

Miroslav Z. Papiz (1955–2026)

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Dr Miroslav Papiz was a member of the UK's Synchrotron Radiation Source (SRS) team throughout its operational life from 1981 to 2008. After graduating from the Astbury Department of Biophysics at the University of Leeds, UK, he gained his PhD at Napier College, now Edinburgh Napier University, in Edinburgh. His PhD involved β -lactoglobulin, on which he was the first author of a paper in *Nature* (Papiz *et al.*, 1986). He then joined John R. Helliwell as a postdoctoral research assistant for the installation, commissioning and use of the Enraf–Nonius 'FAST' TV electronic area detector on Station 9.6 of the SRS Wiggler Protein Crystallography Beamline. This was a pioneering device, originally developed at the MRC Laboratory of Molecular Biology (LMB) in Cambridge by Dr Uli Arndt and commercialized by Enraf–Nonius in Delft in The Netherlands. The FAST system was a challenging piece of instrumentation, not least installing it on the first superconducting wiggler in the world, with its outstanding X-ray beam intensities. There were several visits to the Enraf–Nonius site in Delft. A feature uncovered in the commissioning work was a thermal instability in the detector response, which was eventually solved with a Peltier cooler. The high demand from users for access to this beamline from the UK and worldwide led to considerable pressures on the fraction of commissioning and the beamtime allocation for users. There were outstanding publications from the user programme, including on virus crystallography from Purdue, Oxford and Harvard Universities, in which Miroslav also took part in general user support, which was often an arduous task over many hours in the working day. A

highlight of this effort was the contribution made providing the SRS 9.6 and 9.5 Protein Crystallography Beamlines for the structure solution of the F1 ATPase (Abrahams *et al.*, 1994), a project led by John Walker at the MRC–LMB, who became the first winner of a Nobel prize using data from a synchrotron. This project benefitted from the MAR Research image-plate scanner developed by Jules Hendrix at EMBL Hamburg. In the midst of this, Miroslav developed his own research interests, including in collaboration with researchers such as Neil Isaacs and Andy Freer at Glasgow University, who had the most cited publication from the SRS research programme on the crystal structure of an integral membrane light-harvesting complex from a photosynthetic bacterium (McDermott *et al.*, 1995). The FAST TV system opened whole new avenues of structural science research, notably in microcrystal crystallography (Andrews *et al.*, 1988). The facilities presided over by Miroslav also contributed to another Nobel Prize-winning project, the structure solution of the ribosome, by another team from MRC–LMB led by Venkatraman (Venki) Ramakrishnan (Wimberly *et al.*, 2000). After the closure of the SRS in September 2008, Miroslav moved to the University of Liverpool as an independent research scientist. In Liverpool he successfully continued his research work on light-harvesting complexes (Bellini & Papiz, 2012; Kotecha *et al.*, 2013; Papiz *et al.*, 2019).

Miroslav also took management seriously. In 2002, John Helliwell, as the new Director of SR Science at the CCLRC, reorganized the SRS organizational structure to move from technique-based teams to science areas, thereafter named Science Colleges. Miroslav took up the role of Head of the Biology and Medicine College. This had a wide-ranging remit, wider than structural biology, thereby firmly embracing not only diffraction and spectroscopy but also imaging and coordination of the activities at the Structural Biology Laboratory, an annex to the storage ring.

Despite the growing load of responsibilities Miri would continue interacting closely with the beamline scientists and engineers working on the beamlines, developing and maintaining mechanical, electronic and software systems, with biologists and technicians in the Structural Biology Laboratory and with the CCP4 developers' group based at Daresbury. In fact, for him there were no mental boundaries in going from the activities of the Structural Biology Laboratory to the hardcore engineering activities of the beamlines. It was just one science, a continuum in which he worked.

Miroslav Papiz was a scientist of the best calibre and with a sensible level-headed approach. Miri was adamant that beamline scientists were scientists first and foremost, rather than solely service providers. He supported, mentored and encouraged his fellow SRS beamline scientists, and particularly those he had management responsibilities for, to ensure that they had the time and resources to pursue their own research areas, and to publish and present their work at conferences. He always had the highest regard for their expertise and dedication and was a valued and highly respected colleague to all who worked with him.

As a colleague and a friend, Miri was fiercely intelligent, with a witty, dark and dry sense of humour. He was always helpful and offered a great source of knowledge and insight, especially for younger colleagues, to whom he was eager to pass on his expertise, but perhaps not without a joke at their expense first.

He was someone who preferred to lead by the example of his actions and achievements, rather than words, and he was a colleague and manager that you did not want to disappoint. There was very little ego on display, as it was not necessary, and he disliked this trait in others. Miri was not a fan of meetings. He reserved his fandom for Bradford City.

Miri had a very strong sense of justice and was happy to challenge anyone if he thought he or his colleagues were being treated unfairly. Indeed, Miri's move into management at the SRS started with him rallying his colleagues to oppose decisions that were being made. Some former colleagues reading this may recall the email address sbcoop@dl.ac.uk, where sbcoop stood for Structural Biology Co-Operative, Miri, unsurprisingly, was one of the instigators and drivers of sbcoop. Following this, the group unanimously agreed that Miri was the right person to take the leadership role himself; although it is likely he was initially reluctant to do so. He was later strongly committed to developing proposals for a UK Fourth Generation Light Source at Daresbury Laboratory.

Following the closure of the SRS and until recently, Miri kept in touch with colleagues by attending occasional gatherings at local restaurants of those who still lived in the local area. Here he remained the supportive, wise and witty person he had been as a colleague. Those who worked with Miri learned a great deal from him, and not just in the field of SR structural biology. He was also a reliable referee on a wide range of publications of which we know directly, serving IUCr Journals and no doubt beyond, throughout his career. He will remain as a role model of leadership in science.



Figure 1
This photograph was taken at The Cottage, now Flaver's Indian restaurant, in Warrington on Saturday 10th January 2015. Clockwise, all from Daresbury Laboratory except where stated, are Miri, Michele Cianci, Nick Bushby (Astra Zeneca), James Nicholson, Rod Birchall, Steve Buffey and Steve Kinder.

A picture of a 2015 social event is shown in Fig. 1.

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