Exploring Vectorfields Curl and Divergence using Flash

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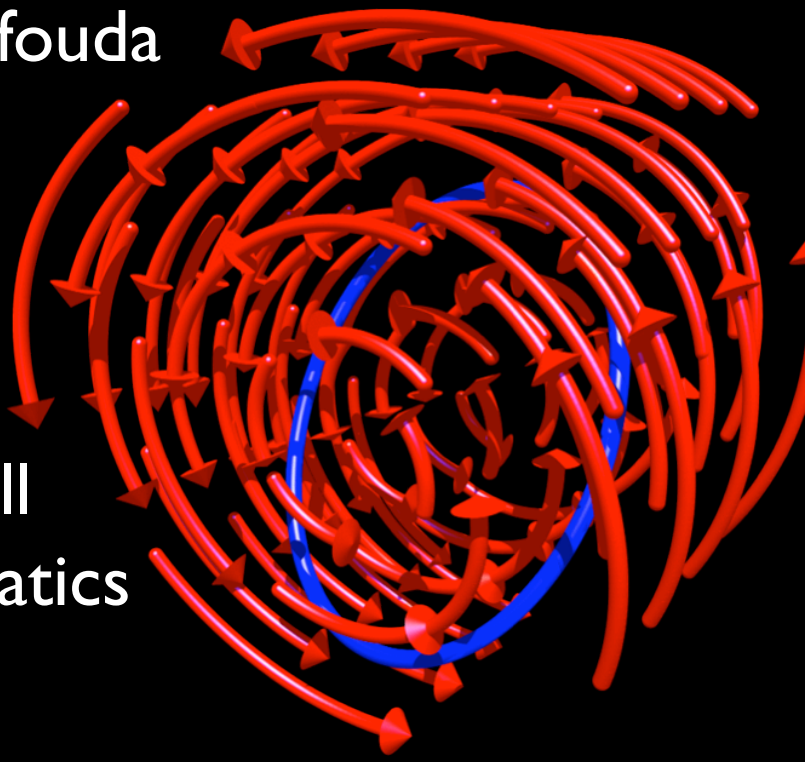
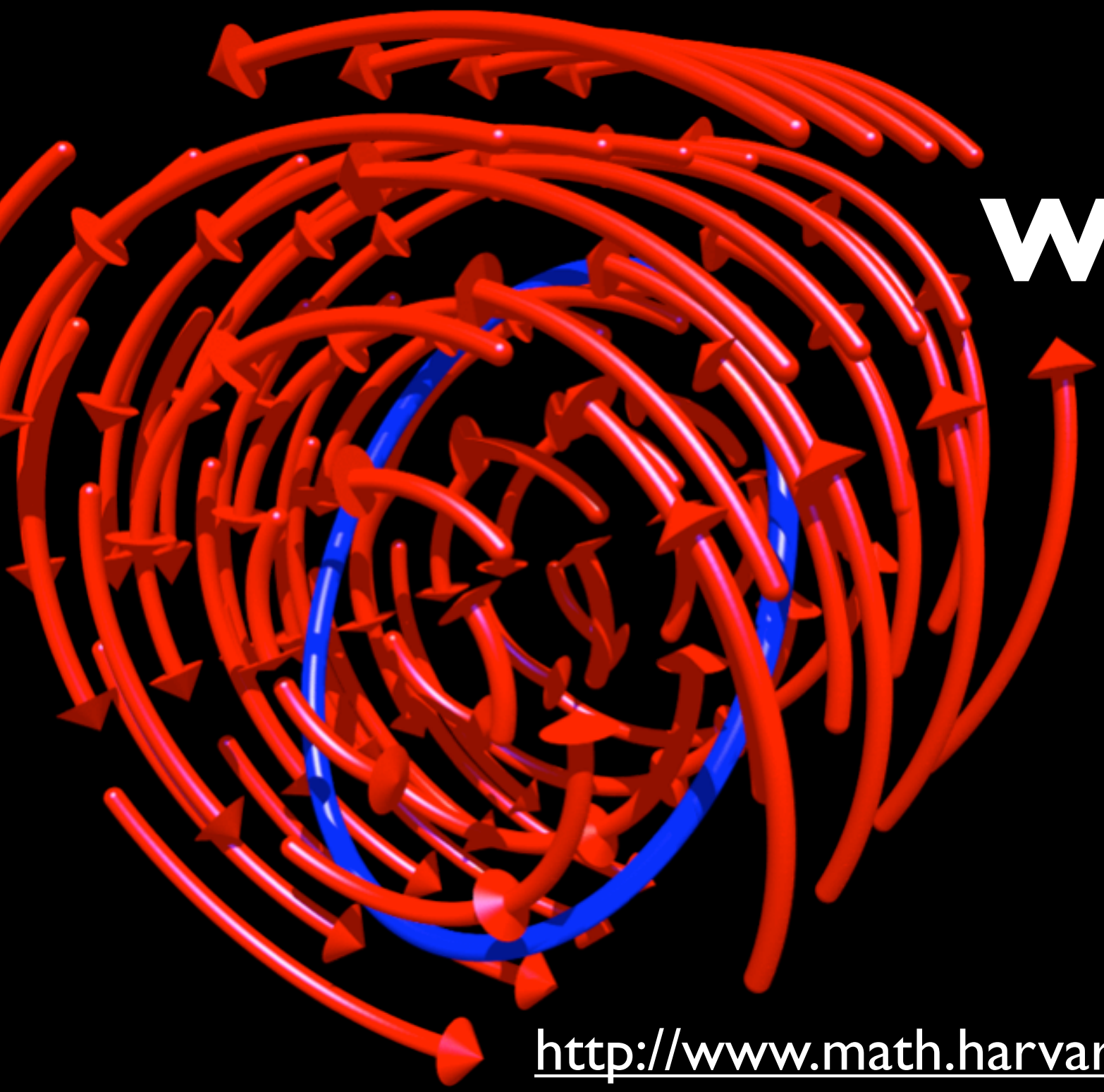
Preceptor of Mathematics



