

ALFREDO LORENZI
(1944 – 2013)



Alfredo Lorenzi graduated in Mathematics at Università degli Studi di Milano in 1967 under the supervision of Giovanni Ricci. Then, he moved to Florence, where he stayed for four years. In this period, under the supervision of Giorgio Talenti, Alfredo Lorenzi was introduced to the field of inverse and ill posed problems, of which field he became later a well recognized expert. After the period in Florence, he moved back to Milan where he became full professor on November 1th, 1980.

His researches put him in contact with the very well recognized Russian School on inverse problems. One anecdote is of much help to understand his way of thinking. Before visiting Russia for the first time to start new collaborations, he decided to attend several courses of Russian language in Milan. Only when he was convinced that his Russian was fluent enough to speak with Russian colleagues in their native language he went to Russia. After the first visit, he spent one month per year in the next ten years, visiting mainly Moscow and Novosibirsk. During these periods he had been in touch with many mathematicians and he invited most of them in Milan to collaborate with him and his Italian colleagues. He was so attracted by the Russian culture that, also when in Milan, he was used to read books of Russian culture and fiction, written in Russian, and listening Russian music, mainly Russian singer-songwriters. Among them he was very fond of Vysockij.

During all his life, Mathematics occupied a very large part of his days. Hence, almost all the days (just not to say *all* the days, which anyway would be much closer to reality) after dinner he moved to his study and work till late evening. Till the very last days of his life he had worked on his mathematics projects, keeping the contacts with all his collaborators. This also when he was a patient in hospitals. There, he spent more than two months of his last period. One of his main concern was to have a desk, his beloved pencil and eraser and a laptop with an internet connection to keep on his researches and discuss with colleagues.

Alfredo was author of more than 150 papers, and two scientific monographs. He investigated many interesting problems and obtained such important results that his work was cited and mentioned on journals of major international relevance. Alfredo could come across as a strong and assertive person at a first glance, but he was also very kind and always willing to help anyone who needed him. His enthusiasm for scientific research was very important and a great aid to all his collaborators, because it pushed everyone to focus on the hardest points and face all the new challenges with more and more strength. He was also very interested in forming and training new mathematicians. In this respect he wrote many books of Calculus and Advanced Calculus. Several time he had been in contact with young students from high schools. During these meetings, following his philosophy of mathematics, he suggested them non standard problems to stimulate their skills.

He seemed optimist until the very end, and his loss was truly shocking for all his friends and colleagues. He will forever remain in our hearts.

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A List of Selected Scientific Articles

1. Lorenzi A. On Elliptic Equations with Piecewise Constant Coefficients. II. *Ann. Scuola Norm. Sup. Pisa (3)*, 1972, vol. 26, pp. 839–870.
2. Lorenzi A., An Inverse Problem for a Semilinear Parabolic Equation. *Ann. Mat. Pura Appl. (4)*, 1982, vol. 131, pp. 145–166.
3. Lorenzi A., Sinestrari E. An Inverse Problem in the Theory of Materials with Memory. *Nonlinear Anal.*, 1988, vol. 12, no. 12, pp. 1317–1335.
4. Lorenzi A., Paparoni E., Direct and Inverse Problems in the Theory of Materials with Memory. *Rend. Sem. Mat. Univ. Padova*, 1992, vol. 87, pp. 105–138.
5. Lorenzi A., Prilepko A. Fredholm-Type Results for Integrodifferential Identification Parabolic Problems. *Differential Integral Equations*, 1993, vol. 6, no. 3, pp. 535–552.
6. Lorenzi A. An Identification Problem Related to a Nonlinear Hyperbolic Integro-Differential Equation. *Nonlinear Anal.*, 1994, vol. 22, no. 1, pp. 21–44.
7. Colombo F., Lorenzi A. Identification of Time and Space Dependent Relaxation Kernels for Materials with Memory Related to Cylindrical Domains. I. *J. Math. Anal. Appl.*, 1997, vol. 213, no. 1, pp. 32–62.
8. Colombo F., Lorenzi A. Identification of Time and Space Dependent Relaxation Kernels for Materials with Memory Related to Cylindrical Domains. II. *J. Math. Anal. Appl.*, 1997, vol. 213, no. 1, pp. 63–90.
9. Colombo F., Lorenzi A. An Identification Problem Related to a Parabolic Integro-Differential Equation with Noncommuting Spatial Operators. *J. Inverse Ill-Posed Probl.*, 2000, vol. 8, no. 5, pp. 505–540.
10. Favini A., Lorenzi A. Identification Problems for Singular Integro-Differential Equations of Parabolic Type. II. *Nonlinear Anal.*, 2004, vol. 56, no. 6, pp. 879–904.
11. Favini A., Lorenzi A., Tanabe H., Yagi A. An L^p -Approach to Singular Linear Parabolic Equations in Bounded Domains. *Osaka J. Math.*, 2005, vol. 42, no. 2, pp. 385–406.
12. Favini A., Lorenzi A., Tanabe H. First Order Regular and Degenerate Identification Differential Problems. *Abstract and Applied Analysis*, 2015, Article ID 393624, 42 p.