Introducing the ICTS Kosambi Lectures and D. D. Kosambi:

[Why the Kosambi lectures at ICTS?]
The 3 missions of ICTS are mainly centred around the natural sciences and mathematics. The Kosambi lectures will afford an opportunity to expand our vistas and engage in other branches of knowledge, some using the methods of science outside the traditional natural sciences and some that are related to the arts and humanities as these too have played and continue to play an essential role in our development as a species.

[D. D. Kosambi:]
Damodar Dharmanand Kosambi was born on July 31, 1907 in Kosben, Goa. His early education was in Pune and then at Harvard University from where he graduated in 1929. Returning to India he worked as a mathematician at BHU (1930-31), AMU (1931-33) [on the recommendation of Andre Weil]. Fergusson College, Pune (1933-45) and TIFR (1946-62) on the invitation of Homi Bhabha to build the mathematics department at TIFR. 1964 onwards he was CSIR Emeritus Professor at the Maharashtra Vidyanavardhini (Maharashtra Association for the Cultivation of Science). He passed away in 1966 at a relatively young age of 59 years.

Kosambi considered himself first and foremost as a mathematician and he was well regarded in that community. He was one of the Foundation Fellows of the Indian Academy of Sciences on the invitation of CV Raman. He served as a member of the International Mathematical Union (1950-52). This is the committee that awards the Fields Medal in Mathematics. The other members of the committee at that time were Harald Bohr (Chair), Lars Ahlfors, Karol Borsuk, Maurice Frechet, William Hodge, A. N. Kolmogorov and Marston Morse. Besides his work in pure mathematics [for lack of a better way to say it], Kosambi had an open mind and did not hesitate to learn about discoveries in the natural sciences. He made contributions to genetics where he introduced the Kosambi mapping function. He weighed (approx. 7000) undated old coins and applied statistical analysis to his data to ascertain their dates.

But there is more:
Kosambi applied the scientific method [for scientific method refer to the talk of David Gross during ICTS at 10] to the study of ancient Indian history.

He *adapted* the method of Karl Marx to the study of human history. The 200th birth centenary of Marx is being celebrated the world over. Marx chose to describe the time development of human society in terms of a certain set of variables (or observables). Adapting Marx's theory, to his problem, Kosambi in his book `An Introduction to the Study of Indian History' says **"history is defined as the presentation, in chronological order, of successive developments in the means and relations of productio**n". Why is this a useful way of describing history? Is it adequate? Predictable? We will not go further into a discussion of this question, except to say that *viewing history in terms of certain variables is a truly profound and revolutionary contribution of Marx, and adapting it Kosambi established the foundation of the scientific study of Indian history, which has had a profound influence on modern Indian historiography.*

Now since many of you are students of science, you will appreciate the above viewpoint quite easily because you all know that the description of the dynamics of simple and complex systems (including complex networks) requires the use of the right type of observables to answer the relevant questions you may be interested in.

By naming this series after D. D. Kosambi we also honour the memory of an extraordinary Indian who integrated various strands of thought and method to understand Indian culture and society, and India's past with the aim that such understanding will help uplifting the lives of the people of India [from hunger, poverty and backwardness].

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