

Video links and E-resources in Mathematics

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<http://www.mathstat.dal.ca/aac/videoweb.pdf>

This site is under construction. Please contact alan.coley@dal.ca directly for suggestions/additional websites

Perhaps the main resources are:

Math Seminars Online:

<https://mathseminars.org>

NSF online:

<https://mathinstitutes.org/videos>

The AMS also has a YouTube channel with videos:

<https://www.youtube.com/user/amermathsoc/>

Also see SIAM Financial Math. and Eng. Activity Group Seminar:

https://siam.zoom.us/webinar/register/WN_s8rIcHwiS-uPM3Dkuok-Wg

The London Mathematical Society also has a You Tube channel (where popular lectures are posted):

<https://www.youtube.com/channel/UCvp7jsbXjx2k8sGEkdtWCA>

Sections below:

- [Institutes](#)
- [Online mathematics seminars](#)
- [Fun on You Tube](#)

1 Online mathematics seminars

There are websites that list seminars, many of which are live seminars. In addition to:

<https://mathseminars.org>

see, for example, Terrence Tao's website and

<https://s.wayne.edu/isaksen/online-mathematics-seminars/>.

These include:

- Princeton regular seminars
- MIT (Applied) Categories Seminar
- One World Probability Seminar
- Electronic Computational Homotopy Theory Seminar
- Homotopy Type Theory Electronic Seminar Talks
- MIT Regularly Scheduled Seminars and Colloquia
- Maryland 2020 Virtual Lecture Series in Dynamics
- Seminario "flotante" de Lógica Matemática de Bogotá
- One World PDE Seminar
- Université de Genève Séminaire de Groupes et Géométrie
- Aram Dermenjian collects online seminars of algebraic combinatorial/discrete math, see Algebraic
- Combinatorics Online Seminars
- Online Asymptotic Geometric Analysis Seminar
- Banach spaces webinars
- Number Theory / Representation Theory Seminar, University of Wisconsin - Madison
- Virtual seminar on algebraic matroids and rigidity theory
- Online Probability Seminars (Spring 2020)
- Oxford Discrete Mathematics and Probability Seminar
- Max-Planck Nonlinear Algebra Seminar Online
- University of Minnesota Combinatorics Seminar, Spring 2020
- UW Combinatorics and Geometry Seminar
- Complex Geometry Seminar
- Shanghai Jiao Tong University INS (Institute of Natural Science) Colloquia
- TCS+
- Harvard regular seminar

2 Fields, CRM and Perimeter Institutes

The current list of current seminars for the academic year for Fields can be found at:

<http://www.fields.utoronto.ca/activities/seminars>.

Many past Fields activities were live streamed and then had video posted after the fact, so they are accessible from the Fields website; any that were recorded will display a link to a *FieldsLivevideo*.

Some online seminars include:

- [Toric Topology Research Seminar](#)
- [GANITA Seminar](#)
- [COVID-19 Math Modelling Seminar](#)

For example, there was a February workshop on COVID-19 done via zoom, whose webpage is at

<http://www.fields.utoronto.ca/activities/19-20/2019-nCoV>.

Videos of CRM conferences/Videos of CRM talks:

<http://www.crm.umontreal.ca/video/>

Most recent talk:

[http://www.crm.umontreal.ca/video/video.php?](http://www.crm.umontreal.ca/video/video.php?v=2020/20200117_ChaireAisenstadt_EvaTardos_v1_owres.mp4)

[v=2020/20200117_ChaireAisenstadt_EvaTardos_v1_owres.mp4](http://www.crm.umontreal.ca/video/video.php?v=2020/20200117_ChaireAisenstadt_EvaTardos_v1_owres.mp4)

CRM are currently in the process of listing online events; for updates see CRM homepage:

<http://www.crm.umontreal.ca/en/index.shtml>

see also

<http://www.crm.umontreal.ca/cal/en/mois202004.html>

PIRSA links <http://pirsa.org>

Seminar listing for available links to attend upcoming seminars:

<http://perimeterinstitute.ca/research/seminars>.

2.1 Algebra/ATCAT

- Algebraic combinatorics: <http://dermenjian.com/seminars/>
- Online mathematics seminars: http://math.mit.edu/aosun/online_seminars.html
- Online mathematics seminars: <http://jaume.dedios.cat/math-seminars/>
- Online worldwide seminar on logic and semantics: <https://www.cs.bham.ac.uk/vicaryjo/owl/>
- Applied category theory seminar: <https://sites.google.com/ucr.edu/actucr/>
- Quantum information seminar: <https://docs.google.com/spreadsheets/d/1nrhPOk5MYxZhxcd9hhC1eYBuIM2wVz42LxDOg5lGo/edit?gid=0>

3 Fun on You Tube

There is lots of neat stuff on You Tube, in addition to the You Tube channels:

<https://www.youtube.com/user/amermathsoc/> and

<https://www.youtube.com/channel/UCvp7jsbXjx2k8sGEkdtWCA>

For example, there are wonderful videos of the Mandelbrot set: e.g.,

<https://www.youtube.com/watch?v=PD2XgQOyCCk> (without music!).

There are descriptions of spinors:

<https://www.youtube.com/watch?v=SBdW978IiE>,

<https://www.youtube.com/watch?v=O7wvWJ3-t44>,

and fun demonstrations using various gadgets.

And some silly stuff:

3.1 Top 10 songs in mathematics and mathematical physics

- Eric Idle (Monty Python) – Galaxy Song.
<https://www.youtube.com/watch?v=buqtdpuZrvk>
- The Bare Naked Ladies – The Big Bang (at 3.16).
<https://www.youtube.com/watch?v=aPWgW8XjLM>
- Kate Bush – Pi (at 1.50).
<https://www.youtube.com/watch?v=W8RE2NyAiJg>
- Jack Black – Math Song.
<https://www.youtube.com/watch?v=aa8U0nL-KXg>
- Jarvis Cocker – Quantum Theory (at 0.50).
<https://www.youtube.com/watch?v=9NgEy58y2b4>
- Nick Cave and The Bad Seeds – Higgs Boson Blues.
[<https://www.youtube.com/watch?v=anXQvf8i0Wc>]
- They Might Be Giants – Why Does the Sun Shine?
<https://www.youtube.com/watch?v=3JdWlSF195Y>
- MC Hawking – $E = mc^2$.
<https://www.youtube.com/watch?v=iCDXeJGCiWg>
- One Direction – Maths Song.
<https://www.youtube.com/watch?v=waj-PN8jTHg>
- Bjork – Mutual Core.
https://www.youtube.com/watch?v=FQiT9ibMw_c

All of these songs are available on You Tube. Links available in Alan A Coley, Open problems in mathematical physics, Physica Scripta Vol. 92, No. 9 [arXiv:1710.02105]

Also: Top 10 movies. Also see: Best Movies For Mathematicians
<https://www.youtube.com/watch?v=EWdcOID8zxU>.

- Ramanujan (2014). Director: Gnana Rajasekaran.
- Einstein and Eddington (2008). Director: Philip Martin.
- Infinity (1996). Director: Matthew Broderick.
- The Theory of Everything (2014). Director: James Marsh
- A Beautiful Mind (2001). Director: Ron Howard.
- Proof (2005). Director: John Madden.
- Good Will Hunting (1997). Director: Gus Van Sant.
- Pi (1998). Director: Darren Aronofsky.
- The Imitation Game (2014). Director: Morten Tyldum.
- Fermat's Room (2007). Directors: Luis Piedrahita and Rodrigo Sopena