Preface

The present issue of the Supplement to Journal of the Physical Society of Japan is the proceedings of the international workshop on *Magnetic Excitations in Strongly Correlated Electrons* held in Hamamatsu, Japan for August 19–22, 1999. It was organized to commemorate the retirement of Professor Hiroshi Yasuoka from the Institute for Solid State Physics (ISSP), University of Tokyo and to celebrate his 60th birthday.

Throughout his research carrier, Professor Yasuoka has been consistently working in the field of nuclear magnetic resonance (NMR) experiments in condensed matter. His research topics, however, covered broad area such as the dynamics in magnetic insulators, the metal-insulator transitions in vanadium oxides, the itinerant electron ferromagnetism and antiferromagnetism, and the high temperature superconductivity. Today these research subjects continue to be the central issues of what are now called the strongly correlated electron systems. He made enormous contribution to establish importance of NMR as a unique microscopic probe to investigate dynamic behavior of correlated electrons. Therefore, we thought it quite appropriate to organize a workshop devoted specially to the magnetic excitations in strongly correlated electrons on the occasion of his retirement from ISSP and assumption of the director of the Advanced Science Research Center at the Japan Atomic Energy Research Institute.

The principal scope of the workshop is the magnetic dynamics in transition metal compounds with particular emphasis on magnetic resonance and neutron scattering experiments, developments of new materials, and related theories. The first part deals with the latest development of the physics of doped cuprates, in particular the pseudo-gap phenomena and the interplay between charge and spin degrees of freedom. The second part is devoted to spin dynamics and quantum phase transitions in low dimensional Mott insulators. Novel effects of disorder in both doped and undoped materials are discussed in the third part. The final part is devoted to a variety of phenomena resulting from interplay among charge, spin, orbital and lattice degrees of freedom. The physics of transition metal compounds has been making remarkable progress since the discovery of high temperature superconductivity. Understanding of magnetic dynamics in both insulating and metallic materials is critically important. We hope that the articles in this volume discussing wide variety of phenomena and materials represent the current status of this exciting field.

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