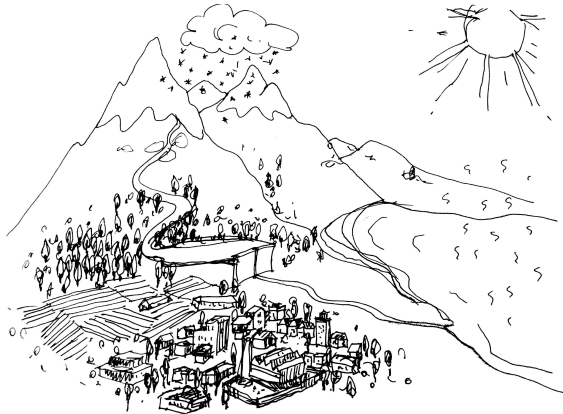
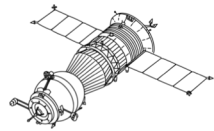


Francesca Pianosi
Lecturer in Water and Environmental Engineering
University of Bristol

EPSRC Early Career *Living with Environmental Uncertainty* Fellowship
"Robust and transparent planning and operation of water resource infrastructure"
(2017-2022) [EP/R007330/1]



My research interests is the advancement and application of systems analysis and **mathematical modelling** to improve the understanding and inform the management of **environmental systems** (and water systems in particular)



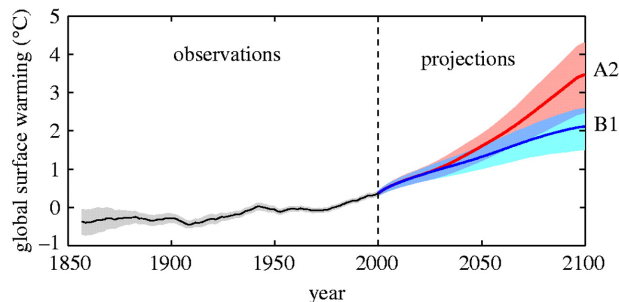
$$\frac{x^2 - y^2}{\sqrt{2}} = 2 \sqrt{\frac{(x^2 - y^2)(3x^2 + 2y^2)}{a^2 + b^2}}$$
$$\sqrt{\frac{a^2 + \frac{b^2}{2}}{a^2}} \cdot \frac{z^2}{a^2} = \frac{(a^2 + \frac{b^2}{2} + \frac{c^2}{2})(x^2 - b^2)}{4b^2 - 2c^2 - a^2}$$
$$\frac{2 \left[(2xy)^2 (3ab + 3c)^2 \right]}{x^2 y^2} = \frac{5x^2 + 3y^2 - a^2 - b^2}{2^2 a^2 b^2}$$



My Fellowship project brings together my two main lines of research:

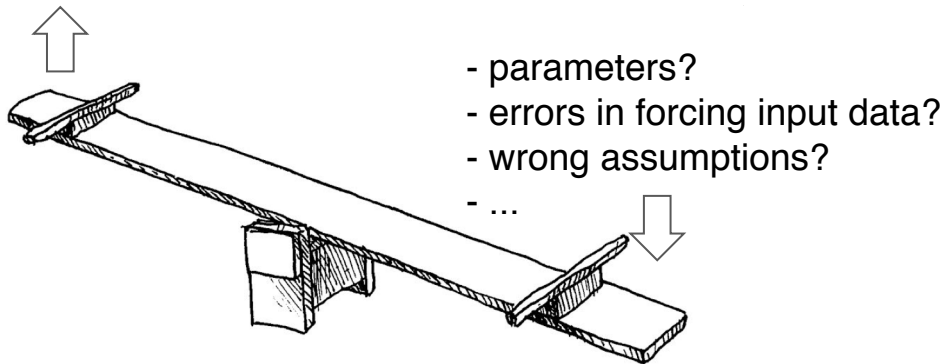
[1] **Uncertainty and sensitivity analysis of simulation models**

[2] **Planning and management of water resource systems**

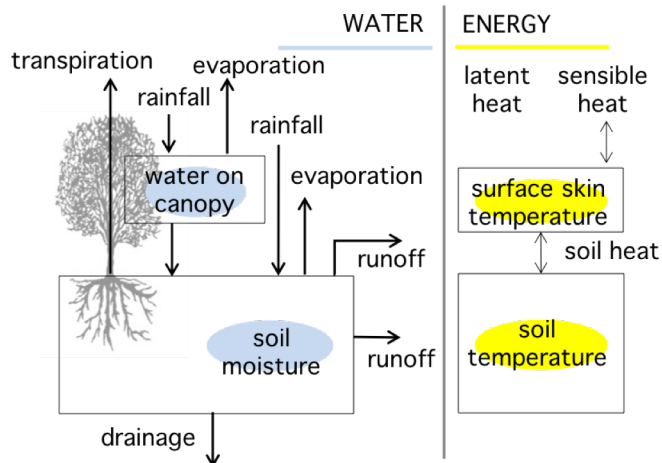


[1] Uncertainty and sensitivity analysis of simulation models

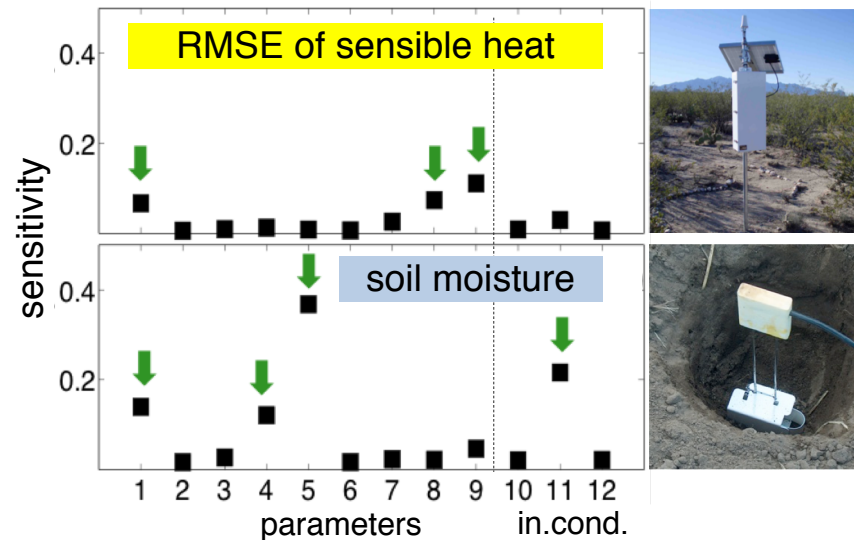
Where does the variability of model predictions come from?



www.safetoolbox.info



[Pianosi et al 2016]



[2] Planning and management of water resource systems

