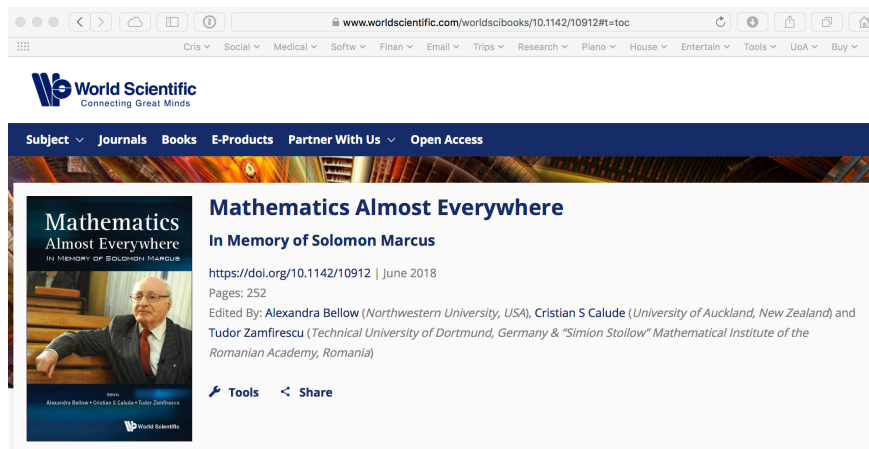


Mathematics Almost Everywhere: In Memory of Solomon Marcus

Cristian S. Calude

Bucharest 27 August 2018

Mathematics Almost Everywhere



The screenshot shows a web browser displaying the World Scientific website. The address bar shows the URL www.worldscientific.com/worldscibooks/10.1142/10912#t=toc. The website header includes the World Scientific logo and navigation links: Subject, Journals, Books, E-Products, Partner With Us, and Open Access. The main content area features a book cover for 'Mathematics Almost Everywhere' edited by Alexandra Bellow, Cristian S. Calude, and Tudor Zamfirescu. The book is in memory of Solomon Marcus and was published in June 2018. The cover image shows an elderly man with glasses, likely Solomon Marcus, sitting at a desk with books.

World Scientific
Connecting Great Minds

Subject ▾ Journals Books E-Products Partner With Us ▾ Open Access

Mathematics Almost Everywhere
In Memory of Solomon Marcus

<https://doi.org/10.1142/10912> | June 2018
Pages: 252

Edited By: **Alexandra Bellow** (Northwestern University, USA), **Cristian S Calude** (University of Auckland, New Zealand) and **Tudor Zamfirescu** (Technical University of Dortmund, Germany & "Simion Stoilow" Mathematical Institute of the Romanian Academy, Romania)

Tools < Share

Mathematics Almost Everywhere refers to

1. Marcus' (and his students/collaborators) theorems referring to properties true with the exception of a “negligible set”.
2. Marcus' view on mathematics
 - ▶ Solving problems
 - ▶ Developing theories
 - ▶ **Modelling and metaphorical vocation**

Mathematics Almost Everywhere in information technology

S. Legg, DeepMind chief-scientist and co-founder, a student of a student of Marcus, gave a high-school the following advice ([BBC, 2 August 2018](#)):

To succeed in the burgeoning field of AI you need to learn

- ▶ linear algebra well,
- ▶ calculus to an OK level,
- ▶ probability theory and stats (to a good level),
- ▶ theoretical computer science basics,
- ▶ to code well in Python and OK in C₊₊.

Mathematics Almost Everywhere

It is notoriously difficult to make the life of a thinker the vivid part of collective memory. If a strong thinker was not the Warden of the Royal Mint, or did not have to drink a cup of cicuta, then "only" his or her thoughts remain a hidden treasure, as they constitute his or her main legacy. Friends, students, and collaborators of Solomon Marcus, mathematician and philosopher, took upon themselves this difficult task, and honourably fulfilled it.

Yuri I. Manin, Académie des Sciences de l'Institut de France

A much deserved tribute to an eminent mathematician whose works span a wide range of mathematics and computer science.

Anil Nerode, Goldwin Smith Professor of Mathematics, Cornell University

Solomon Marcus was an extremely influential Romanian mathematician with huge erudition and lots of interests. The beautiful papers collected in the present volume are related to his favourite subjects and are written by some of his collaborators and admirers. The diversity of the contributions truly reflects the complex personality of Solomon Marcus and adds to the pleasure of reading them.

János Pach, École Polytechnique Fédérale de Lausanne



The book is a collection of original papers, research and surveys, dedicated to the memory of the Romanian mathematician Solomon Marcus (1925–2016). Marcus published many papers and books in mathematical analysis, theoretical computer science, mathematical linguistics, poetics, theory of literature, semiotics, and several other fields less strongly connected to mathematics, like cultural anthropology, biology, history and philosophy of science, education. He exemplified an unimaginable richness of ideas.

This volume intends to emphasize the mathematical fields in which Solomon Marcus worked, and demonstrate — as he also did — the interconnection between them. The authors who contribute to this volume are well-known experts in their fields. Most of them knew Solomon Marcus well, some even owed him for his decisive impulses for their careers and general development. With articles in so diverse areas, the volume will attract readers who would like to diversify their own knowledge or find unexpected connections with other topics.

World Scientific
www.worldscientific.com
10912 hc



Mathematics Almost Everywhere

Contents:

- **Logic, Complexity and Algebra:**
 - On Bases of Many-Valued Truth Functions (*A Salomaa*)
 - Quasiperiods of Infinite Words (*L Staiger*)
 - Early Romanian Contributions to Algebra and Polynomials (*D Ștefănescu*)
 - Distributed Compression through the Lens of Algorithmic Information Theory: A Primer (*M Zimand*)
- **Integrals, Operators, AF Algebras, Proof Mining and Monotone Nonexpansive Mappings:**
 - Monotonically Controlled Integrals (*T Ball, D Preiss*)
 - Fine Properties of Duality Mappings (*G Dincă*)
 - Primitive Ideal Spaces of Postliminal AF Algebras (*A Lazar*)
 - An Application of Proof Mining to the Proximal Point Algorithm in CAT(0) Spaces (*L Leuştean, A Sipoș*)
 - Generic Well-posedness of the Fixed Point Problem for Monotone Nonexpansive Mappings (*S Reich, A J Zaslavski*)
- **Linguistics, Computer Science and Physics:**
 - Analytical Linguistics and Formal Grammars: Contributions of Solomon Marcus and Their Further Developments (*M Burgin*)
 - A Contagious Creativity (*Gh Păun*)
 - Entanglement through Path Identification (*K Svovil*)
- **Solomon Marcus in Context:**
 - Memories about Solomon Marcus (*A Bruckner*)
 - Memories With and About My Uncle (*M Marcus*)
- Index



Bucharest mathematicians, 1958 (courtesy Prof. I. I. Popescu)

Mathematics Almost Everywhere



C. S. Calude, A. Bruckner and S. Marcus, Bucharest, 1978

Mathematics Almost Everywhere



Monica and Solomon Marcus, Bucharest, 2006

Mathematics Almost Everywhere



C. Calude, A. Bellow, S. Marcus, N. Dinculeanu
Sixth Congress of Romanian Mathematicians, Bucharest 2007

Mathematics Almost Everywhere



S. Marcus and T. Zamfirescu, Mulhouse, 2014

Mathematics Almost Everywhere



S. Marcus and C. Calude, *The Human Face of Computing*,
Bucharest, 2015