

Relevance For What, Relevance For Whom: Numerical Simulation and  
Experimental Measurements Face-to-Face

Isabelle Peschard

*San Francisco State University*

*Abstract:*

Situation: scientists investigate a certain phenomenon, some conducting measurements, some conducting numerical simulations. Some of the measurements conflict with the numerical results. Question: What arguments would settle the dispute in favor of one or the other? Distinguishing between supportive arguments, used to support one's claim, and undermining arguments, used to undermine the opponent's claims, I examine what the four types of arguments and draw some conclusions to highlight some crucial epistemological differences between two forms of investigation.

I will focus on a specific case in fluid mechanics, but consider also a case in cognitive psychology, the Wason experiments.