Remembering Enrico Giusti

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Enrico Giusti died on March 26th, 2024, at nearly 84 years of age. I met him in November 1978 – a lifetime ago. And with him, a large part of *my* life is gone. There will undoubtedly be other occasions to remember him as a mathematician and a historian of science, fields in which Enrico left his own mark, a very important one. What I hope to do here is to weave together the threads of memory from more than forty years of exchanges and friendship.

How I met Enrico

In November 1978 – I had a research grant but was also "serving the country" at the Military District of Pisa – I happened to go to the Mathematics Institute at Via Derna. Freshly graduated and still quite inexperienced, I was told that Giusti (What? You don't know him? He wrote groundbreaking works on minimal surfaces with De Giorgi and Bombieri! He has just moved to Pisa from Trento and is teaching Analysis for the students in Computer Science) was giving a seminar on the History of Mathematics. Since my graduation, I had been fascinated by the subject; so, even though the seminar was almost over, I decided to enter the room. I remember three things from what I heard: that a group of mathematicians wanted to re-launch historical research; that Enrico was working on an interpretation of Bonaventura Cavalieri's geometry; and that there were two fields where he thought one could work productively: nineteenth-century mathematics (demanding

Copyright notice This work is licensed under a Creative Commons Attribution 4.0 International License (CC-BY 4.0). a knowledge of French and German) and seventeenth-century mathematics (requiring at least a basic grasp of Latin and French). And he invited those who were interested to come forward.

I seized the moment. I really liked his manner and was enthusiastic about the idea of working in such a fascinating field of research. So, I showed up in his office and told him that the seventeenth century seemed perfect for me. As you have probably understood, I was an inexperienced and a rather impulsive young man: yes, of course, I knew some Latin and could speak French, but I had little knowledge of history, even less of history of science, and least of all of seventeenth-century mathematics. Despite this, the encounter between one of the most renowned mathematicians of that time and a naive, clueless young man worked quite well: Enrico welcomed me. Perhaps he saw in my limitations the kind of challenges his project entailed. He, an internationally renowned mathematician, was embarking on a new endeavour and was well aware of what lay ahead. His ambition was to renew the stale and provincial approach to the history of mathematics, particularly in Italy. Achieving this meant breaking away from deeply rooted interpretative traditions and engaging with worlds – especially that of historians of science – that were far from the one where he had achieved recognition and success.

His first historical work, *Bonaventura Cavalieri and the Theory of Indivisibles* (1980), fully reflects his perspective. Traditional interpretations of the geometry of indivisibles, which often regarded Cavalieri as a "precursor" of integral calculus, or even set theory, were obliterated by a new conception: conceiving Cavalieri's indivisibles as a geometric magnitude subject to the rigid constraints of Euclidean proportion theory. In this way, Giusti was able to explain both its success as a tool and its theoretical failure. Beyond a new textual analysis, Enrico worked hard to meticulously reconstruct Cavalieri's life and biographical events. I remember one day – after the work had already been published – he told me with pride, "I managed to locate the Jesuate convent where Cavalieri lived here in Pisa!".

Historical research and textual interpretation: two aspects that could seem obvious. And yet, at the end of the Seventies they were not obvious at all. Most works on the history of mathematics aimed to identify results of contemporary mathematics that could have been foreshadowed or anticipated by the author under study, from Ancient Greece to the Eighteenth century. Archival research was mostly neglected and the work of textual reconstruction was overlooked or carried out using criteria that would make any philologist cringe.

During the two years we were both in Pisa – Enrico was to move to Florence in autumn 1980 – this was one of the main subjects of our conversations. He had suggested that I work on Luca Valerio, a little-known mathematician of the second half of the Sixteenth century. I was enthusiastic about this new world of research as well as about the perspectives that opened up. And one of the things I loved the most about Enrico was the freedom he gave me and his esteem. During those years and beyond, he never made me feel like his pupil or sub-ordinate, but always as an equal. This is probably the most important quality of a true Master.

