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## Editorial

**George Yadigaroglu** was born in Constantinople (Turkey) to Greek parents on September 16, 1939. He attended the Greek community primary and secondary schools there but finished his secondary studies in Athens, Greece. He then made another move west, to Lausanne, Switzerland where he studied mechanical engineering at the Ecole Polytechnique Fédérale. Lausanne was a pleasant place and after graduation he spent four years organizing and heading a small research team for a Swiss industrial company. In 1965 he made a much greater leap west, to the US, for graduate studies at MIT where he obtained in 1970 his Sc.D. in Nuclear Engineering. He taught as Assistant Professor for a semester at MIT, waiting for a more permanent move to the far (and golden) west this time and a faculty appointment in the Department of Nuclear Engineering at the University of California—Berkeley. He kept this one from 1970 till 1982; in 1980 he was promoted to Full Professor.

He would have certainly stayed happily in California if not called in 1979 to organize and direct a Nuclear Regulatory Service for the Greek Atomic Energy Commission, in Athens again: from his Californian far west location of the US he moved all the way east in Europe. At the time, Greece was considering the installation of a nuclear power plant and the main concern of his Service was to address the difficult siting problems in Greece, including the thorny seismological risk issues. After three years and without a nuclear power plant in sight, he swung again towards the West, but this time only a short distance, back to Switzerland: in 1982 he resigned from his appointments at UC-B and the GAEC and was elected to the Nuclear Engineering Chair of the Swiss Federal Institute of Technology in Zurich, better known as ETH.

In Switzerland, beyond his teaching and research duties at ETH, he has been closely associated with research at the Paul Scherrer Institute, the Swiss national nuclear research centre. Between 1988 and 1999, he was formally responsible for the direction of the Thermal-Hydraulics Laboratory of PSI. Under his leadership, the laboratory became well-known worldwide for its activities in reactor safety model development and code validation, and more recently for its work on passive cooling systems. The large-scale PANDA facility, originally a 1:25 scale model of a boiling water reactor containment system, the largest experiment he has ever conceived, was built during this time. The facility produced data needed for the certification and analysis of a number of novel passive cooling systems developed internationally. The PSI work has also provided, however, the incentive for a number of very interesting fundamental developments, related, e.g., to condensation in the presence of non-condensables, the numerical simulation of two-phase flows, etc.

Earlier, during his Berkeley years, *George* was active as a teacher, a researcher and a consultant for various national and industrial organizations in research areas around Light Water Reactor safety and the loss-of-coolant accident (LOCA). Starting from his doctoral dissertation, he made several contributions to the understanding and the analytical treatment of two-phase flow instabilities and dynamics. In the early seventies, reflooding heat transfer was treated in the safety analysis codes by strictly numerical correlations; he was one of the first to propose mechanistic, two-fluid modelling of the various LOCA phenomena and for axial-conduction controlled rewetting. Following the passive containment cooling period, George concentrated most of his research on the development of methods for computational fluid dynamics (CFD) of *multiphase flows*, an area that he calls Computational *Multi-Fluid* Dynamics, or CMFD, an acronym that may well become commonplace. He and his team at ETH are conducting pioneering work in this challenging, future oriented, difficult area. One of the ideas promoted by Yadigaroglu is that certain problems need “cascades of solutions” (from the largest, macro- or system scales, via meso-scales, down to the smallest micro-scales of interest) to arrive at satisfactory answers. He is actively promoting such ideas in Europe for potential applications of CMFD methods for nuclear power plants.

Yadigaroglu has since 1984 organized the now famous Zurich series of courses on multiphase flows and boiling heat transfer. The Zurich Short Courses have attracted well over 1200 participants and have become an initiation step for all young persons entering into multiphase flow research in Europe.

Most of all Yadigaroglu is a teacher. His teaching combines a rigorous treatment of the subjects with down-to-earth practical engineering advice. His students remember his courses for the fundamental understanding of the subjects that they gained.

He was or is editor or otherwise associated with several scientific journals and he likes to say that, starting in 1987, he has slaved for some fifteen years as Associate Editor of this journal, with an enthusiasm kept alive by the vague promise of an imminent Festschrift. He has fully deserved it.

Shortly after the end of his studies in Lausanne, he married Suzanne née Kern. They have two sons, Ion is the younger and Charris, the older who gave them two grandsons. The two-phase flow community appreciates Suzanne’s dinners during the Zurich Short Courses and other occasions. After his retirement from ETH at the compulsory age of 65, George may oscillate between yet undisclosed locations East or West of Zurich.

George and I have been friends for many years. I always look forward to coming to Zurich and seeing his smiley face at the airport. We then continue downtown and discuss multiphase flow over a steak Tartar and a beer. We also spent quality times on “his” island in Greece (he is the best surfer in his age group), and I very much hope that this will continue for many years to come.

Happy birthday, George, and many happy returns!

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