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# Professor Francesco Altomare at his $60^{\text{th}}$ anniversary

*If there is a God, he is a great mathematician* (Paul Dirac)

Between September $22^{\text{nd}} - 24^{\text{th}}$, 2011, the International Conference *Recent Developments in Functional Analysis and Approximation Theory* was held at Lecce, Italy. It was organized in collaboration by members of the Universities of Salento, Bari and Basilicata being devoted to some significant aspects of contemporary mathematical research on Functional Analysis, Operator Theory and Approximation Theory including the applications of these fields in other areas such as partial differential equations, integral equations and numerical analysis. Behind this scientific activity there was an emotional manifestation namely the celebration of Francesco Altomare's $60^{\text{th}}$ birthday. The present note is intended to pay tribute to the man and professor Francesco Altomare, pointing out his contribution to the mathematical community.

**Biographical notes.** Francesco Altomare was born on May $18^{\text{th}}$, 1951, in Giovinazzo, a charming small town on the Adriatic coast. Growing up close to the sea, he learned to love the beauty and the fascination of the Infinite so far in mathematics. He married Raffaella Bavaro who is 58 years old and nowdays teaches Economical Geography at secondary school. They have two children: Bianca Maria (1983) and Gianluigi (1986). The former got a PhD in Greek Philology in 2010 at the University of Bari and now she is spending a study stay in Paris supported by a post-doc fellowship. The latter is completing his university studies on Pharmacology at the University of Parma.

**Career.** Francesco Altomare graduated in mathematics from the University of Bari (1975). In time, he has covered all levels of professional career: senior research fellow at the Institute of Mathematical Analysis of the University of Bari (1975-1978), assistant professor at the Faculty of Sciences of the University of Bari (1978-1985), associate professor at the same institution (1985-1987). Since 1987 he was promoted professor at the Faculty of Sciences of the University of Basilicata (Potenza). From 1990 he has held a professorship at the University of Bari where he is currently employed. In the past years professor Altomare held many leadership positions: director of the

Institute of Mathematics at the University of Basilicata (1987-1990), director of the Graduate School in Mathematics at the University of Bari (1993-1995), head of the Interuniversity Department of Mathematics of the University and the Polytechnic of Bari (1997-1999), coordinator of the PhD School in Mathematics of the University of Bari (1999-2003). Under his guidance, the following students received a PhD in mathematics: Sabrina Diomede, Mirella Cappelletti Montano, Rachida Amiar, Vita Leonessa, Sabina Milella, Graziana Musceo. Their present day scientific activity hallmarks the impress of professor Altomare.

**Research areas.** Albert-Szent Gyorgyi, a Hungarian biochemist who obtained the Nobel Prize for Medicine in 1937, said: "Research is to see what everybody else can see and to think what nobody else has thought." At a close look at professor Altomare's activity we can identify three major scientific research directions.

i) Real and Functional Analysis - Choquet representation theory, Choquet boundaries, continuous function spaces, function algebras and Banach algebras, locally convex vector lattices, positive linear forms and applications to abstract Potential Theory and Harmonic Analysis.

ii) Operator Theory - positive operators, semigroups of operators, differential operators and applications to evolution equations.

iii) Approximation Theory - Korovkin-type approximation theory, positive approximation processes, approximation of semigroups by means of positive operators.

His main achievements are concerned with general methods of construction of positive approximation processes by means of selections of Borel measures and a new method to investigate qualitative properties of positive operator semigroups as well as of solutions of evolution equations by means of positive operators.

Further on, we briefly certify his outstanding scientific activity and its recognition.

