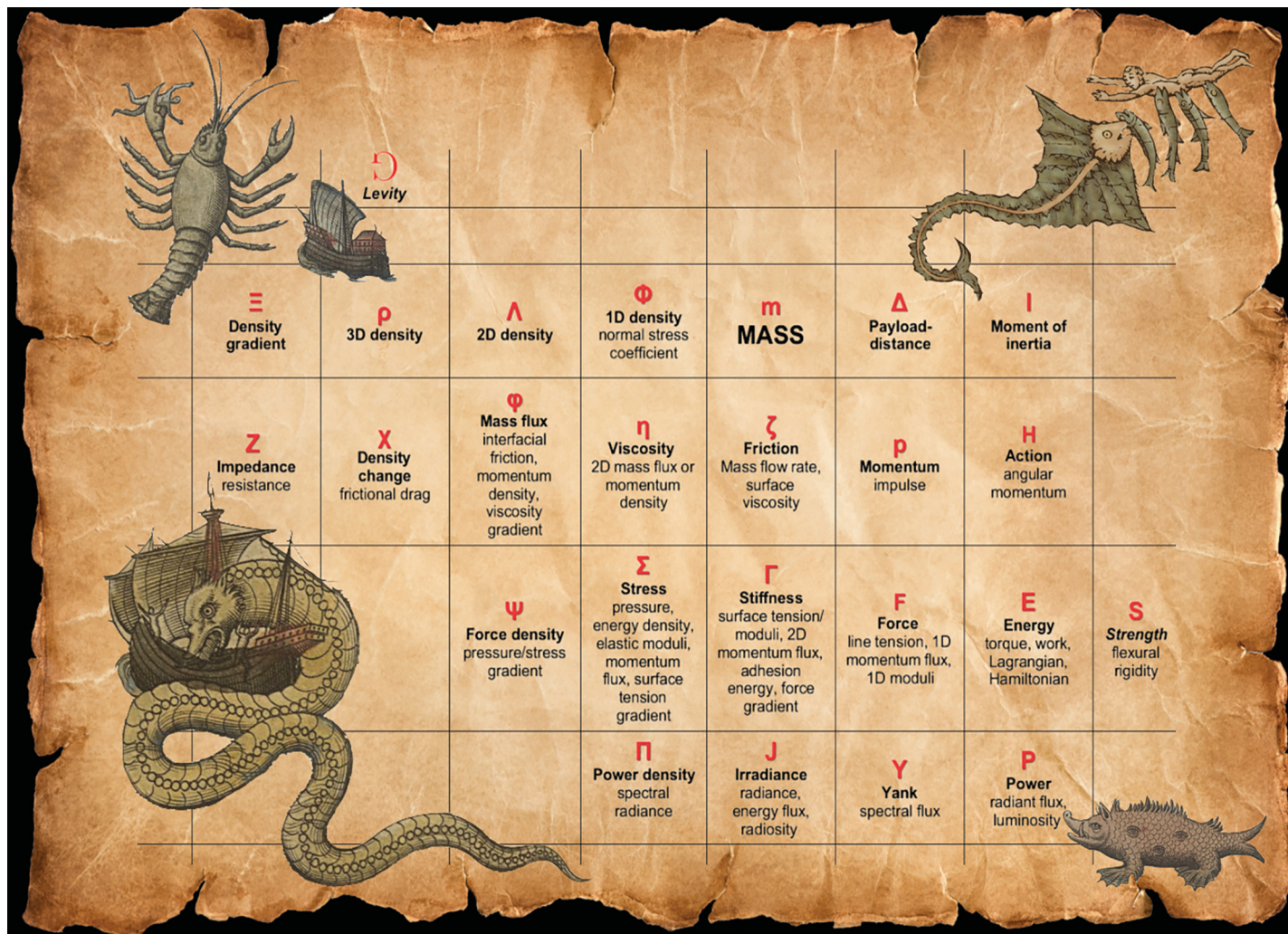




A Map of Mechanics, by Marc-Antoine Fardin (Institut Jacques Monod, CNRS, Université Paris Cité, France), Mathieu Hautefeuille (Institut de Biologie Paris Seine, Sorbonne Université, France), and Vivek Sharma (Department of Chemical Engineering, University of Illinois at Chicago, USA).

Dynamic duos: the building blocks of dimensional mechanics

Force, energy, viscosity, power, etc. All these quantities have dimensions of the form $M^x L^y T^z$ ($x, y, z \in \mathbb{Z}$), so they can be arranged into a table, a great guide for researchers and teachers, and the perfect cheat sheet for students. We explore this map and show how to use it to understand time, space and motion in mechanical terms. We focus on what emerges from the interplay of duos of mechanical quantities. This type of pair interaction is the elementary building block of a dimensional analysis of mechanics, to which we refer to more succinctly as “dimensional mechanics”.

Map inspired by Olaus Magnus's *Carta marina* (1572 edition)

As featured in:



See Marc A. Fardin *et al.*,
Soft Matter, 2024, 20, 5475.