Cassius Tocqueville Ionescu Tulcea
in occasion of his 90-th Birthday

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C. T. Ionescu Tulcea is celebrating this year his 90th Birthday. He is joined by the Romanian Mathematical Diaspora and a great number of colleagues from Romania and United States of America, who are sending him their best wishes for a continuous research activity and long life.

Professor Ionescu Tulcea was born in Bucharest, Romania, on October 14, 1923. He received his elementary and secondary education in distinguished schools from Bucharest and in 1942 became a student at his Alma Matter, the University of Bucharest, the Faculty of Sciences, Mathematical Section. He graduated from this school in 1946, obtaining his Diploma in Mathematics.

The University of Bucharest counted among its Professors some distinguished mathematicians, like Octav Onicescu (Probability Theory), Miron Nicolescu (Mathematical Analysis), Gheorghe Vranceanu (Geometry), Nicolae Theodorescu (Differential Equations), Simion Stoilow (Complex Variables), all of them former students of great mathematicians from France or Italy.

During his four years of study at the University of Bucharest, Ionescu Tulcea has acquired a solid training as a research mathematician, not only in classical mathematics, as represented in Europe before the Second World War, but also in the relatively new branches of Topology or Functional Analysis.

Following his graduation in 1946, Ionescu Tulcea has been appointed on a position of Assistant at the Chair of Probability Theory and remained with the University of Bucharest for the next 11 years. He has been promoted from the Assistant position to Associate Professor (1951) and to Full Professor (1957), at the Chair of Mathematical Analysis.

As a faculty member, Ionescu Tulcea has developed a teaching activity that qualified him as the main promoter of modern mathematics at the Bucharest University, in the field of Modern Analysis. To be more specific, he gave his lectures using Bourbaki’s books and other up to date treatises, which found their place in the programs only after World War II.

Moreover, as a research fellow of the Mathematical Institute of the Romanian Academy (1949-1957), Ionescu Tulcea organized seminars on Operator Theory, substantially contributing to a generation of Romanian specialists in this field, among
them counting Ciprian Foias (currently with Texas A & M University at College Station, TX), Nicolae Dinculeanu (University of Florida in Gainesville, as an Emeritus Professor), Radu Theodorescu (late Professor at the University of Quebec, Canada). The tradition of research in Operator Theory and Applications has been successfully continued by a new generation of Romanian mathematicians, including Serban Stratila (Bucharest), Laszlo Zsido (Rome), Dan Voiculescu (Berkeley, CA, a member of the National Academy of Sciences of the US).

After the Romanian period in his life/activity, in 1957, Ionescu Tulcea started his American period, still lasting. On the occasion of the Fourth Congress of Romanian Mathematicians (1956), Einar Hille was one of the distinguished participants who has had scientific discussions with Ionescu Tulcea, inviting him to join, in 1957, a group of young mathematicians at Yale University. In the unanimous regret of his Romanian colleagues, Ionescu Tulcea decided to emigrate to the US. He spent two years at Yale, where he obtained his Ph D under Einar Hille.

While in Romania, he could have easily obtained the degree, and was promoted to Full Professorship without the Ph D degree, because he decided not to get through the compulsory examination in Marxism-Leninism, imposed at that time by the authorities in Bucharest.

After the time at Yale, Ionescu Tulcea held positions of Associate Professor and Professor at University of Pennsylvania, University of Illinois at Urbana, finally becoming a Professor at Northwestern University in Evanston, IL, (1966) where he is currently associated as an Emeritus Professor.

It is a difficult task to get through the details of research work undertaken and carried out by Ionescu Tulcea. We shall only give a few indications regarding his varied preoccupations in kind.

Among the first publications one can indicate his paper *Mesures dans les espaces produits*, in Atti dei Lincei, 1949, in which he improves some results due to the well known probabilist J.L. Doob and a joint paper with G. Marinescu (University of Bucharest and Romanian Academy), in Annals of Mathematics, entitled *Théorie Ergodique pour des classes d’opérateurs complètement continus* (1950). Both papers had a very good reception in the international mathematical community.

In 1956 the Publishing House of the Romanian Academy has issued the book *Hilbert Spaces*, in Romanian, and has been awarded an Academy Prize for it. This was a very useful source for several generations of Romanian mathematicians who were interested in Functional Analysis. Also in 1956, appeared a treatise on *Probability Theory and Applications*, co-authored by Onicescu, Mihoc and Ionescu Tulcea, a work distinguished with the State Prize in 1962.

Very likely, the most significant work to be mentioned is the Springer production *Topics in the Lifting Theory* (1969), co-authored by Alexandra and Cassius
Ionescu Tulcea. They have also published several journal articles, dealing with this concept, which attracted the attention of many researchers. Mathematical Reviews has created a special division, dedicated to The Lifting Theory.

While at Illinois University in Urbana two joint projects with Robert Bartle led to the publications Introduction to Calculus and Honours Calculus, both with a good pedagogic/didactic flavor.

Two other titles, Sets and Topology, jointly with William Fairchild, were published in 1970 and 1971, each being re-edited/reprinted five times.

In concluding this short account, a modest tribute to Cassius Ionescu Tulcea for his life and work dedicated to Mathematics, we express our gratitude for his substantial and inspiring contributions brought to our beloved field of knowledge.

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