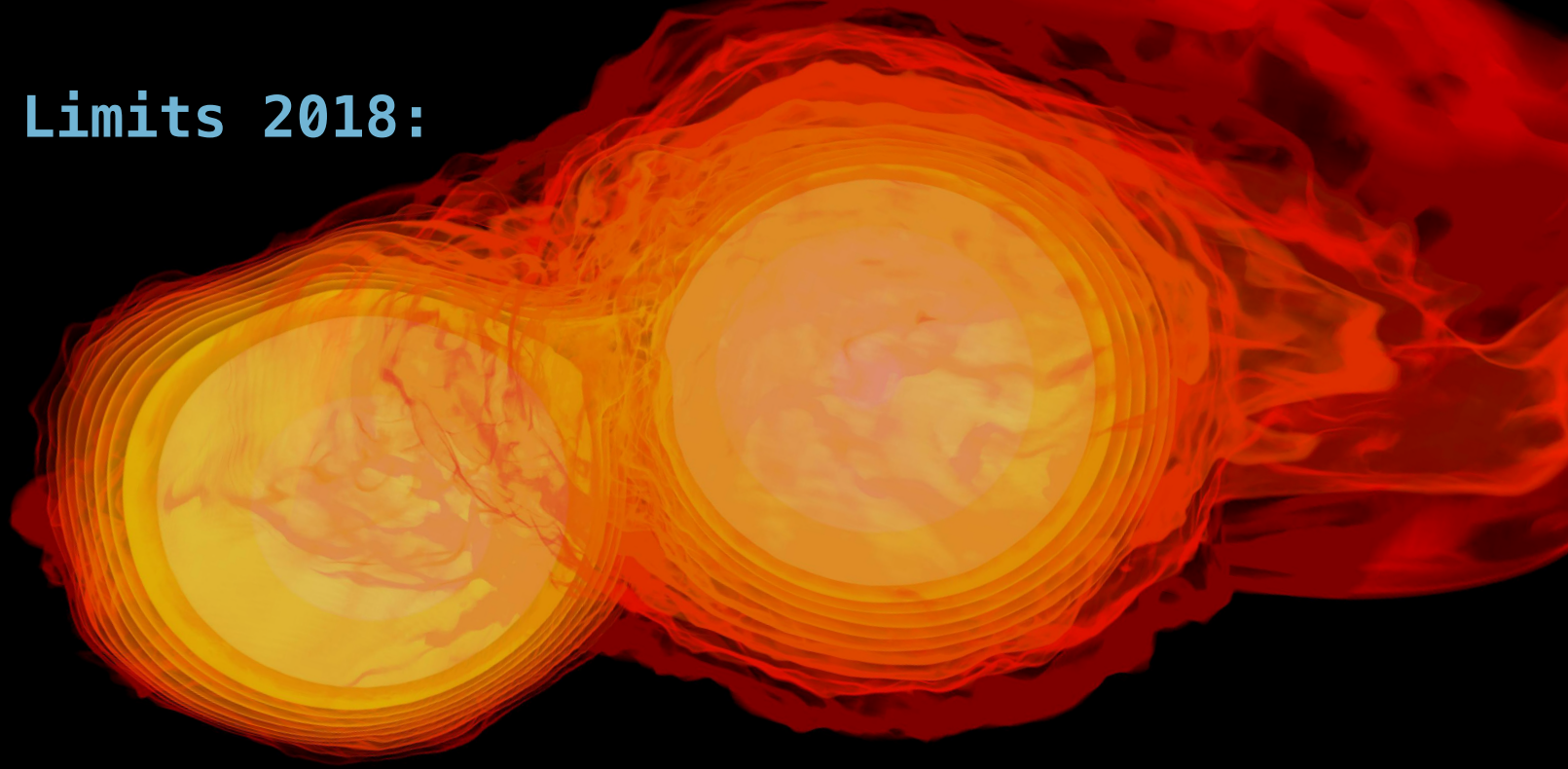


Boston City Limits 2018:



SUMMER SCHOOL ON

# Mathematical General Relativity & the **Geometric Analysis** of Waves of Fluids

**June 11–22 2018**  
**MIT (Cambridge, MA)**

*The purpose of this school is to introduce advanced undergraduate and beginning graduate mathematicians to a variety of topics in the theory of nonlinear evolution-type PDEs, with a focus on wave-like equations motivated by geometric and physical considerations. The courses will integrate background material with cutting-edge research topics.*

**Organizer:**

- Jared Speck

**Lecturers:**

- Stefanos Aretakis (University of Toronto)
- Marcelo Disconzi (Vanderbilt)
- Andrew Lawrie (MIT)
- Jared Speck (MIT)

