Life and Work of Günter Lumer

Günter Lumer was born in Frankfurt, Germany in 1929. With Nazism on the rise, the Lumer family left Germany in 1933 and settled in France, where Günter received his early education. Then, in 1941, the Lumer family fled once again, this time to Uruguay, where Günter would become a citizen.

Possessing what would be a life-long passion for mathematics, Günter graduated in 1957 with a degree in electrical engineering from the University of Montevideo. In fact, while at Montevideo, he was in the research group of Paul Halmos, who would later dedicate a page to Günter in his book *I Want to be a Mathematician: an Automathography.* Günter's first paper "Square roots of operators," a joint work with P. Halmos and J.J. Schäffer, appeared in 1953 in the *Proceedings of the American Mathematical Society.*

In 1956, Günter received a Guggenheim fellowship to study at the University of Chicago. There he received his Ph.D. in Mathematics in 1959; his dissertation was entitled *Numerical Range and States* and was written under the supervision of Irving Kaplansky, thus earning himself a place among a long lineage of mathematicians connected to Kaplansky.

Following Chicago, Günter Lumer held positions at UCLA (1959–1960), Stanford University (1960–1961), University of Washington (1961–1974), University of Mons-Hainaut (1973–2005), and the International Solvay Institutes for Physics and Chemistry in Brussels (1999–2005).

Günter Lumer was a creative and prolific mathematician whose works have great influence on the research community in mathematical analysis and evolution equations. His scientific activities greatly contributed to the standing of the Belgian Universities in general and the University of Mons-Hainaut in particular. In 1976, supported by the Belgium National Science Foundation, Günter founded a contact group with the goal of organizing research and exchange meetings in the fields of Partial Differential Equations and Functional Analysis. From the 1990s on, building on the success of this group, Günter became a driving force and leading contributor to several large-scale projects sponsored by the European Community. The resulting conferences on *Evolution Equations* created a lasting network supporting international research collaboration. These activities, combined with Günter's relentless energy and love for mathematics, were at the origin of the breath-taking development of the field of evolution equations and the theory of operator semigroups after the pioneering book of Hille and Phillips from 1957.

In particular, between 1992 and 1997 he co-organized the *North West European Analysis Seminar* that was held in 1992 at Saint Amand les Eaux (France), in 1993 at Schloss Dagstuhl (Germany), in 1994 at Noordwijkerhout (The Netherlands), in 1995 at Lyon (France), in 1996 at Glasgow (United Kingdom) and in 1997 at Blaubeuren (Germany). Those seminars covered a broad range of topics in analysis and were a reflection of the true spirit of Günter Lumer, who always enjoyed bringing together and working with a wide range of mathematicians and scientists.

Although Günter Lumer's professional focus was on functional analysis, partial differential equations, and evolution equations, he nourished a broad interest for almost all areas of mathematics and for science in general. He published more than one hundred papers and edited many books. Probably his best known result is the celebrated Lumer-Phillips theorem, which gives necessary and sufficient conditions on an operator to generate a strongly continuous semigroup of contractions on a general Banach space. This result, published in the *Pacific Journal of Mathematics* in 1961, is a key contribution to the theory of operator semigroups.

Günter Lumer deeply loved mathematics. He considered his work as the most precious thing he could leave to future generations. He was an independent and original person, never influenced by fashion or convention. He used to say, "If a crowd of a thousand unanimously condemns someone, then he must be innocent. For it is unlikely for a thousand people to honestly agree on the same thing."

With Günter Lumer we miss an inspiring teacher, a mentor and friend of a generation of researchers, and a leader of our professional community. Günter Lumer: a mathematician to be honored.

List of Ph.D. students of Günter Lumer

Charles Widger, *Multiplicative perturbations of generators of semigroups of operators*, U. Washington, 1970

David Neu, *Summability of the linear predictor*, U. Washington, 1972

Luc Paquet, *Sur les équations d'évolution en norme uniforme*, U. Mons, 1978

Roger-Marie Dubois, *Equations d'évolution vectorielles, problèmes mixte et formule de Duhamel*, U. Mons, 1981

Serge Nicaise, *Diffusion sur les espaces ramifiés*, U. Mons, 1986

Maryse Bourlard, *Méthodes d'éléments finis de bord raffinés pour des problèmes aux limites concernant le laplacien et le bilaplacien dans des domaines polygonaux du plan*, U. Mons, 1988

List of publications of Günter Lumer

Wilansky, A. and Lumer, G., Advanced Problems and Solutions: Solutions: 4397, Amer. Math. Monthly 58 (1951), no. 10, 706–708.

Butchart, J.H. and Lumer, G., Advanced Problems and Solutions: Solutions: 4403, Amer. Math. Monthly 59 (1952), no. 2, 115.