The Bollettino di storia delle scienze matematiche

Enrico was certainly not an easygoing person. I began to understand this aspect of him more clearly after 1982, when I started collaborating as the editorial secretary for the *Bollettino di Storia delle Scienze Matematiche* that Giusti had founded in 1981 along with Luigi Pepe, Tullio Viola, and Clifford Truesdell, also with the support of the Unione Matematica Italiana (UMI), and which he directed until 2022.¹

The *Bollettino* quickly became a reference point for Italian historians of mathematics, though not without its share of friction and controversy. Enrico was particularly forthright, especially in the early years, as he worked to establish and solidify a new approach to the history of mathematics. His project had to contend with the existing Italian landscape, where research groups and individual scholars had already become established: Tullio Viola's group in Turin, the Centro Studi della Matematica Medievale directed by Laura Toti Rigatelli and Raffaella Franci in Siena, Luigi Pepe's group in Ferrara, Umberto Bottazzini in Bologna, Silvio Maracchia, and the school of Lucio Lombardo Radice and Giorgio Israel in Rome, Antonio Garibaldi in Genoa, and Massimo Galuzzi and Angelo Guerraggio in Milan – and I am pretty sure I am forgetting someone.

Of course there was discontent and disagreement, especially when Enrico promoted two important conferences: in 1982 in Cagliari² and in 1983 in Cortona.³ In particular, the Cagliari meeting was attended by most of the Italian researchers interested in the history of mathematics: this represented the premise of a new community of scholars aimed at a rigorous historical, philological and mathematical analysis of sources as well as at abandoning precursor-focused or merely celebrative approaches.

Ars analytica

In September 1983, in Perugia, Enrico Giusti gave the opening lecture at the 12th Congress of the UMI. Enrico spoke to an overcrowded room about the birth of infinitesimal calculus, presenting a highly innovative thesis: Leibniz's differential calculus was primarily developed to provide an efficient method for solving the problem of determining the tangents to an algebraic curve.⁴ I recall having a discussion with Tullio Viola, who argued that

- ¹ Please find the index of the issues published until 2000 on the website of *Giardino di Archimede. un museo per la matematica*: <u>https://php.math.unifi.it/archimede/archimede/bollettino/bol-lettino.php</u> and that of the issues 2001-2022: <u>https://php.math.unifi.it/archimede/archimede/ bollettino/bollettino21.php</u>. The issues between 2001-2024 are available here: <u>http://www.li-braweb.net/riviste2.php?chiave=bollettino%20di%20storia</u>.
- ² The Proceedings are published in Montaldo & Grugnetti (eds.), *La storia delle matematiche in Italia.*
- ³ The Proceedings are published in Various Authors, *Storia delle matematiche in Italia*.
- ⁴ Giusti, "A tre secoli dal calcolo…".

Enrico had missed an opportunity: in front of the "Estates general" of Italian mathematicians, he should have given a much grander talk on the importance of history. I countered that, instead, he had opened up new perspectives on how to actually do history.

In Perugia, I caught up with Aldo Brigaglia and Pietro Nastasi from Palermo, whom I had first met in Cagliari and later seen again in Cortona. We came up with the idea of organizing study meetings on Marino Ghetaldi, a mathematician of the early seventeenth century, one of the first experts who recognised the importance of François Viète's innovations in algebra. It was in the side discussions of the Congress sessions dedicated to history that we decided to involve Enrico in organizing this project. Giusti welcomed the idea with enthusiasm: the plan was to form a working group, with each session of the seminar devoted to the analysis of one or two texts by Ghetaldi. Participants would be expected to study the texts introduced by a lecturer. There would be no time limits for discussion or presentations.

The first session of the seminar *The Figure and Work of Marino Ghetaldi* was held in Pisa at the beginning of 1984, if I remember correctly. This was followed by several more sessions, and after Ghetaldi, we analyzed the work of Viète and then Descartes. These meetings, which continued until 1986 under Enrico's guidance, led to the formation of a group of historians who shared research methodologies and objectives. One can get a clear idea of this by browsing the indexes of the *Bollettino* from those years and the following ones.

These seminars were quite informal: people would interrupt each other, criticising openly. And often, the discussion would heat up. Also because, as I have already said, Enrico was anything but easygoing: if he had the feeling that someone was missing the point or going off on a tangent due to a flawed understanding, he wouldn't hesitate to interrupt and point out that what was being said didn't make any sense. Naturally, some people would get upset.

It happened to me too: at the end of the "Ghetaldi" seminar, a discussion arose about what should be done thereafter. I argued one position, Enrico another, and at a certain point, he said something like, "Daniele, calm down." "Don't tell me to calm down!" I snapped, losing my temper and stormed out of the room, slamming the door behind me. In anger, I left the Department building. An hour later, after cooling off, I came back, brooding over the end of my career as a historian. Just as I was entering the lobby of the department, Enrico and the others were coming out of the classroom for a break. He came up to me, shaking my hand with a big smile. I doubt many others would have done the same.

