

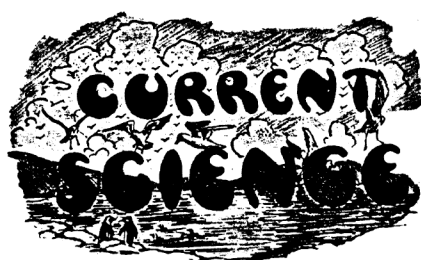
ions (SHI) could do to materials. In this talk, some of the results in the areas related to electronic sputtering, interface modifications, phase transitions and nano-phase generation by SHI were discussed. An overview of the research facilities and research possibilities in materials science with SHI was also given. T. K. Chini (SINP, Kolkata) spoke about periodic morphology development on semiconductor surfaces induced by ion beams. He reported the latest experimental results on the development of periodic ripple morphology on Si (100) due to argon ion bombardment at an incident angle of 60° of the ions.

On the fourth day, Ajay Sood (IISc, Bangalore) highlighted the recent results of Raman and Brillouin scattering studies on charge-ordered manganite systems. H. R. Krishnamurthy (IISc, Bangalore) presented the main features of a new theory for understanding a variety of phenomena, including colossal magneto-resistance in doped perovskite manganites. This was followed by a talk by G. P. Das (BARC, Mumbai) on spintronics: the latest revolution in semiconductors. He presented a review of the current state of fundamental understanding of the origin of ferromagnetism in Mn-doped GaN and related systems. An emerging scenario of the

applications of spintronics was also discussed.

The invited talk sessions were closed on the last day with the talk by V. K. Jindal (Panjab University, Chandigarh) on the carbon nanotube materials in single-wall and multi-wall formations. This was followed by a concluding session.

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Ramanujan: His Life and Work

In his review of G. H. Hardy's book on 'Ramanujan: His Life and Work', appearing in the July (1941) number of *Current Science*, Prof. Siddiqi says: "There is one remark of Prof. Hardy with which it is difficult to agree. Prof. Hardy says, 'I very much doubt whether Ramanujan, to the end of his life, ever understood at all clearly what an analytic function is'. It should be remembered that Ramanujan stayed at Cambridge for more than three years and *passed the Mathematical Tripos*. . . . However, if Prof. Hardy's conjecture is true, it does not speak much for the teaching of Mathematics at Cambridge which could not make a Ramanujan understand the nature of an analytic function at the end of a three years' course. We hardly think that Prof. Hardy himself would like to be forced to this conclusion".

It is incorrect to say that Ramanujan took the Mathematical Tripos, for, the B.A. Degree that he obtained at Cambridge was only a research degree. A life-sketch in the *Journal of the Indian Mathematical Society*, August 1919, says, 'At Cambridge he was given the research degree and the frontispiece shows him in his academical robes'.

Prof. Hardy himself observes in the collected papers of Ramanujan: 'He wished indeed to qualify for a Cambridge degree as a research student but this was a formality'.

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I, acknowledge my mistake, and gratefully accept Mr. Chandrasekharan's correction. However, I plead that my mistake was natural for various reasons.

(1) Before the last Great War, Cambridge academic life was dominated by the Mathematical Tripos, and every promising mathematics student went there for the Tripos. I was therefore under the impression that Ramanujan's

Cambridge B.A. must have been due to his having taken the Tripos.

(2) The lowest research degree at Cambridge or any other University is that of M.Sc., and it would come as a surprise to most people that Ramanujan was awarded a research B.A. Degree at Cambridge.

I am not disputing the fact, but only explaining why the details about Ramanujan's degree escaped my notice. Both the quotations given by Mr Chandrasekharan do not specify the 'B.A. Degree', but mention only the research degree. I assume with Mr Chandrasekharan that they refer to the B.A. Degree. Anyway, one does not think much of degrees in connection with Ramanujan. They are immaterial. The main point for the purpose of my argument is, as I have explicitly stated in the passage cited by Mr Chandrasekharan, that Ramanujan stayed at Cambridge for more than three years. During this time he must have met and talked with many mathematicians at Cambridge—not to speak of Prof. Hardy himself, whom he met almost every day.

RAZIUDDIN SIDDIQI

*Osmania University,
Hyderabad (Deccan),
17 November 1941.*