

Erich Peter Klement

Obituary to Edwin Lughofer (August 4, 1972 – June 26, 2023)  
at the occasion of his funeral, July 8, 2023, Obernberg am Inn

Dear family Lughofer!  
Dear friends and colleagues of Edwin!  
Dear mourners!

My memories to Edwin Lughofer reach back almost 33 years: in the fall of 1990 he participated, during his first semester at the Johannes Kepler University Linz, in my course on Linear Algebra which was followed by other courses I taught, including some seminars on Fuzzy Logic.

In this way he got in touch with the first cooperation between Sony DADC Austria and the Fuzzy Logic Laboratorium Linz-Hagenberg, where we developed an automatic quality check in real time for prints on compact discs.

After having invited Edwin to join our institute in 1997, in his first project he was responsible for the development and implementation of algorithms for the detection of transcription errors between the original recording and the digital CD (called "Noise Detector"). Some of the project results became part of his master thesis „Application of mathematical signal analysis for detecting noise on compact disks“.

After his graduation to Diplom-Ingenieur, Edwin contributed also to other projects, in particular to the project AMPA „Automatic Measurement Plausibility and Quality Assurance“ sponsored by the European Union (EU), where the company AVL List in Graz, a leading developer of engine test benches, was the main contractor. The main/relevant problem was the (as automatic as possible) deduction of mathematical models from measurement data and their gradual improvement. His PhD thesis „Data-driven incremental learning of Takagi-Sugeno fuzzy models“, in partial fulfilment of the requirements for the academic degree Doctor of Technical Sciences completed in 2005, was an in-depth study of learning data-driven fuzzy systems.

During the following years his scientific spectrum grew further, including topics like Evolving Fuzzy Systems, Active Learning, Predictive Maintenance, and Hybrid Modeling of Complex Systems.

Edwin was actively involved (quite often as a Key Researcher) in a large number of innovative research projects which were sponsored by the EU or by national institutions for research funding such as the FWF (Austrian Science Fund, for basic research) or the FFG (The Austrian Research Promotion Agency, responsible for company-related research and development). The list of industrial partners included, besides Sony DADC Austria and AVL List, other distinguished companies such as voestalpine, Profactor, and Engel. Some of them offered, recognizing the quality of his work, interesting jobs to Edwin – we appreciated that he decided to continue to work in our institute.

Edwin Lughofer is the author of the monograph "Evolving Fuzzy Systems – Methodologies, Advanced Concepts and Applications" published by Springer in 2011, and co-editor of several collected volumes and special issues of international scientific journals. His list of publications includes over 100 articles in peer-reviewed journals and more than 100 papers in Edited Volumes and Conference Proceedings. Google Scholar lists more than 9000 citations of his publications (including five journal papers with exceeding 200 quotations each) – over the last several years he was the most cited author in our institute. Also, for several contributions to international conferences he received a Best Paper Award.

In addition, Edwin served as a member of the Editorial Board of renowned scientific journals such as Evolving Systems, IEEE Transactions on Fuzzy Systems, Information Sciences and Information Fusion. He also was actively cooperating in the organization of scientific conferences (mainly in the field of Evolving Fuzzy Systems), most notably as General Chair of the IEEE Conference on Evolving and Adaptive Intelligent Systems in Linz in 2014.

During his whole career Edwin Lughofer was a dedicated researcher who had grown to a Key Researcher over the years, who was a principal investigator in some of his own projects and who helped to create innovative research ideas, especially in the cooperation with the two centers of competence SCCH (Software Competence Center Hagenberg) and LCM (Linz Center of Mechatronics), but also with Profactor. Taking into account that all these activities were made possible only by third

party funds of companies and institutions for research funding, his overall achievements are even more remarkable.

In his research community Edwin is acknowledged as a profound expert, and he will be remembered as a successful and cooperative partner who published his results extensively, in this way willingly sharing his own expertise with his colleagues.

And the members of the Fuzzy Logic Laboratorium Linz-Hagenberg (FLL) and of the Institute for Mathematical Methods in Medicine and Data Based Modeling (m3dm) of the Johannes Kepler University Linz have lost a most reliable colleague, many also a friend with whom it was a pleasure to share a nice glass of beer, discussing about soccer, movies and music.

We all were deeply shocked when the sad news reached us that, in the early morning of June 26, Edwin had passed away completely unexpectedly, after a longer serious illness he had endured in quiet patience.

Also on behalf of the head of our institute, Luca Gerardo-Giorda, and his deputy, Susanne Saminger-Platz who cannot be with us today, I offer our sincere condolences to you, dear Family Lughofer – we all are grateful to have had such a dedicated colleague in our institute for more than 25 years.

May you rest in peace, dear Edwin!