**Topics:**

General Relativity

- The evolution problem in general relativity
- Stability of Minkowski spacetime
- Formation of trapped surfaces
- Black holes
- The memory effect
- Singularity formation
- Stability of the Big Bang

Fluid mechanics

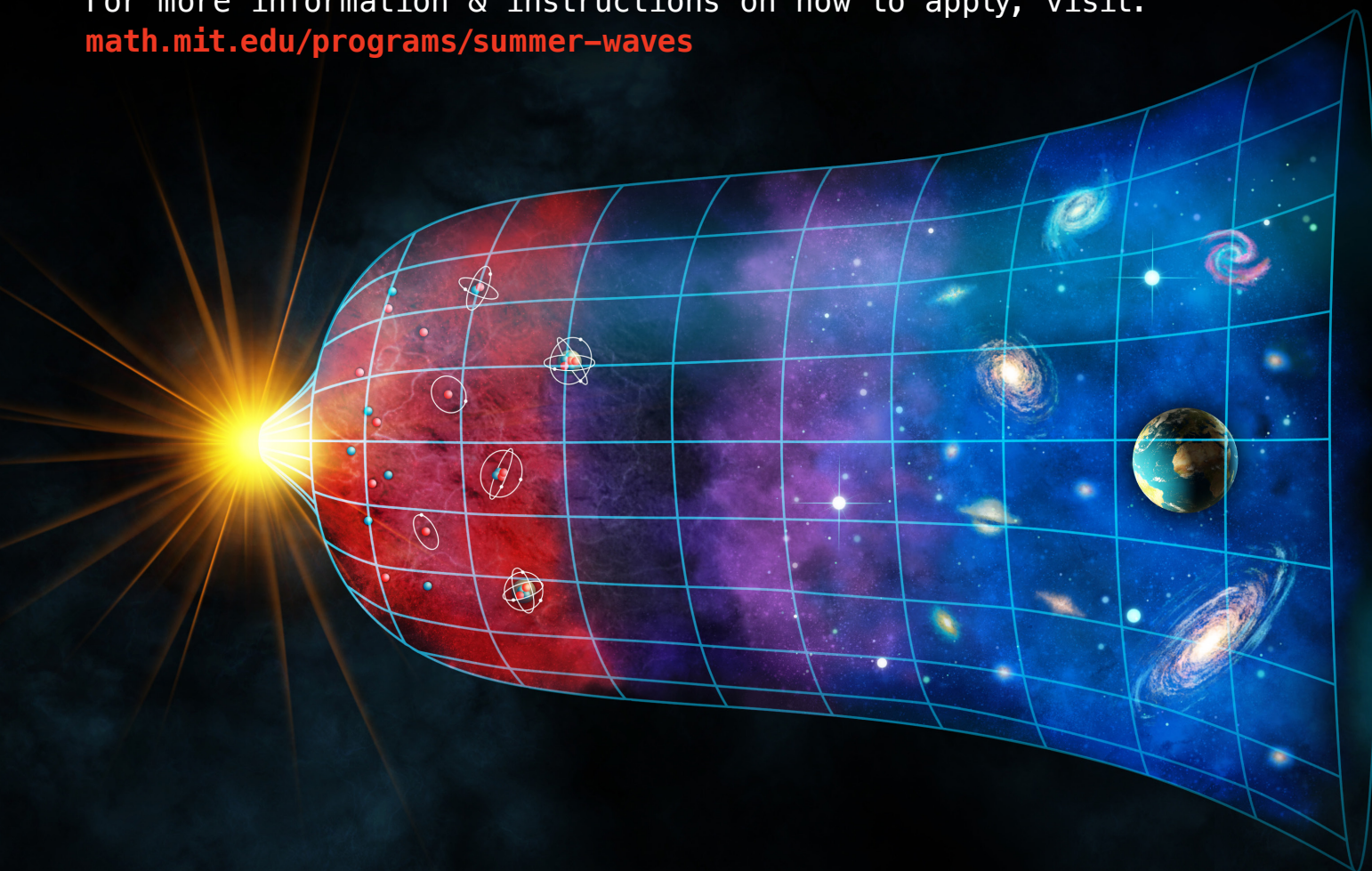
- Classical fluid mechanics
- Relativistic fluid mechanics
- Relativistic fluids with viscosity
- Free boundary problems

Wave equations

- Solitons
- Bubbling
- Blowup

For more information & instructions on how to apply, visit:

[math.mit.edu/programs/summer-waves](http://math.mit.edu/programs/summer-waves)



A special thanks  
to MIT and the  
NSF for their  
generous support.