

C) Electronic and magnetic properties: The novel atomic order propagating in quasicrystalline solids is expected to possess electron transport behaviour and band structures qualitatively different from those of periodic translational order in 3d. Apart from these, the different nature of coordination and interatomic distances may also influence the splitting of various energy levels in quasiperiodic intermetallics, which in turn affect the magnetic behaviour of materials. These aspects were covered through 6 invited lectures, 8 contributed talks and 43 poster presentations. The nature of electron transport was discussed by O. Rapp (Stockholm, Sweden) and U. Mizutani (Nagoya, Japan). Apparently, the nature of electron conduction seems to be strongly sensitive to quality of the specimen and hence reproducibility seems to be a major problem. Photoemission studies reported by Z. M. Stadnick (Ontario, Canada) seem to suggest a universal pseudogap in the density of states curve at or around the Fermi level. Mg–Zn–RE systems are reported to be an ideal class of quasicrystalline solids for studying magnetic correlations. T. J. Sato (Tsukuba, Japan) presented various aspects of the above in a lucid manner for which he was adjudged the best speaker of ICQ7.

D) Thermal and dynamic properties: The dynamics of quasicrystals in Al–Ni–Co decagonal phase and Zn–Mg–Y

icosahedral quasicrystals were studied by inelastic neutron scattering and were reported by M. De Boisseu (Grenoble, France). High temperature specific heat of Al–Pd–Mn reported by K. Edagawa (Tokyo, Japan) was an important experimental study depicting a constant value of C_V between 300 K and 700 K which attained a value of 5 R at 1100 K. The experimental findings however, need to be understood. Other aspects of the nature of the thermal conductivity, process of diffusion, elastic constants, atomic defect studies by positron life time spectroscopy and time differential dilatometry were also discussed in this category of presentations. Apart from one invited lecture, there were four contributed talks and 23 posters covering various aspects of thermal and dynamical properties of qcs.

E) Mechanical properties: The three invited presentations pertaining to mechanical behaviour of qcs discussed (a) high strength quasicrystalline base aluminium alloys [A. Inoue, Sendai (Japan)], (b) defects and plastic behaviour of quasicrystals and approximants [M. Feuerbacher, Juelich (Germany)], (c) dislocations in quasicrystals and micromechanisms of plastic deformation of quasicrystals [R. Wang, Wuhan (China)]. Dislocation structures and toughness of qcs and also mechanical properties of composites were presented in this category. Apart from the 3 invited lectures, 2 contributed papers and

20 poster presentations deliberated on the challenges in these areas with particular reference to mechanisms of deformation and also the nature of dislocation movement in the presence of phonon and phason displacement fields.

F) Surface and thin films: The two invited lectures in this category dealt with (a) various aspects of interface characterization in qcs and their related phases [R. K. Mandal, Varanasi] and (b) the nature of surfaces in view of corrosion resistance, low friction, low surface and interfacial energy [P. A. Theil, Ames (USA)]. Many other aspects of coatings, surface oxidation and the nature of surface transformations were discussed through 5 contributed talks and 22 poster presentations.

The area of quasiperiodic structures has been shown to be truly international and interdisciplinary in nature.

All the delegates were appreciative of the splendid organization of the scientific, social and cultural aspects of ICQ7 by the three conference chairs, Professors Peter Kramer (Tubingen), H. R. Trobin (Stuttgart) and Knut Urban (Juelich).

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12th Khwarizmi International Award

Govind Swarup, Homi Bhabha Senior Fellow of the Homi Bhabha Fellowship Council has been awarded the 12th Khwarizmi International Award by the Iranian Research Organization for Science & Technology for his outstanding scientific contributions to the field of radio astronomy and for innovative design of the Giant Metrewave Radio Telescope recently constructed near Pune, India. The Award was presented to Govind Swarup by the President of Iran on 6 February 2000. Over the last decade, Govind Swarup was responsible for the indigenous design and construc-

tion of the Giant Metrewave Radio Telescope (GMRT) which has been set up recently by the National Centre for Radio Astrophysics of the Tata Institute of Fundamental Research, about 80 km north of Pune. GMRT consists of 30 fully steerable 45 m dish antennas of a novel design. The antennas are located in an interferometric array spread over a 25 km region, which provides radio images of celestial radio sources with a high resolution. GMRT has been fully designed and built in India by a team of dedicated Indian scientists and engineers. It is one of the largest radio telescopes in the world for operation at

decimetre and metre wavelengths. It has been designed for investigating certain outstanding problems in the field of astrophysics and cosmology.

Al-Khwarizmi was a ninth century scholar from Baghdad who wrote several books based on hellenistic, Hebrew and Hindu knowledge of which three are best known, viz. *Kitab al-jabr wa al-muqabalah*, *Al-goritmi de numero Indorum* (as translated into Latin) and *Sind-Hind*. It is remarkable that the words algebra and algorithm can be traced to his books based on India's contributions to mathematics.