Giusti made a significant contribution to these meetings, and his article on Descartes' *Géométrie* and the relationship between numbers and magnitudes remains, in my opinion, a cornerstone. It was the result of many discussions we had during those years on the relationships between algebra, geometry, and the geometrization of reality.⁵ At the

⁵ Giusti, "La *Géométrie* di Descartes tra numeri e grandezze".

end of September 1987, at the *Ars analytica* workshop held at the Centre International de Rencontres Mathématiques in Luminy (Marseille), we discussed these topics with our French colleagues.⁶ Maybe I'm just glorifying things – *le souvenir*, it's well known, *c'est embellisseur* – but I clearly remember feeling proud of how our "school" presented a clear thesis and program: the research perspective that Giusti had begun to outline at the 1983 Perugia congress had taken shape and were opening new horizons.

Nevertheless, just as it seemed that an Italian school of the history of mathematics with international relations and connections was coming into being, the aforementioned disagreements began to deepen into dissent and growing impatience towards Giusti's leadership. It was perhaps at this point that our community's decline began to take shape.

At the dawn of modern mathematics

Not that Enrico did not perceive that things were not going so well. In a conversation of a few years later – it must have been Spring or Summer 1993 – Giusti confided to me the need to relaunch this kind of experience. "What could we do?" he asked me. "We might tackle Maurolico", I replied doubtfully. In fact, the idea of approaching the work of this 16th-century mathematician – about 5000 pages of old prints and manuscripts, many of them still unpublished – had indeed come up several times in the previous years. In particular, the idea had emerged occasionally after the publication of Rosario Moscheo's 1988 study on Maurolico, which included a detailed catalog of his writings and could serve as a starting point.⁷ The project was therefore not as far-fetched as it might seem, but it still presented a significant challenge. To my doubts, Enrico replied, "What does it matter? Let's give it a try anyway!"

This is how the seminar At the Dawn of Modern Mathematics: Francesco Maurolico and the Return of the Classics (Pisa, 1993-1996) was conceived, which led to the more developed Maurolico Project (1998-2009). The Seminar and the Project brought together about fifty researchers from various backgrounds: young graduands, renowned philologists like Ottavio Besomi, historians of science such as Carlo Maccagni, and and many Italian historians of mathematics, as well as several international scholars, such as Ken Saito, Ken'ichi Takahashi, Jean-Pierre Sutto, and others. Over the course of a decade, we managed to explore that mare magnum of texts, complete a full digital transcription, and successfully propose the establishment of the Edizione Nazionale of Francesco Maurolico's Opera Matematica.

This endeavour has been ongoing for twenty-five years. And, if it has managed to continue, it is largely due to Enrico. Not only because of the published contributions, albeit

⁶ The proceedings of that meeting were not published, but you can find the program here: <u>https://www.academia.edu/112087580/Franco_Italian_colloquy_ars_analytica?uc-sb-sw=4963832</u>.

⁷ Moscheo, Francesco Maurolico tra Rinascimento e scienza galileiana.

significant.⁸ But especially because of his ceaseless, always active, and insightful participation – I cannot recall a single seminar or internal meeting on Maurolico at which he was absent. And, more prosaically, for his support: Giusti made the Project one of the main pillars of the various PRIN "History of Mathematics" grants funded between 1997 and 2004, for which he was the principal investigator.

The last time I saw Enrico (only online, as his illness, which eventually took him from us, had forced him into extreme caution) was last February, for a meeting of the Scientific Committee of the National Edition. It is almost impossible for me to imagine that the next time we meet he will not be with us.

De motu antiquiora

I will miss Enrico so much. Just as I have missed – and still miss, even today after more than twenty years – Pierre Souffrin.⁹ Pierre had made sporadic appearances at the "Ghetaldi" and "Maurolico" seminars and had become friends with both Enrico and me. Like Enrico, Pierre was a physicist by training, and his interests were focused on "pre-classical" mechanics, in particular on Galilean mechanics. Enrico had long explored similar topics. As early as the 1980s, had also focused on Galilean kinematics; he had curated an edition of *Two New Sciences*; and in 1993 he had published an important monograph on the challenges Galileo faced in trying to describe a new physics using the framework of Euclidean proportion theory.¹⁰ This led to the development of a deep scientific friendship, although Pierre and Enrico did not always agree. In fact, I recall rather lively discussions between them, particularly on the concept of velocity and Galileo's use of it, as well as on the Galilean theory of tides.

