

Dr Ramachandran Saravanan, Asst. Prof. of Physics, has been associated with the Department. of Physics, The Madura College, affiliated to the Madurai Kamaraj University, Madurai, Tamil Nadu, India from the year 2000. He worked as a research associate from Jan.1998-Mar.1998 at the Institute of Materials Research, Tohoku University, Sendai, Japan and then as a lecturer at the Centre for Interdisciplinary Research, Tohoku University, Sendai, Japan from Apr.1998-Mar.1999. From 1999-Mar.2000, he worked as Visiting Researcher at the same center. [Tohoku University was adjudged as Asia's second best University in standards – (Ref. 1. Multidisciplinary University Ranks and Ref 2. Tohoku University)].While in Japan, he supervised one doctorate and one master course student.

As on 2008, about 10 researchers are working under his guidance on various research topics in materials science, crystallography and condensed matter physics. As on 2008, he has published around 55 research articles in reputed Journals and has attended around 45 conferences, seminars, symposia and presented research papers. He has attracted government funding in the form of Research Projects. He has completed one CSIR (Council of Scientific and Industrial Research, Govt. of India) project successfully and proposing various projects to Government funding agencies like CSIR, UGC and DST.

He was awarded Senior Research Fellowship by CSIR, New Delhi, during Mar.1991- Feb.1993; awarded Research Associateship by CSIR, New Delhi, during Mar. 1994 – Aug. 1997 (In CSIR research Project); awarded Research Associateship by CSIR, New Delhi, during Oct.1997-Apr.1998; awarded the Matsumae International Foundation Fellowship -1998 (Japan) for doing research at a Japanese Research Institute (Not availed by him); awarded a Research fellowship at the Institute of Materials Research, Tohoku University, Sendai, Japan – January 1998 – March 1998; awarded a Lecturership position at the Centre for Interdisciplinary Research, Tohoku University, Sendai, Japan – April 1998 – March 1999; awarded a Lecturership position (as visiting Scientist) at the Centre for Interdisciplinary Research, Tohoku University, Sendai, Japan – November 1999 – March 2000.

He expertises in various crystal growth, materials science, crystallographic, condensed matter physics techniques and tools as in Slow evaporation, Gel, Melt growth, Bridgmann methods, CZ Growth. He and his group can handle various equipments, different types of cameras; Laue, Oscillation, Powder, Precession cameras, Manual 4-circle X-ray diffractometer, Rigaku 4-circle automatic single crystal diffractometer, AFC-7R automatic single crystal diffractometer, AFC-5R automatic single crystal diffractometer, CAD-4 automatic single crystal diffractometer, Rigaku powder X - ray diffractometer, (with a superconducting magnet (5 Tesla) and a cryostat with temp. down to 4K,), Microdensitometer, Crystal pulling instruments, Other crystallographic, material science related instruments.He and his group has a sound computational capabilities too working on different types of computers. IBM – PC, Apple Macintosh - PC, Cyber180/830A – Mainframe, SX-4 Supercomputing system – Mainframe. He can handle various softwares related to crystallography and materials science. Around twenty (20) of (both DOS and GUI versions) programs have been included in the SINCRIS software data base of the International Union of Crystallography <http://www.iucr.org/>. More programs will be added in the future too. He can create/modify FORTRAN programs not only in the UNIX system as well as in the supercomputing systems, but also in the MAC-OS or Windows for PC's. In fact he has made extensive modifications in PREMOS (Powder refinement of modulated structures) and stabilized this program in the Dept. of Applied Physics, Faculty of engineering, Tohoku University, Sendai, Japan. He can create precise electron density maps using the versatile MEM (Maximum Entropy Method) technique. Using a super computer SX-4, he has computed and plotted the total electron density distributions of some semiconductor materials.