

## Curriculum vitae

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**Name:** Antal Járai

**Nationality:** Hungarian

**Born:** 25th August, 1950, Biharkeresztes, Hungary

**Permanent address:** Institute of Computer Science, Department of Computer Algebra, Eötvös Loránd University, H-1117 Budapest, Pázmány Péter sétány 1/C, Hungary.

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**Education:** Mathematics (1969–1974), Kossuth Lajos University, Debrecen, Hungary. M.Sc. (1974), Ph.D. (1976), Kossuth Lajos University, Debrecen, Hungary. Candidate of Mathematical Science degree (1990), Hungary. After the re-introduction of habilitation in Hungary I received this degree too (1996). D.Sc. degree (2001), Hungarian Academy of Sciences.

**Positions held:** Scholarship of the Hungarian Academy of Sciences 1974–1976, Junior Research Fellow 1976–1978, Senior Research Fellow 1978–1991, Research Professor 1991–92, each at the Department of Mathematics and Computer Science, Kossuth Lajos University, Debrecen. From 1992 to 1997 Senior Research Fellow at Institute of Mathematics and Computer Science of Universität GH Paderborn, Germany. From 1997 to 2001 Research Professor, and from 2001 Professor at the ELTE (Eötvös Loránd University), Budapest. From 2003 to 2008 head of the Computer Algebra Department, ELTE. From 2002 Professor on BME, Mathematical Department. From 2014 Professor emeritus on ELTE, Computer Algebra Department. Visiting the University of Waterloo, Canada in 1982 for 6 weeks and in 1998 for 4 weeks. Visiting Rutgers University, New Jersey, USA in 1997 for 2 weeks and several times Universität GH Paderborn, Germany.

**Field of interest:** Functional equations, measure theory, system programming, computational number theory and computer algebra, generalized number systems.

**Teaching experiences:** Undergraduate and graduate courses in calculus, measure theory, complex function theory, integral transforms, functional analysis, probability theory, orthogonal series, differential equations, harmonical analysis, topological groups, Haar measure and applications, functional equations, topology, compilers, prime tests, fractals and number systems, factorization, computational number theory, discrete mathematics, RISC processors, computer architecture, etc.

**Professional experiences:** Author of over 20 system programs in assembly. Manager and co-author in the development of 8 application systems. Project manager in the group of Karl-Heinz Indlekofer in 3 projects in computer science resulting in more than 10 “world records”. Leader of 2 project and former fellow in 12 other ones in mathematics in Germany and in Hungary. Leader of a computer science project in ELTE resulting 10 “world records”.

**Publications:** 4 theses, 4 monograph from own research, 4 books,  $\approx$  20 lecture notes, over 60 papers, over 50 conference talks, over 40 software copyright, over 20 program plans and technical reports.

**Membership:** President of the Hungarian T<sub>E</sub>X Society until 2004. Member of Bolyai Mathematical Society, John von Neumann Computer Science Society, Eötvös Loránd Physical Society, Public Body of Hungarian Academy of Sciences, editorial board of Publ. Math. Debrecen, Ann. Univ. Sci. Budapest Sectio Computatorica, Alk. Mat. Lapok, Math. Pannonica, International Review of Applied Sciences and Engineering.

**Awards:** “Pro Universitate”, Kossuth Lajos University, Debrecen, 1974. “Grünwald Géza award”, Bolyai Mathematical Society, 1979. Ministry award of the Ministry of Culture, 1990. Award “For outstanding contribution to the conference”, International Symposium on Functional Equations, 1994. Award of the Hungarian Academy of Sciences, 2000. Kalmár Award of the Neumann Society 2008, “Knight Cross”, the Order of Merit of the Hungarian Republic 2010.

**Languages:** English, German and some Russian.

**Personal status:** Married since 1982, wife is Járainé Matisz Ilona, programmer. One child from this, and two children from the first marriage. They are 34, 45 and 48 years old, respectively.

**Hobbies:** Physics, chemistry, electronics.

My main research field is functional equations. For a large class of functional equations my results show that measurable solutions are  $\mathcal{C}^\infty$ . This solves the second part of Hilbert’s fifth problem for the class in question. The monograph containing these results published by Springer-Verlag. Other research fields are measure theory, generalized number systems and applied mathematics. I wrote more than 20 system programs (compiler, time sharing system, floating point package, etc.) and several other programs for microprocessor systems. I have joint results with Karl-Heinz Indlekofer in computational number theory. We hold 10 “world records” in this field. 10 more “world records” on this field are found in ELTE. My programming experience consists of writing about 4000 pages of programs. I have written over 60 research papers; one of them is the separate issue CCXXXIII of *Dissertationes Mathematicae*. I have written a booklet “Regularity properties of functional equations”, a book “Fast Arbitrary Precision package” with Zoltán Járainé, four text books “Measure and Integration Theory”, “Modern Applied Analysis”, “Discrete Mathematics”, “Calculus” and approximately 20 lecture notes as “Analysis and Probability Theory”, “Computational number theory”, “Calculus I”, “Calculus II”, “Calculus III”, etc.