Pierre worked at the Observatoire de la Côte d'Azur in Nice, and together we organized a series of *ateliers* to study certain early writings of Galileo, known in the literature as *de motu antiquiora*. The style was the same as described above: a lecturer with no time limits and open discussion. Giusti was one of the key figures in the four or five meetings held between 1993 and 1997, in Nice and Pisa. Enrico was particularly enthusiastic about

- ⁹ Pierre died in 2002, he was 67 years old. His writings were collected in Souffrin, *Ecrits choisis d'histoire des sciences.*
- ¹⁰ Giusti, "Aspetti matematici della cinematica galileiana"; "Ricerche galileiane: il trattato *De motu aequabili*..."; Galilei, *Discorsi e dimostrazioni matematiche*... (critical edition by Enrico Giusti); Giusti, *Euclides Reformatus*...

⁸ Giusti, "Maurolico et Archimède…"; Introduction to the volume Archimede in the site of Maurolico Project (<u>http://people.dm.unipi.it/maurolic/edizioni/archimed/intro.htm</u>). As much important are the lessons held in Firenze in 2000: *Centrobaryca. Equilibrio dei gravi e centri di gravità dall'Antichità al Cinquecento* which could be consulted until quite recently at <u>http://web.math.unifi.it/users/giusti/corso%20storia%20matematica/centrobarica%201.pdf</u> but which is now unavailable.

the meetings in Nice: Pierre organized them at the Westminster Hotel on the Promenade des Anglais, where seminar discussions enjoyably continued with digressions on the most array of topics, in the exceptional scene of the Westminster's *terrasse*.

One of the issues with these texts – which we have in Galileo's original handwriting – was to establish their chronology. To put it simply, we had three texts $(T_{10}, T_{23}, \text{ and } D)$, all incomplete. It was unclear when they were composed (when Galileo was in Pisa? Or in Padua?), and, above all, their relative chronology was also uncertain. In the literature, various proposals had been made, and in particular, four out of the six theoretically possible chronological orders had been suggested using the mst extravagant ideas and methodologies.

I remember Enrico's sarcasm regarding this and other oddities of Galilean studies – he drafted a pamphlet, *Il metodo Caverni* (The Caverni Method), which advised a young scholar at his first steps in the history of science to adopt the most absurd theses, as they would surely appear quite original: this would have ensured him a brilliant career. Unfortunately, he never wanted to publish it, and who knows where it has ended up. However, putting sarcasm aside, Enrico decided to face the matter head on. He took over the manuscripts and set out to create a new edition aimed at accounting for all of Galileo's various interventions (corrections, marginal additions, erasures, intertextual references). He presented the results of his study on these interventions in the fall of 1996 at a workshop in Ascona, *Testi e contesti galileiani*.¹¹ There, he established the relative chronology beyond any doubt as D, T_{10} , T_{23} . A debate that had been ongoing since the early years of the century could then finally attain a definitive conclusion.

Textual criticism

Giusti published the results of his work in *Nuncius* in 1998;¹² however, his edition of *De motu antiquiora* was never published. It was a pity because that experience marked an important step in the evolution of his interests toward the relationship between history of mathematics and philology.

From his earliest works, Enrico had been addressing this issue. I remember that at the end of the summer of 1980, he had already organized a meeting at the Mathematics Institute in Florence, focusing on the editions of correspondences. He spared no effort in order that Christoph Clavius' correspondence might be published.¹³ In 1985, at the CIRM in

¹¹ Galilean Texts and Contexts (October 28 - November 2, 1996), organized by the Chair of Italian Literature at the Federal Polytechnic of Zurich, the Museum of the History of Science in Florence, and the Max Planck Institute for the History of Science in Berlin.

¹² Giusti, "Elements for the relative chronology".

¹³ Despite Giusti's support, the project remained partially unfulfilled. Clavius' correspondence was published in 1992 only as a preprint by the Department of Mathematics in Pisa, although it is now available online: <u>https://echo.mpiwg-berlin.mpg.de/content/mpiwglib/clavius.</u>

Trento, he organized, together with Luigi Pepe, a conference on the relations between critical editions of mathematical and scientific texts.¹⁴

As I mentioned, in 1990, Einaudi published his edition of Galileo's *Discorsi* (Two New Sciences). I remember the discussions I had with him about this work. It naturally needed to measure up to the national edition by Antonio Favaro and the more recent one by Adriano Carugo and Ludovico Geymonat. When he first told me he was working on this task, I was dumbfounded:

"But you'll have to write countless footnotes!" – I remarked with surprise, thinking of the heavily annotated Carugo and Geymonat edition.