Aim:

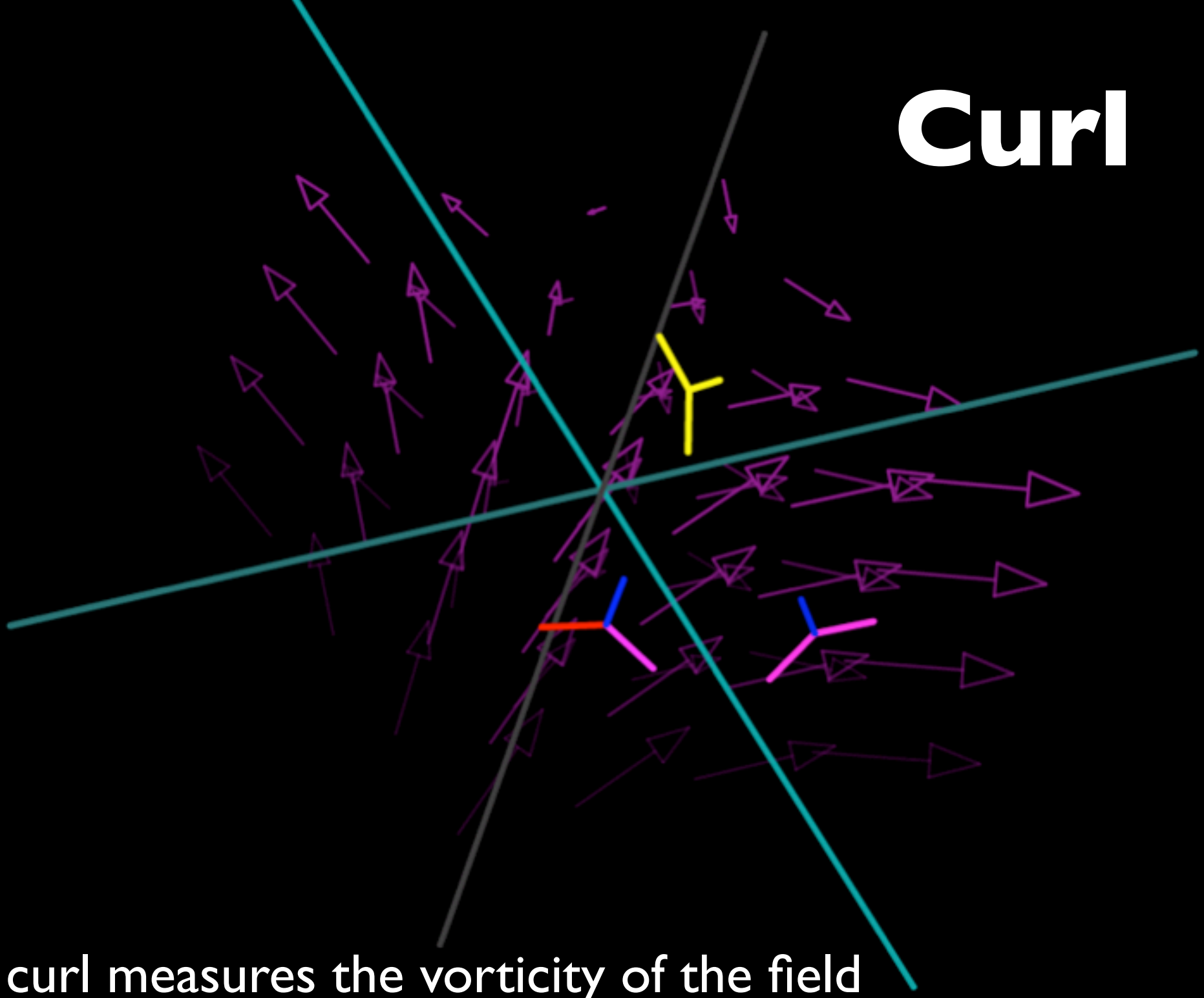
- Produce Flash Applications for Multivariable Calculus.
- Visualize Divergence and Curl with interactive tools.



