

**LAUDATION TO
Professor Gyula Maksa
on his seventieth birthday**

by Eszter Gselmann (Debrecen, Hungary)

Gyula Maksa was born in Miskolc, on 23 of April, 1948. His father, István Maksa was a timber worker at a sawmill, and his mother, Vilma Mattyasovszky was a housewife. He is the only child of his parents.



Figure 1. Giving a talk at one of the many conferences

He went to primary school in his hometown, Szinpetri (Borsod–Abaúj–Zemplén County). After that he continued his studies at Lajos Kossuth High-school in Sátoraljaújhely, where he spent four years and did his school-leaving exams in 1966. He graduated from Lajos Kossuth University in 1971. He then immediately began to work at Lajos Kossuth University (since the integration in 2000, the University of Debrecen), at the Department of Analysis, where he worked (only interrupted for a 5-year interval) right until the end of the Spring Semester of 2018. Since then, he has been awarded professor emeritus status. During the above-mentioned five years, between 1994 and 1999 he was the head of the Department of Mathematics and Descriptive Geometry at the Faculty of Engineering.

He received his CSc degree (Candidate of Science) in 1986 under the supervision of Endre Vincze, and based on this degree, his PhD degree in 1997. The title of the CSc dissertation was *Deviations and differences*.

After defending his habilitation dissertation entitled *Recent results from the theory of functional equations*, he received dr. habil. degree in 2000.

In 2004, he defended his DSc (Doctor of Science) dissertation entitled *Associativity and bisymmetry equations* and became a full professor at the University of Debrecen.

Since 2008, he has been the leader of the PhD program in Mathematical Didactics of the Doctoral School of Mathematical and Computational Science. Furthermore, he is the editor-in-chief of the journal *Teaching Mathematics and Computer Science*, as well as the chairman of the Scientific Committee of the conference series Research in Didactics in Mathematics and Informatics.

Between 2001 and 2007, he was the head of the Department of Analysis.

His most important travels include: a visit to the University of Bern (hosted by Jürg Rätz) in 1981, with the Swiss National Foundation and a visit to the University of Nijmegen in 1992 with TEMPUS. Besides several conferences, he was also an invited researcher for shorter or longer periods at the following institutions:

- University of Waterloo, Waterloo, Canada (1980, 1994, 1995, 1996)
- University of Silesia, Katowice, Poland (1988)
- University of Irvine, Irvine, California, USA (1998)
- University of Amsterdam, Amsterdam, The Netherlands (2000)
- Hausdorff Research Institute for Mathematics, Bonn, Germany (2008)

According to the Mathematical Reviews, his research areas encompass the following:

- Difference and functional equations
- Functional analysis
- Game theory, economics, social and behavioural sciences
- Geometry
- Information and communication, circuits
- Number theory
- Numerical analysis

- Operations research, mathematical programming
- Probability theory and stochastic processes
- Real functions
- Special functions

His list of publications clearly shows that the main research area of Gyula Maksa is the field of difference and functional equations. Within this topic, he achieved numerous fundamental and significant results in the following sub-fields: characterization of information measures, associativity and bisymmetry equations, stability of functional equations, composite functional equations, characterization of means and convexity theory.

His approximately 110 publications prove that Gyula Maksa is a productive mathematician, indeed. With respect to his list of publications, he obviously made prosperous and fruitful contribution to the field of functional equations and inequalities not only on his own but also with several colleagues including (but not limited to):

- Zsolt Páles (18 joint publications)
- Zoltán Daróczy (12 joint publications)
- János Aczél (11 joint publications)
- Eszter Gselmann (5 joint publications)
- Károly Lajkó, Fruzsina Mészáros (3 – 3 publications).

Thanks to his emphatic and impressive character, he was also a really successful supervisor. Besides an enormous number of MSc theses, he supervised the following PhD dissertations as well:

- Zoltán Boros, *Sequences of connected spectrum and completely additive functions*, Lajos Kossuth University, 1993.
- Imre Kocsis, *Stability of sum form functional equations*, University of Debrecen, 2003.
- Eszter Gselmann, *Stability of some functional equations stemming from the theory of information*, University of Debrecen, 2011.
- Adrienn Varga, *Functional equations containing mean values*, University of Debrecen, 2012.

He has three children: Gyula jr. (1975), Ákos (1987) and Dávid (1989) and also a grandchild: Áron (2016).



Figure 2. Dávid (left), Gyula jr. (center) and Ákos (right)



Figure 3. Gyula with his grandchild, Áron

Dear Gyula, thank you for the stimulating role you have played by transferring your knowledge, your inspiring enthusiasm and your patience to the younger generation. Besides this, I am personally grateful for your adamant belief in me, which made me stronger than I ever believed. Last but not least, thank you for the friendship you generously offered, and, of course, for your humour and wit, too, which made our relationship always a pleasant experience.