Interactive Web Apps for Visualizations in Mathematics and Engineering

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Examples of Bokeh

AN INTERACTIVE EXPLORER FOR IMDB DATA

Interact with the widgets on the left to query a subset of movies to plot. Hover over the circles to see more information about each movie.

Inspired by the Shiny Movie Explorer.

Information courtesy of IMDb (http://www.imdb.com). Used with permission.

Minimum number of reviews: 80
Dollars at Box Office (millions): 0
Genre
All ▼
Year released: 1970
End Year released: 2014
Minimum number of Oscar wins: 0
Director name contains
Cast names contains
X Axis
Tomato Meter ▼
Y Axis
Number of Reviews ▼

2758 movies selected
SDOF system – forced vibration
Conservation of momentum

Water Scene with the Boat and its Swimmers

Velocity Diagram

Number of swimmers on board : 5

Pause

Jump!

Reset
Extended java features: drag and drop

Collision Play Ground

PARTICLES’ PARAMETERS:

mass = 2.0 kg
mass = 1.0 kg

Green ball Velocity Direction (deg): 0
Green Ball Velocity Magnitude (m/s): 0

Orange ball Velocity Direction (deg): 0
Orange Ball Velocity Magnitude (m/s): 3

Coefficient of Restitution: 1

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Extended java features: 3d visualization
Fourier series approximation

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GitHub

Repository in GitHub
• Free access to all the application’s codes
• Possible for many people to work at the same time
• Track the code history and changes. Previous versions of the code are stored in GitHub
How to access the applications?

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Department of Mathematics

Chair of Structural Mechanics
Department of Civil, Geo and Environmental Engineering


https://www.bm.bgu.tum.de/lehre/interactive-apps/
Questions?

Thank you for your attention!