

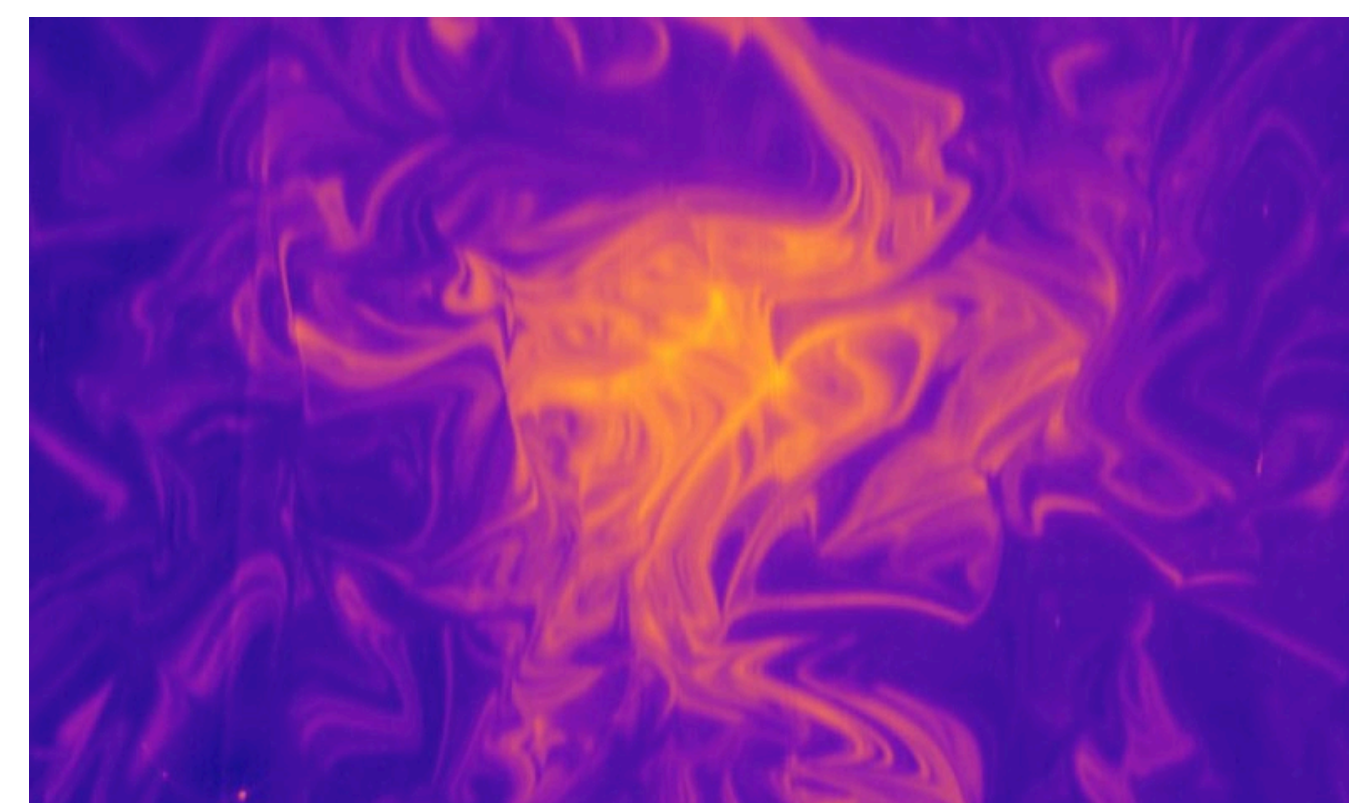
# Mathematics in Action: from wastewater to wildfires

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## What I do

My research areas are

- Modelling the spread of fires, disease and chemicals
  - From a given model of spread, mixing and spread, what types of behavior are possible?
  - What are the important quantities and mechanisms that make the model behave one way or another?
  - Is it possible to go from one behavior to another by changing only one quantity?



- Modelling of the treatment of wastewater
  - What happens if we add more tanks to the system?
  - What are the important mechanisms needed to improve performance?
  - What are the quantities we can adjust to improve performance?
  - What are the quantities which we cannot adjust do we need to know accurately?



## What skills do I have?

- Over thirty years experience of developing, validating and exploiting models of physical and industrial processes.
- Extensive teaching experience of explaining complex topics in (hopefully) easily understood terms.
- Extensive experience in computational modelling, from laptops to high performance computing platforms.



## What am I looking for?

- I am looking for problems that are of interest to you and to me, beyond the usual crowd of colleagues, collaborators and the handful of people who understand what I do.

