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David Foster Wallace and mathematics: preface

Roberto Lucchetti[1] · **Roberto Natalini**[2]

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Abstract This article introduces the papers in the special section of the *Lettera Matematica International Edition* dedicated to author David Foster Wallace.

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1 David Foster Wallace and mathematics: preface

Dedicating an entire section of a mathematics journal to a single writer, moreover one who is not a mathematician, is undoubtedly a little strange. The case of David Foster Wallace is however rather singular and we believe merits attention. In 2003, when he was already quite famous, at least in the United States, Wallace published a long, 400-page non-fiction work on Cantor's mathematical infinity [2], which he considered one of the most fascinating intellectual adventures of all time. It's a rather strange feeling for a mathematician to discover a writer who is capable of being moved by infinitesimal calculus and Fourier series, to the point where he feels a need to communicate it publicly. And it does not end there. In the vaguely autobiographical work of non-fiction/fiction entitled 'Derivative Sport in Tornado Alley' [1990, republished in (Wallace 1998)], Wallace begins like this: 'When I left my boxed township of Illinois farmland to attend my dad's alma mater in the lurid jutting Berkshires of western Massachusetts, I all of a sudden developed a jones for mathematics' [1, p. 3].

In this special section of the *Lettera Matematica International Edition*, we have decided to explore the boundaries of this addiction; there is—as you will see—an abundance of material. In 1996 Wallace published a novel, his masterpiece, over 1000 pages in length, in which infinity is one of the principal themes, beginning with the title, *Infinite Jest*, and in which the mathematical allusions never cease to amaze the reader. One of the many notes in the book contains several integrals and the statement of the mean value theorem. In an interview Wallace said that the novel was conceived with a structure that was inspired by a Sierpinski triangle.

After his suicide, which happened in 2008 when he was only 46 years old, Wallace became a world famous author, translated into many languages and the object of academic studies and international symposia. However, in this issue of the LMIE we will limit ourselves to looking at him through the particular lens of his passion for mathematics. This restricted vision, however, will allow us to focus better on some of significant aspects of this writer.

Let us see how this section is structured. We open with two articles: Laura Kreyder's 'David Foster Wallace: a brief biography' and '"I am in here": the Archivio David Foster Wallace Italia', a description of the website that has for years now dealt with the analysis of Wallace in Italy and whose collaborators have made a fundamental contribution to the creation of this section. This is followed by 'Introduction to the David Foster Wallace special section of the *Lettera Matematica International Edition*' by Stephen J. Burn, an introduction, of a literary nature, by one of the internationally best known scholars of Wallace.

✉ Roberto Natalini
roberto.natalini@cnr.it

Roberto Lucchetti
roberto.lucchetti@polimi.it

[1] Dipartimento di Matematica, Politecnico di Milano, Piazza Leonardo da Vinci, 32, 20133 Milan, Italy

[2] IAC-CNR, Via dei Taurini 19, 00185 Rome, Italy

There are then three professional mathematicians who describe from their points of view David Foster Wallace and his relationship to mathematics (not everyone sees this in the same way). These are: Roberto Natalini, 'David Foster Wallace and the mathematics of infinity'; Jordan Ellenberg '*Everything and More*' by David Foster Wallace: a review'; Michael Harris, 'A sometimes funny book supposedly about infinity: a review of *Everything and More*'.

These are followed by three articles in the vein of 'the making of'. 'Everything, and more, in Austin' by Laura Kreyder is a tour among the papers left by Wallace regarding the preparation of his book on Cantorian infinity. 'The Making of Wallace's *Everything and More*: an interview with Erica Neely' by Stuart James Taylor is a previously unpublished interview with Erica Neely, who had helped write this book. 'The author's voice: the translators of David Foster Wallace' by Eleonora Viganò is based on a series of interviews with Wallace's Italian translators.

Next comes a pause, perhaps to relax us (though in reality it's to make us dizzy): 'Something less: a concise (but jumbled) explanation of the infinite in comics' is an eight-page comic that is dense and conceptual, drawn by Emanuele Rosso exclusively for the *Lettera Matematica*, in which the dialogue engages Wallace himself in a discussion on infinity and surroundings.

