

## FOREWORD

### ANNIVERSARY OF PROFESSOR AUREL POP

It is a great pleasure to honor Aurel Pop with this dedicated issue on “Studia Universitatis Babes-Bolyai – seria Physica”. Aurel Pop has contributed to the synthesis and characterization of various materials, like polycrystals, thin films, interfaces, and nanostructures covering a broad range of materials and methods and is well recognized in the worldwide scientific community.

Aurel Pop was born in Feleacu, Cluj county, Romania, on July 8, 1953 and graduated Faculty of Physics at the Babes-Bolyai University in 1976. In the period 1976-1977 he has followed Master studies in Solid State Physics at the same University. He performed his PhD studies between 1989 and 1993 at Babes-Bolyai University under the supervision of prof. dr. Alexandru Nicula and prof. dr. Ioan Cosma. In this time his studies became more comprehensive, and they covered a broader research field. His Ph.D. thesis was entitled “*Electric and Magnetic Properties Studies on High  $T_c$  superconductor oxidic compounds*”. The effect of the Gd substitution on Y site on structural, magnetic and electric properties in YBCO compounds were reported. He has shown the presence of thermal fluctuations below 170 K, confirmed by a metallic behavior at low temperatures and by Hall effect measurements. Several methods were used as static and dynamic susceptibility, transport and EPR measurements.

He starts to work in 1977 as a teacher of physics at the Chemistry Industrial High School Craiova till 1987. During this period, he acts also as vice-director at the same institution. From 1987 till 2018 he has occupied several positions at Babes-Bolyai University, Faculty of Physics. He was assistant professor (1988-1993), lecturer (1994-1996), associate professor (1997-2000) and full professor starting with 2001. In this period he was

teaching different courses, seminars and laboratory classes, at bachelor level, like: "Mechanics and Acoustic", "Molecular Physics and Thermodynamic", master level courses for master degree as follows: "Thin films physics", "Transport phenomena", "Physics of vortex systems", "Magnetic and superconducting materials" and PhD level: "Experimental methods in solid state physics". He was focused on understanding the modern directions in science and technologies, and to introduce these new information, at high scientific level, from the field of solid state and applied physics, in his courses. The teaching activities performed by during this years were very appreciated by his students. He was awarded by the University with "The Diploma of Merit" in 2005, Diploma Comenius in 2010, and Diploma Teacher of the Year in 2011.

Aurel Pop research interest was focused in the field of high temperature superconductivity: synthesis, structural, electric and magnetic characterization of different classes of superconducting materials with high transition temperatures, both bulk and thin films. In the last years, another field of interest was the study of electrodeposited nanocomposite coating and their anticorrosive behaviour and ZnO doped thin films, respectively. In his research activities Aurel has installed and used different techniques for thin films preparation and characterization as follows: installation the equipment for thin film synthesis by magnetron sputtering, a.c. magnetic susceptibility devices, magnetization devices, and transport properties measurements. In the last years he was involved in numerous studies related to the understanding of the morphological and structural particularities of a large variety of nanostructures with potential applications, as well as of the processes in which such systems are involved. He was involved in the field of magnetism and superconductivity during 1 year and 3 month (1999-2000) at Universite Libre de Bruxelles, Department "Physiques des Solides et Cryophysique" (Director prof. R. Deltour). He has published 97 papers in prestigious ISI journals like Thin Solid Films, J. Alloys and Compounds, Superconductor Science and Technology, J. of Applied Electrochemistry and others. In the same time, he has contributed with 8 papers in journals of the Romanian Academy, 38 papers in University journals, 20 papers in International non-ISI journals and 8 in Proceedings of International

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Conferences, 63 abstracts in international conferences volumes and 7 books. He was awarded in 2005 with the Romanian Academy “Stefan Procopiu” prize for his researches on *Oxidic superconducting materials with high transition temperature* and with Babes-Bolyai University prize for the book “*Introduction on the Physics of Vortex Systems*” in 2004. He was director of many research grants. His result has attracted many appreciations in scientific literature, confirmed by the high number of citations in ISI journals.

Besides his scientific activity, Aurel Pop was permanently involved in the academic development at local and national levels. In this respect, he served as Head of Mechanics and Solid State Physics Department of the Faculty of Physics (1996–1998), as Head of the Department of Condensed Matter Physics and Advanced Technologies (1998–2012), as Dean of the Faculty of Physics (2012–2018), as President of the Cluj Branch of the Romanian Physics Society (2013–2017), as member of the National Council for Research in Romanian University (2000–2008), and ARACIS member starting with 2011, member of the Senate and member of the Faculty Council.

He is also a member of the following international scientific societies: European Physical Society, Romanian Physical Society, Balkan Physical Society and IEEE Magnetic Society. He serve as Editor in Chief of *Studia Universitatis Babes-Bolyai, seria PHYSICA* (2012-2018) and member in the editorial office of the journal *Coroziune si protectie anticoroziva* from Technical University of Cluj-Napoca.

Under his supervision, many students obtained their license Diploma degree, Diploma at the Master or PhD in Physics. In the name of all his students and his colleagues I would like to express the deepest appreciation and best wishes for the future.

**Dr. Romulus Tetean**

Professor at Babes-Bolyai University