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Preface

On September 6, 2023, the world lost a remarkable mathematician, Professor Dr. Niovi Kehayopulu. Born in İstanbul, Türkiye, on November 9, 1942, she embarked on a distinguished academic journey that left an indelible mark on the field of mathematics.

Professor Dr. Kehayopulu's academic journey began at İstanbul University, where she earned her bachelor's and master's degrees in the Department of Mathematics. Later, she ascended to the position of a full professor at the Department of Mathematics at the National and Kapodistrian University of Athens. During her initial years at the University of Athens, she collaborated closely with Professor Dr. Demetrios Andreou Kappos, who served as the supervisor for her doctoral dissertation. (Professor Kappos, in turn, was a student of Constantin Caratheodory and a pioneering figure in the contemporary mathematical scene of Greek universities.)

In the classroom, Professor Dr. Kehayopulu was renowned for her exceptional teaching skills, as she had a rare ability to convey complex mathematical concepts with clarity. Her students held great affection for her, a testament to her dedication and passion for education. Her research primarily centered on ordered semigroups, a subfield of ordered algebraic structures that she helped establish and advance. Notably, the concept of an ordered semigroup generalizes that of a semigroup without order, as every semigroup without order can be considered an ordered semigroup with its equality relation serving as the order relation. This insight allowed her to extend many results from semigroups without order to the realm of ordered semigroups. Among her significant contributions, she introduced the notions of pseudoorder and complete pseudoorder in ordered semigroups, which proved to be pivotal in the study of these structures. She delved into the semilattice (and complete semilattice) decomposition of various types of ordered semigroups and explored the role of fuzzy sets within this context, offering valuable characterizations for different types of ordered semigroups. In addition, Professor Dr. Kehayopulu made notable strides in the study of regular ordered semigroups and the set of regular elements within these semigroups. In recent years, she provided precise definitions for hyper (ordered) semigroups and Γ-(ordered) semigroups, allowing her to systematically investigate a wide range of results related to these structures.

Over the course of her illustrious career, she authored approximately 250 papers, all of which exhibited a flawless and elegant mathematical writing style that mirrored her teaching approach. Her passing is a profound loss to the international mathematical community, and her contributions will continue to shape the field for years to come.

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