This is followed by two articles by non-mathematicians, who nevertheless speak competently of their points of view on Wallace's connections to mathematics. These are: '"Mathematically uncontrolled but humanly contained": narrative iteration in Infinite Jest' by Ugo Panzani and 'Reactions to chaos theory: the mathematical references in the notes of *Infinite Jest*' by Marta Bono.

This issue closes with 'David Foster Wallace: language, mathematics, memory' by Jordan Ellenberg, a brief recollection written shortly after Wallace's death.

For our part, we hope that this effort of ours will pique your curiosity at least a little and lead you to take some of Wallace's works in hand. Believe us, they are really worth it (and not only for the mathematical references).

Acknowledgments This section on Wallace has been made possible thanks to the work of a great number of people. In the first place we thank Angelo Guerraggio and Luca Alberini of the editorship of the *Lettera Matematica* for the patience they have shown during the long preparation, not always easy. The translations from articles originally in Italian were done by Kim Williams. This project could not have existed without the Wallace-l list, coordinated by Matt Bucher (http://www.mattbucher.com/tag/wallace-l/), and the website Howling Fantods by Nick Maniatis (http://www.thehowlingfantods.com/dfw/), both of which are inexhaustible sources of unpublished and interesting material about Wallace and his work. Steve Rhodes and Davide Azzolini generously granted permission to publish the photographs of Wallace that appear here, and Matthew Zuckero provided us with the image of the Cantorian cover of *Infinite Jest*, which we found thanks to the fine website of Chris Ayers (http://pooryorickentertainment.tumblr.com/). Thanks also to the Harry Ransom Center of the University of Texas for allowing us to publish the image that accompanies the article by Laura Kreyder. Stephen Burn immediately believed in this project, maintaining that Wallace's relationship with mathematics was an area that was up to now but little explored in international studies devoted to this author. It was his idea to interview Erica Neely, who we thank for patiently and kindly replying to the questions of Stuart James Taylor. Finally, we thank Luigi Civalleri for his help with various editorial situations that we weren't sure how to deal with. Finally, Roberto Natalini thanks Gabriella for having tolerated this obsession for so many years.

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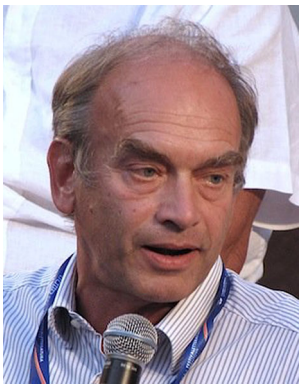

Roberto Lucchetti is full professor of mathematical analysis at the Politecnico di Milano, where he currently also performs the role of coordinating the doctoral program in mathematical methods and models for engineering. He has taught at the Universities of Genova, Milano Statale, Milano Cattolica, Università dell'Insubria, and the Université de Limoges in France. He has been a visiting professor in France (Limoges, Dijon, Paris Dauphine, Institut H. Poincaré, Toulouse, Montpellier, Perpignan, Marseille, Clermont Ferrand), Spain (Università Autonoma Barcelona, Alicante, Elche, Valencia), Germany and Holland, the Netherlands, the United States, Canada, Bulgaria, Israel (Beer Sheva, Haifa). He is also intensely involved in divulgation. His most recent books are *Matematica al bar* (with Giuseppe Rosolini) (Franco Angeli editore, Giugno 2012) and *Scacchi e Scimpanzé* (Bruno Mondadori Editore, Giugno 2012).

Roberto Natalini is the director of the Istituto per le Applicazioni del Calcolo "Mauro Picone" of the Italian National Research Council. With a Ph.D. in mathematics, his principal scientific interests regard the analytical and numerical study of partial differential equations and their applications in biology, conservation of monuments, traffic and gas dynamics. He is coordinator of the website MaddMaths! (http://maddmaths.simai.eu/) and chair of the EMS committee for Raising Public Awareness.