

## **Yves Joly**

Researcher for 23 years my first efforts lied in the study of surfaces, both experimentally and theoretically by low energy electron diffraction and low energy positron diffraction. For the last 12 years, my main investigations have been theoretical and computational studies of X-ray Absorption Spectroscopy, especially near to the absorption edges and with anomalous diffraction. In particular, I have developed the FDMNES code (Finite Difference Method for Near Edge Structure) which overcomes the intrinsic limitations of muffin-tin potential codes. This understanding has been applied to the study of oxides, especially relating to charge ordering, orbital ordering and spin ordering, which are not easily amenable with other available techniques. This work has had many applications both from my group and from other groups which have used this methodology. Actually at the Institut Néel, CNRS and UJF, Grenoble, my present work concerns new theoretical developments in order to include multi-electronic aspects in the photo-absorption process.