ICTS DISTINGUISHED LECTURE

Residual Intersections in Geometry and Algebra

In this talk, aimed at non-specialists, I'll describe the geometric questions in the 19th century that led to the geometric theory of residual intersections, from oddities such as "How many conics in the plane are tangent to 5 given conics?" to central topics such as the Riemann-Roch theorem and the classification of space curves. I'll then explain how the theory was refined in algebra, and point to some open problems.

David Eisenbud

David Eisenbud is a Professor of Mathematics at the University of California, Berkeley. He is Director of the Mathematical Sciences Research Institute in Berkeley, where he served from 1997 to 2007 and again since 2013. He served from 2009 to 2011 as Director for Mathematics and the Physical Sciences at the Simons Foundation, and is currently on the Board of Directors of the Foundation. Eisenbud is Chair of the Editorial Board of the *Algebra and Number Theory* journal, which he helped found in 2006, and serves on the Board of the *Journal of Software for Algebra and Geometry*, as well as Springer-Verlag's book series *Algorithms and Computation in Mathematics*. Eisenbud was President of the American Mathematical Society from 2003 to 2005 and is also the Director of Math for America, a foundation devoted to improving mathematics teaching. He has been a member of the Board of Mathematical Sciences and their Applications of the National Research Council and is a member of the U.S. National Committee of the International Mathematical Union. In 2006, Eisenbud was elected a Fellow of the American Academy of Arts and Sciences. Eisenbud's interests outside of mathematics include theater, music and juggling. He has co-authored a paper on the mathematics of juggling, plays the flute and sings Bach, Brahms, Schubert, Schumann.

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ICTS Bengaluru

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