

DISASTERS BY THE DOZEN

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Simulation of natural hazards of interest to ACES spans much more than earthquakes alone. This talk presents quantitative, physics-based simulations of natural events and engineering failures drawn from both historical and hypothetical events. Landslides, tsunami, floods, storm surge, dam breaks — disasters by the dozen — I offer examples from the cases below. Take a look at the movie links if you want a sneak preview.

– 1958 Lituya Bay Alaska Landslide and Mega-Tsunami:

[<http://www.youtube.com/watch?v=PVLWLFMr8cw&feature=channel>]

– 1889 Johnstown Pennsylvania Flood:

[<http://www.youtube.com/watch?v=tMc9kP9q-d8>]

– 1963 Vaiont Dam (Italy) Landslide and Flood:

[http://www.youtube.com/watch?v=g_t_xAGaU-c]

[<http://www.youtube.com/watch?v=6C0eNRT0YqU>]

– 2005 Hurricane Katrina Storm Surge:

[<http://www.youtube.com/watch?v=S3j87m7wAik>]

– 1928 St. Francis Dam, California Failure and Flood:

[http://www.youtube.com/watch?v=3MdB_s6KhWA]

– Paleo: Lake Tahoe California Mega Tsunami:

[<http://www.youtube.com/watch?v=D8Py3XgRMkk&feature=channel>]

– 2010 Chile Earthquake Tsunami:

[<http://www.youtube.com/watch?v=rFsBShSfSis>]

- Future: Marsili Volcano (Italy) Collapse and Tsunami:

[<http://www.youtube.com/watch?v=8LQpPtj8EiY>]

An important role for all scientists (like we in ACES) is to transfer effectively the results of their work to the general public. I believe that short YouTube style movies like those above represent a wonderful, inexpensive and effective means to convey the value of our products and the excitement of our science to the younger generation of would-be scientists. Tell me what you think.