"I have no intention of doing that", he replied. "I am planning to write a detailed introduction on Galileo's kinematics and limit myself to purely textual notes".

Enrico often argued that overloading an edition with editor's comments and reflections only makes it prematurely outdated. He would cite examples like the correspondence of Marin Mersenne or the edition of Descartes' works. Any oversight – or worse, any mistake – made by the editor in the footnotes would be practically indelible, given that the edition would become a reference point for scholars in the years to come.

He believed that anyone undertaking the task of producing a critical edition inherently assumes a significant responsibility. What gets published will be *the* text, literally, for decades to come. As he often pointed out, even if you publish an article explaining why the footnotes on such-and-such pages are wrong or misleading, what impact will your article have compared to a work that took years to produce and is widely known? When people argued that avoiding detailed commentary meant losing the accumulated capital of knowledge the editor had built up, he would respond that one could always publish their opinions separately. He often mentioned Antonio Favaro as an example: without annotating his edition of Galileo's works, Favaro published dozens and dozens of notes and articles in the series *Amici e corrispondenti di Galileo* (Friends and Correspondents of Galileo) and *Adversaria Galilaeiana*.

The 1996 seminar in Ascona was organized by Ottavio Besomi, one of the leading contemporary experts in Italian studies, who was working with Mario Helbing on a new critical edition of the *Dialogue Concerning the Two Chief World Systems*.¹⁵ I was with Giusti and Besomi, waiting to go to dinner, and we were discussing Enrico's presentation and his findings on the chronology, when Enrico showed him his own edition of *de motu an-tiquiora* texts. In order to better highlight the various interventions of Galileo on his own text, Giusti had showered it with diacritics: in addition to square and angle brackets, there were double square brackets, double angle brackets, curly brackets, and passages in italics that had specific meanings... For his main goal – to establish a chronology – it might have

¹⁴ Giusti and Pepe, eds., *Edizioni critiche e storia della matematica*.

¹⁵ Galileo (Besomi and Helbing eds.), *Dialogo sopra i due massimi sistemi del mondo*.

been fine, but the text was tough to follow. Ottavio, like the true old-school gentleman he is, pointed this out with great discretion, also offering his assistance if Enrico ever intended to publish it.

This is how the edition remained unpublished. But every cloud has a silver lining. At the end of 1996, the seminar *At the Dawn of Modern Mathematics* was almost at its end, and the Maurolico project was about to come to light. Enrico, Carlo Maccagni – another friend who had passed away and whom I miss dearly – and I thought that it would be a good idea to involve Besomi in the creation of a digital edition of Maurolico's works. And Ottavio gave his "fateful reply".

And so it was that from 1998 to 2005 our discussions on how to present Maurolico's texts – and more in general how to realize the edition of a scientific text – were enriched with new visions and perspectives: in addition to Ottavio a young classical philologist also "converted" to the textual critique of scientific writings, Paolo d'Alessandro. I think that these experiences had an important impact on Enrico as well as on his work and the way it developed in his last years, leading him to undertake the edition of Leonardo Fibonacci's works.

Leonardi Bigolli Pisani Opera quae extant omnia

2002 marked the eight-hundredth anniversary of the publication of the *Liber abbaci*. But it was also the year in which, after the Twin Towers and the invasion of Afghanistan, the wicked war in Iraq was looming on the horizon. Enrico had the brilliant idea to organize a major international conference in Pisa and Florence, which would also serve as a clear signal of peace: a conference celebrating Leonardo Fibonacci that would also remind us how much Western society and culture owe to the Arab civilization. It was attended by numerous scholars, particularly Arabists such as Roshdi Rashed, Jacques Sesiano, Djamil Aïssani, and Ahmed Djebbar.¹⁶ In addition to the conference, we also set up the exhibition *Un ponte sul Mediterraneo (A Bridge across the Mediterranean)*, accompanied by a volume of essays.¹⁷ Giusti wrote a quite hefty contribution, *Matematica e commercio nel Liber abaci (Mathematics and Trade in the Liber Abaci)*, in which, thanks to his remarkable skills as popularizer and the rigor he was known for, he discussed the content and significance of this text for the development of modern mathematics and society.

