

Professor Petru T. Mocanu at his 80th anniversary

Grigore Ştefan Sălăgean

Professor **Petru T. Mocanu** was born in June 1, 1931 in Brăila, Romania. He attended primary and secondary school in Brăila, then university studies (1950-1953) and higher studies (1953-1957) at the Faculty of Mathematics, University of Cluj (now "Babeş-Bolyai" University of Cluj-Napoca). In 1959 he defended his doctoral dissertation under the guidance of the great Romanian mathematician G. Călugăreanu. The name of the doctoral thesis is *Variational methods in the theory of univalent functions*.

He worked at the "Babeş-Bolyai" University of Cluj-Napoca as Assistant Professor (1953-1957), Lecturer (1957-1962), Associate Professor (1962-1970) and Full Professor (since 1970).

He was Visiting Professor at Conakry, Guinea (1966-1967) and at Bowling Green State University, Ohio, USA (1992, fall semester), and invited talks at: Lodz (Poland) - 1966, Lublin (Poland) - 1970, Jyvaskyla (Finland) - 1973, 6 universities in USA - 1973, Lodz (Poland) - 1976, Rouen (France) - 1990, University of Michigan and Iowa University (USA) - 1992, Hagen (Germany) - 1991-1993, 1996, 2000, 2001, 2003-2008, Debrecen (Hungary) - 1996, Univ. of Chisinau (Moldavia), 1998, Wuerzburg (Germany) - 1998, 2000 - 2002, 2003, Dortmund (Germany) - 2000, 2002, 2006, Nicosia (Cyprus) - 2004, Istanbul (Turkey) - 2007, 2009.

Professor P. T. Mocanu was appointed Dean of the Faculty of Mathematics (1968-1976 and 1984-1987), Head of the Chair of Function Theory (1976-1984 and 1990-2000), Head of Department of Mathematics and Vice-Rector of "Babeş-Bolyai" University (1990-1992) and the president of the Romanian Mathematical Society.

He is also the Chief Editor of *Mathematica (Cluj)* and member of Editorial Board of *Studia Universitatis Babeş-Bolyai. Mathematica*, *Bulletin de Mathématiques S.S.M.R.*, *Proceedings of the Romanian Academy* and *Analele Univ. Oradea*.

Since 1972 Professor P. T. Mocanu has been a Ph. D. supervisor; 37 students had taken Ph. D. At least 13 of his former Ph. D. students are now full university professors.

During his fertile teaching activity he teaches the basic course on Complex Analysis and many other special courses (Univalent Functions, Differential Subordinations, Geometric Function Theory, Measure Theory, Hardy Spaces etc.). He is also the author of two handbooks on Complex Analysis, which are very useful for Romanian students in mathematics.

Professor P. T. Mocanu was many years the Chairman of the Seminar of Geometric Function Theory, Department of Mathematics, "Babeș-Bolyai" University and he is the Head of Romanian School on Univalent Functions.

Professor P. T. Mocanu is: Member of Romanian Academy, Member of the American Mathematical Society, Doctor Honoris Causa of University "Lucian Blaga", Sibiu (Romania) - 1998 and of University of Oradea (Romania) - 2000.

The scientific activity of Professor P. T. Mocanu is very rich; he has more than 180 papers in the field of Geometric Function Theory (Univalent Functions) and two important monographs: *Geometric Theory of Univalent Functions* (Romanian), Ed. Casa Cartii de Stiinta, Cluj-Napoca, 1999, 410 pages and 2006, 460 pages (with T. Bulboacă and Gr. St. Sălăgean) and *Differential Subordinations: Theory and Applications*, Marcel Dekker, Inc., New York, Basel, 2000, 459 pages (with S. S. Miller) (this monograph is cited more than 520 times [2]). About 300 mathematicians cite a lot of his results. The top ten most cited papers are cited over 1530 times ([2]). The method of differential subordinations (admissible function method) due to Professor P. T. Mocanu and Professor S. S. Miller is well known and very useful in the research activity in the field of Geometric Function Theory.

Professor P. T. Mocanu obtained important results in the following domains: extremal problems in the theory of univalent functions, new classes of univalent functions (well known is the class of alpha-convex functions, known also as Mocanu functions), integral operators on classes of univalent functions, differential subordinations and superordinations (together professor S. S. Miller they introduced and developed this theory), conditions of diffeomorphism in the complex plane, sufficient conditions for injectivity, starlikeness or convexity, application of complex analysis in geometrical optics.

In Mathematical Reviews (MathSciNet) (2011) the name Mocanu is mentioned in about 400 reviews ("Review Text"), 50 in "Title" and more than 770 in "Anywhere". The concept of "Differential Subordination", is mentioned in about 300 reviews (Review Text), more than 250 in "Title" and more than 450 in "Anywhere". The concept of "alpha-convex function", is mentioned in 95 reviews (Review Text), 83 in "Title" and 146 in "Anywhere". There are 356 citations by 128 authors in MR Citation Database.

Collaborators: Hassoon S. Al-Amiri, Valeriu Anisiu, Kit C. Chan, Dan Coman, Paul J. Eenigenburg, Richard Fournier, Sorin Gh, Gal, John T. Gresser, Hidetaka Hamada, Miodrag Iovanov, Gabriela Kohr, Mirela Kohr, Sanford S. Miller, Grigor Moldovan, Gheorghe Oros, Mihai Popovici, Maxwell O. Reade, Dumitru Ripeanu, Stephan Ruschewyh, Grigore Ștefan Sălăgean, Ioan Șerb, Steven M. Seubert, Ion D. Teodorescu, Gheorghe Toder, Xanthopoulos I. Xanthopoulos, Eligius J. Zlotkiewicz.

References

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- [2] http://scholar.google.ae/scholar?q=p+mocanu&hl=en&as_sdt=1%2C5&as_sctp=on

Grigore Ștefan Sălăgean
"Babeș-Bolyai" University
Faculty of Mathematics and Computer Sciences
1, Kogălniceanu Street, 400084 Cluj-Napoca, Romania
e-mail: salagean@math.ubbcluj.ro