

Friendship Creates Intercontinental Cooperation in Aerosol Research

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Keyword: Prof. Dr. David Y. H. Pui

Our first meeting in 1972

Prof. Dr. David Pui and I met for the first time in Minneapolis in 1972. He was a master's student in the Particle Technology Laboratory of Kenneth Whitby and Benjamin Liu. I spent my second year as a postdoc in the U.S. working further on my Ph.D. topic "Flame spectroscopy for analyzing the gas phase in combustion processes". In the first year at the University of California, La Jolla, I heard a lot about the increasing smog (aerosol) problem, mainly caused by the particles from combustion processes (traffic). In the Particle Lab everybody including Dave were already involved in this topic. I started to use flame spectroscopy for the detection of soot in flames. After I went back to Germany, I accepted the offer of a professorship with the topic "Aerosol Measurement Technology" at the new University Duisburg – Essen. I started to keep the connection I had to the Particle Lab at the University of Minnesota, especially to Dave Pui.

Almost 50 years of research cooperation

The first joint project was the development and testing of the DMPS, a particle size distribution measuring device, based on the combination of the DMA and a condensation nuclei counter of TSI. This was the starting point for the later developed SMPS. Over the years many different topics were investigated. In the 1990's we both became very interested in nanotechnology. One of the projects was the development of the nano-DMA. 1993 we both got the best supported Max-Planck-Award in Germany for our ideas in the new research topic Nanotechnology. The last big joint project was the Extreme UV-Lithography (EUVL) project supported by Intel in the years 2003 to 2007, in which my last Ph.D. student Dr. Christof Asbach, now president of the German Association for Aerosol Research (GAeF), was also involved. We tried to avoid the contamination of the mask in the EUVL tools. To give a feeling for the amount of cooperation between the two of us, I checked the publication list of my division and determined 85 publications, which include Dave Pui's name.

Friendship supports cooperation

Friendship delivers a good support for cooperation. We involved our families in many activities. We visited each other on family events such as birthdays and weddings. We invited our children to visit each other's families in Germany and U.S. We made many sightseeing tours together, for instance to Australia, Japan, Spain, Switzerland and the last one to Eastern Germany before the Corona Pandemic.

Formation of the worldwide aerosol community since 1972

Also important for successful cooperation in research is a good worldwide research community. GAeF, founded in 1972, was the first aerosol research association in the world that were followed by the formation of national associations all over the world. In the early time already International Aerosol Research Assembly (IARA) has been founded to get a basis for the International Aerosol Conference (IAC) every four years. We thought that IARA is also the best basis for worldwide co-operations. Therefore we set up via IARA the Fissan-Pui-TSI Award for co-operations between colleagues from two continents. This year it will be presented at the IAC in Athens.



Max Planck Research Award (1993) conferred to Fissan-Pui for Collaboration in Aerosol Technology