It marked the beginning of a passion. Enrico began working seriously on Leonardo's text, although it was only a few years later (in 2015, when he was already retired) that he

¹⁶ The proceedings of the convention Leonardo Fibonacci. Matematica e società nel Mediterraneo del secolo XIII (Leonardo Fibonacci, Mathematics and society in the Mediterranean in the 13th century) were published in the second issue of 2023 and in the first issue of 2024 of the Bollettino di storia delle scienze matematiche; unfortunately they do not include all the interventions.

¹⁷ Un ponte sul Mediterraneo: Leonardo Pisano, la scienza araba e la rinascita della matematica in Occidente, ed. by Enrico Giusti in collaboration with Raffaella Petti.

presented a project to Veronica Gavagna, Paolo Freguglia, and to me: a revision of the edition of the *Liber* prepared by Baldassarre Boncompagni in 1859 – an edition as rare as Leonardo's manuscripts and, moreover, full of transcription errors, especially in its mathematical aspects. It was a "modest proposal", given that it entailed revising hundreds and hundreds of pages.

But of course, it was not like him to stop there. His long-standing experience in studying and publishing mathematical texts, along with his friendships with prominent philologists, soon led him to study the manuscripts – about twenty of them! – so that the original project evolved into that of a true and proper critical edition.

We began to regularly meet in Pisa to stay updated on his progress and try to help him with any problem he might encounter: Carlo Maccagni, Paolo d'Alessandro, and myself. It was during these meetings that he shared with us his discovery of a version of the text preceding the revision Leonardo made for Michael Scot; there we long discussed also whether this version could actually date back to 1228, as was widely believed, uncovering evidence that cast doubt on this date; there we also established that the name 'Fibonacci' was an invention of 18th-century erudite scholars and that, from a historical perspective and despite the current universal usage, the Pisan mathematician should more be correctly referred to as Leonardo Bigollo; and there we examined numerous issues of interpretation and textual criticism. During these meetings, Enrico found in Paolo the ideal mate, someone who could reassure him about the philological decisions required for such a complex edition.

By 2018, the critical edition had already taken shape, although there was still much work to be done to check the collations and the critical apparatus. The main problem, however, remained where to find the funds to publish it. Thanks to Paolo Galluzzi and the Museo Galileo, as well as Paolo Mancarella, Rector of the University of Pisa, we managed to reach an agreement with the publisher Olschki. And finally, in 2020, the eight hundred pages of *Leonardi Bigolli Pisani vulgo Fibonacci Liber abbaci: edidit Enrico Giusti adiuvante Paolo d'Alessandro* came to light.

The edition had not yet been published when Enrico started working again – this time involving Paolo d'Alessandro from the very beginning – on the project of completing the edition of Leonardo's works. The critical editions of the *Practica geometriae, Liber quadratorum,* and *Flos* were still missing. This work was nearly finished when Enrico passed away last March. Thanks to d'Alessandro, it will be fully completed: in the next few months, the new edition will come out, once again with the support of the Museo Galileo and the University of Pisa. I do not think I am exaggerating when I say that only Enrico could have carried out this work: only his mathematical insight and philological passion could have made it succeed.

These Opera omnia Leonardi Bigolli Pisani are the most beautiful monument Enrico could have ever left us.

As I read back over these lines, I realize how little they manage to convey forty years of friendship and collaboration. I wish I could better convey his ability to grasp the central point of a problem or a discussion, and his remarkable gift for explaining complex mathematical problems in simple terms. These were the qualities that made Enrico an outstanding teacher and popularizer, which found their embodiment in the *Giardino di Archimede*, the first museum in the world dedicated solely to mathematics. Qualities that shine in his novel, *La matematica in cucina* (Mathematics in the Kitchen), in his insightful reflections in *Ipotesi sulla natura degli oggetti matematici* (Hypothesis on the Nature of Mathematical Objects), and in his analysis textbooks, on which thousands of students have studied.

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And I have said nothing about the trips and journeys we took together, the pieces of advice he gave me on my academic career, the lunches at his home in Florence and his wife Francesca's *polpettone*, his passion for fine wines, and his love for rare books.

But, above all, I wish I could manage to better describe Enrico's human side: the liveliness of his intellect, his sense of humor, his generosity, his openness to discussion and debate. There is also an important aspect of his character that I have not mentioned yet – his extreme discretion. His reluctance to talk about himself or his personal concerns made it difficult to establish a more intimate relationship beyond the purely intellectual. Yet, behind this façade of emotional reserve, I have always felt his affection and profound kindness.

And I can only feel deeply proud and grateful to have shared such a significant part of my life with him.

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