**Academic prestige.** The main results of the above mentioned researches are documented in about 80 papers published in scientific journals, conference proceedings and special issues. We do not intend to present here this list of publications. Consulting the *MathSciNet* database it can be easily identified. Instead, we want to emphasize the following monograph written jointly with Michele Campiti

*Korovkin-type Approximation Theory and its Applications*, de Gruyter Studies in Mathematics, 17, Walter de Gruyter & Co., Berlin, 1994, xii + 627 pp **MR** 95g:41001

that serves as a landmark for many mathematicians who are grounded in this research area. In this monograph it is presented a modern and comprehensive exposition of the Korovkin-type theorems and some of their applications, by following ingenious new paths that, other than to add new results, allows to synthesize in a well-organized logical exposition the main results of about six hundred articles on the subject. The monograph also well emphasizes one

of the main peculiarities of Francesco Altomare, namely to be able to put the mathematical problems of his concern, in the right general perspective and to use (sometimes, to create) general tools that can be useful to better understand the problems as well as other related aspects. As a matter of fact, searching on *MathSciNet* we found that, so far, this book has been cited 111 times. Moreover, until now, Altomare's papers have been cited 246 times by 90 authors in the MR Citation Database.

The activities carried out as visiting professor and as invited speaker at several international meetings are other expressions of his value as a researcher.

Francesco Altomare was a research visitor at the Universities of Paris VI (1980 and 1981), Tübingen (1983) and Münster (1985). In 1985 he also awarded a NATO research grant. On 2004 he spent a research period at the Mathematical Institute of Oberwolfach under the RiP program. He was invited to deliver lectures and postgraduate short courses and to develop joint researches at several Italian and foreign universities such as Napoli, Lecce, Cosenza, Potenza, Roma, Milano, Bologna, Trieste, Salerno, Palermo Perugia, Sofia, Annaba, Erlangen, Passau, Valencia, Praga, Paseky, Siegen, Vienna.

He also attended about fifty international meetings as invited speaker. In addition to those which took place in many Italian cities, we mention recent ones from abroad: Kaohsiung (Taiwan, 2000), Vienna (Austria, 2000), Blaubeuren (Germany, 2001), Cluj-Napoca (Romania, 2002, 2006, 2010), Piteşti (Romania, 2003), Witten-Bommerholz (Germany, 2004), Eger (Hungary, 2005), Kitakyushu and Osaka (Japan, 2006), Ubeda (Spain, 2007, 2010).

Since 2004 F. Altomare has been the founding Editor-in-Chief at *Mediterranean Journal of Mathematics*, a well-reputed international mathematical journal issued by the Department of Mathematics of the University of Bari and published by Birkhäuser Verlag - Basel.

Also, his name is included in the Editorial Board of the following journals: *Conferenze del Seminario di Matematica dell'Università di Bari* (from 1990 to 2003), *Revue d'Analyse Numérique et de Théorie de l'Approximation* (since 1998), *Mathematical Reports* (since 2000), *Journal of Interdisciplinary Mathematics* (since 2004), *Journal of Applied Functional Analysis* (since 2004), *Numerical Functional Analysis and Optimization* (since 2008), *Bollettino dell'Unione Matematica Italiana* (since 2008), *Studia Universitatis Babes-Bolyai, Mathematica* (since 2009), *The Journal of the Indian Academy of Mathematics* (since 2009).

But above all, Altomare's name is forever associated with the international conferences FAAT (Functional Analysis and Approximation Theory) held in Acquafredda di Maratea (Potenza). Six editions took place in 1989, 1992, 1996, 2000, 2004, 2009, respectively. Under Altomare's wand and with the help of his collaborators, for 20 years these meetings have brought together hundreds of mathematicians from all over the world in the fields of

Functional Analysis, Operator Theory, Approximation Theory and have accumulated over 300 papers published in *Supplemento ai Rendiconti del Circolo Matematico di Palermo*. F. Altomare was co-editor of the corresponding Proceedings. Practically, these conferences have marked two decades of scientific work of the mathematicians who have investigated the mentioned areas.

Returning to the conference in Lecce, in a short speech professor Altomare revealed the secret of his success: a permanent support in family life and the sacrifice made by someone who has created optimal conditions to complete his scientific work. With a tear in the corner of his eyes he pronounced a name: Raffaella - his wife.

Those 36 years of scientific activity and a lifetime cannot be condensed in enough words on four pages, so, at this point, we limit ourselves to wishing professor Francesco Altomare health and creative strenght. May he crop the scientific seeds planted by himself.

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