



Mathematical Sciences Research Institute

Video math: Free downloadable lectures by the world's best mathematicians.



Photo: Ed Alcock



Vmath: MSRI Lectures on the Internet

The Mathematical Sciences Research Institute (MSRI) wants to make its premier collection of lecture video materials ubiquitous. Teaching a course in Quantum Computation? A seminar on Noncommutative Algebra? Curious about the latest progress in Differential Geometry? Want to find a great speaker on Random Matrices or the Genetics of Complex Diseases? Pick your favorite lectures from our website and enrich your offering with them! Our library is there for your free use, and vast improvements are being made in its accessibility and video quality.

MBONE to Streaming Video

Since 1982 when the Institute opened its doors, many of the world's great mathematical researchers have visited MSRI. We have dreamed of sharing the excitement here with the students and researchers who cannot attend.

To realize this dream, MSRI became a pioneer in distributing lectures over the Internet. Starting in 1996, the "MBONE Project" broadcast a small number of lectures to a small group of math sites. But few could watch: technical barriers were high, and the fact that lectures were broadcast at the time they were given was less an advantage (mathematical ideas are long-lived) and more of a problem (it might be night where you live) than expected.

MSRI responded with Streaming Video. Our imperatives were these:

1. To allow the lecturer to present the material in the most effective way, whether with blackboard, overhead slides, or PowerPoint.
2. Make the lectures available free on the web to the widest possible audience, using low bandwidth.
3. Host material produced elsewhere and offer assistance to other institutions.

Despite many problems, the system worked. Seminars are based on the materials on our site. Many, many lectures have been watched. MSRI has the largest mathematical video library in the world, nearly 3000 hours of lectures as of 2004, available for free at any hour of the day or night.

Vmath

Starting in 2004 a generous grant from William R. Hearst III, and technical contributions from the Internet Archive and Brewster Kahle, will enable MSRI to take the next steps. The best features of our old system will be kept: free access and the avoidance of anything that disturbs the presenter. But we will:

1. Improve the production values, lighting, and sharpness of the videos to nearly cinematic quality, and make use of available bandwidth.
2. Make lecture notes, and associated documents available as PDFs.
3. Encourage individuals and institutions to establish special collections of our videos, possibly annotated, for locally given courses and seminars.
4. Greatly improve the indexing and accessibility of the material on the videos
5. Make individual DVDs of any lecture available by mail on a low-cost basis.

Visit www.msri.org to see Vmath for yourself!