

Jacques Michel Hammann Biography

October 8, 2022. Patrick Charbonneau

Jacques Michel Hammann (September 28, 1940-) was born in Pfaffenhoffen, Alsace, France, son of Ernest Hammann, engineer at Électricité de France (EDF), and Madeleine Hammann. In 1955, his family moved to Paris, where EDF had promoted his father.

Hammann was a student at École des mines de Paris (1961-1964), obtaining a diplôme d'ingénieur from the selective *grande école*. He then pursued graduate studies at the Centre d'études nucléaires (now CEA) in Saclay, where he obtained a PhD in 1969 for a *thèse de sciences physiques* entitled "Étude par diffraction des neutrons de 0,3°K des propriétés magnétiques de grenats de terre rare et d'aluminium ou de gallium," under the supervision of André Herpin. He then stayed at CEA and, in 1970, was put in charge of the laboratory of low temperature magnetism within the Service de Physique du Solide et de Résonance Magnétique, which was later renamed Service de Physique de l'Etat Condensé. In 1995, Hammann became Chef du Service de Physique de l'Etat Condensé, a position from which he retired in 2003. Over the years, Hammann spent several long stays abroad, including at the University of California Los Angeles (1977-1978 and 1989-1990) and at Osaka University in Japan (1994).

Hammann was trained as a low temperature neutron diffraction specialist, and quickly moved into the study of magnetism. Around 1980, he took up the experimental study of spin glasses, motivated by collaborators who could produce alloys with controlled quenched substitutional disorder. His high-accuracy susceptibility meter, paired with the unique magnetometer of his CEA colleague, Miguel Ocio, attracted several additional collaborations over the years. The nearby theory group at the Service de Physique Théorique (now, Institut de Physique Théorique) naturally led Hammann and coworkers to interpret their results through the lens of replica symmetry breaking. This notably led Ocio and him to co-author a popular science article for *Pour la Science* on the topic in 1987. In the 1990s, the group also collaborated closely with Jean-Philippe Bouchaud, who proposed a trap model to understand the activated dynamics of experimental spin glass materials.