In Memoriam

Our much-loved, highly respected long-standing colleague, Dr Marie-Sousai Appavou, passed away suddenly on 13 September 2023 at the age of 46.

We will remember him for his passionate dedication to his research as well as his ready willingness to help others, always with kindness, modesty, and generosity – qualities that were very much his own.

After graduating from Cergy-Pontoise University in 2001 with a degree in biochemistry, Marie-Sousai moved to the Laboratoire Léon Brillouin (LLB) for his PhD. He brought together two very distinct areas of physics – high pressure and neutron scattering – to elucidate questions rooted in biochemistry in his thesis entitled “Influence de la température et de la pression sur la structure et la dynamique de l’inhibiteur de la trypsine pancréatique bovine. Une étude par diffusion de neutrons.” His PhD supervisor, Dr Marie-Claire Bellissent-Funel, recalls Marie-Sousai showing great perseverance as he carried out “a remarkable piece of research.”

In 2006, Marie-Sousai moved to Germany to take up a postdoctoral position with Dr Wolfgang Doster in the Physics Department of the Technical University of Munich, where he studied the effects of hydration, secondary structure, temperature, and pressure on the dynamics of proteins. To this end, he designed and oversaw the construction of a high-pressure cell, tirelessly fighting leaks as he pushed materials to their limits.

From 2007, Marie-Sousai worked at the newly established outstation of Forschungszentrum Jülich, the Jülich Centre for Neutron Science (JCNS) at the FRM II research reactor in Garching. As instrument scientist for small-angle neutron scattering, he always supported users and students with his exceptional dedication, abundance of patience,
and outstanding expertise. At the same time, he furthered his own research on the structure and dynamics of biomolecules using a wide range of neutron scattering methods.

Shortly after beginning at JCNS, Marie-Sousai once again broadened his competence by diving into transmission electron microscopy. After spending months on end with experts to master this technique, he established a completely new, JCNS-operated transmission electron microscopy laboratory for soft matter. Subsequently, he initiated numerous collaborations with institutes and universities all over Europe as well as in the United States and Japan. In 2021, he was instrumental in acquiring a scanning electron microscope for the jointly operated Hereon and JCNS laboratory at MLZ. All this activity did not distract him from neutron research and he often participated in measuring campaigns. Most recently, he was preparing an experiment at ILL scheduled for November 2023. He successfully managed to bridge the gap between real and reciprocal space and was keen to help others do the same.

Marie-Sousai’s colleagues across the scientific community are deeply saddened by their loss. Wherever he went, he left a lasting impression with his smile and human touch. Sometimes, in the middle of a technical discussion, he would start searching for the necessary reference in his archive: an imposing ensemble of paper towering around him on his ever-too-narrow desk. We will all miss Marie-Sousai’s warm and open-hearted nature, which made him approachable for scientific as well as private discussions, whatever the hour. His passing leaves an irreplaceable void within our community – not only do we lose an excellent scientist, we also lose a friend.

Our thoughts go to Marie-Sousai’s family, and in particular to his wife and son. We wish them strength and fortitude at this sad and difficult time.

On behalf of his colleagues at FZJ, at MLZ – JCNS, GEMS, FRM II – as well as his former colleagues at LLB.

September 2023, Garching bei München