that involve the world of mathematics, and sometimes focusses on their meaning and development, rather than their scientific contents or technical results. Our journal boasts the interest it shows towards memory, in the general sense of recollections, histories, and personages that have nurtured the progress of mathematics or have simply made its presence apparent, both in different fields of knowledge and in different parts of the world. However, these aspects also tend to pervade even the most specialised topics, conferring greater meaning and depth.

In the issue you are now reading, this viewpoint is especially strong and exemplified at its best: relationships of important figures with mathematics, events, both personal and social, from different countries, works that offer a precious testimony of past cultures that never cease to amaze us.

Thus, in “Mathematical passages in Carlo Emilio Gadda”, **Ledo Stefanini** takes us along the trails of scientific culture that emerge in the work of the great Lombard writer, while in “Pacioli’s and Galileo’s ship”, **Vico Montebelli**, an expert in the history of medieval and Renaissance mathematics, revives the “learned, practical and curious” physics of Luca Pacioli. We then move on to general aspects with a relevance to our recent past, when **Luciana Vieira Souza da Silva** and **Rogério Monteiro** talk about “Luigi

Fantappiè: mathematical analysis, education, and fascism in Brazil (1934–1939)”, on a little-known mission which played a sadly important propaganda role. The historical part is completed by a contribution that takes us to Germany to consider some crucial developments for world science: “Education and research: the development of German physics in the nineteenth century” by **Francesco Boria** and **Barbara Rapaccini**, of the Terni chapter of the Mathesis Association.

The contributions in a more strictly mathematical spirit, never missing from our pages, are devoted to different topics: “Circle inversion and tessellations of the non-Euclidean plane”, by **Renato Betti**, aims at surveying the knowledge necessary to recognise the “non-Euclidean” geometric constructions in the wonderful images of the *Limit circle* series by M.C. Escher, while **Roberto Lucchetti**, from the Politecnico di Milano, gives us a personal slant on the mathematical theory that deals par excellence with interactions, and in many cases helps us to make the most appropriate decisions: “Game theory: a user’s guide (from my own point of view, of course)”.

Of course, we also have current events and topics for discussion: **Renato Betti** gives us an account “About the 2018 Fields medals” awarded during the International Congress of Mathematicians in August 2018 and especially about one of the winners, Peter Scholze, while **Luciana Tasselli**, curator of the Energy Department at the Leonardo da Vinci National Museum of Science and Technology Foundation in Milan reports on “Transitions in energy history”, the international conference in the interdisciplinary area concerned with the development and transformation of energy sources and uses.

Finally, we also have some reading suggestions: **Paolo Freguglia** and **Enrico Rogora** review the recent essay on issues about teaching mathematics *Didattica della matematica* by Baccaglini Frank, Di Martino, Natalini and Rosolini (Mondadori 2017), while **Luca Alberini**, of our editorial staff, writes about the new book by Gian Italo Bisch and Giovanni Darconza, *Lo specchio, il labirinto e la farfalla* (ELS La scuola 2018) which deals with the theme of post-modernism in literature and mathematics.

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We wish all of you, as usual, a fruitful reading.
Translated from the Italian by Daniele A. Gewurz.

Renato Betti is a former full professor of geometry at the Politecnico di Milano. His research concerns, on the one hand, category theory and its applications to algebra and geometry, and on the other, the historic-logic reconstruction of mathematical facts. He is a co-director of *Lettera Matematica PRISTEM* and a member of the Accademia Nazionale Virgiliana in Mantua.

Angelo Guerraggio is lecturer of general mathematics at the Università dell'Insubria in Varese and at the Bocconi University in Milan, where he directs the Research Centre PRISTEM (Progetto RICerche SToriche E Metodologiche), founded by him in 1987. His research interests range from non-linear programming to the history of mathematics, with particular reference to the Italian post-unification period. In 2007 he was appointed by the Italian Government national representative for the

committees of the 7th Framework Programme of the European Union.

Settimo Termini was professor of Theoretical Computer Science at the Universities of Palermo and Perugia, directing – from 2002 to 2009 – the Istituto di Cibernetica “Eduardo Caianiello” of the Italian National Research Council (CNR) in Naples. A theoretical physicist by training, he has been mainly concerned with problems raised by the treatment of incomplete and revisable information in complex systems and, recently, with the connections among scientific research, innovation and economic development.

His work forms the basis of the “Theory of measures of fuzziness”. Fellow of the International Fuzzy Systems Association (IFSA) and the Accademia Nazionale di Scienze Lettere ed Arti, his books include: *Aspects of Vagueness* (with H. J. Skala and E. Trillas; Kluwer – now Springer – 1984); *Imagination and Rigor* (Springer, 2006); *Contro il declino* (with Pietro Greco; Codice, 2007); *On Fuzziness* (with R. Seising, E. Trillas and C. Moraga; Springer 2010).