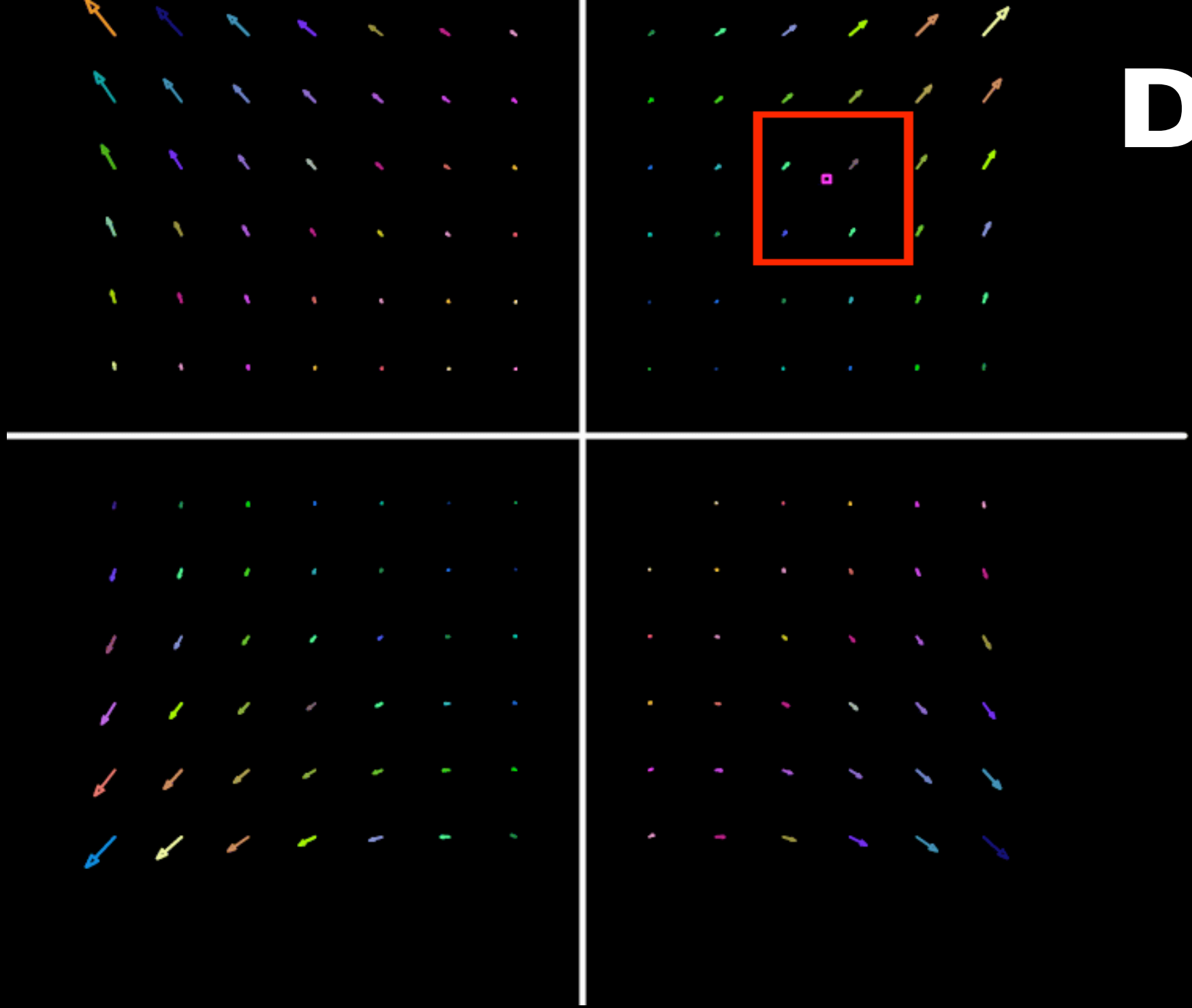
Website

http://www.math.harvard.edu/~knill/pitf

Curl

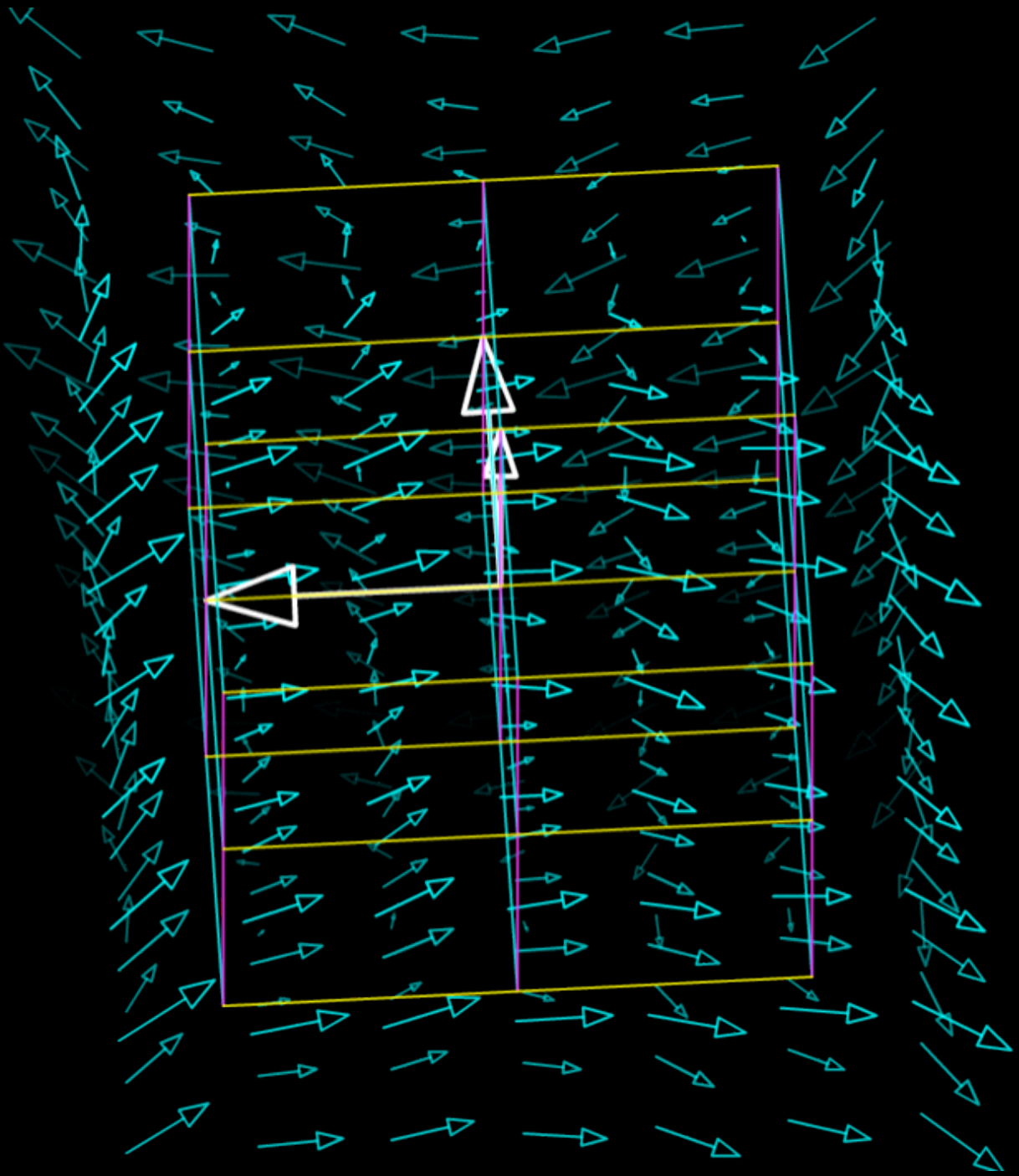


curl measures the vorticity of the field



divergence measures the expansion of the field

3D Visualization



Benefits

- Explore Flash as an alternative to Java applets
- Deliver interactive features in course websites.
- Build actionscript building blocks for future projects

PITF-Faculty interaction

The student gained experience in delivering abstract mathematical content in a visual and interactive way. The challenges were to combine:

- technology
- pedagogy
- mathematics

- programming
- planning