

Models to Decisions (M2D): Network on Decision Making Under Uncertainty

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www.models2decisions.org

Who Are We?

RCUK-funded Network with > **300 members** from academia, industry and user organisations.

The management team is:

- **Peter Challenor (PI)**, University of Exeter
- Catherine Powell (co-I), University of Manchester
- **Emma Clarke (Project Manager)**, University of Exeter

with help from an **Expert Panel** (who assess applications for funding) and an **Advisory Board**.

- Today, many decisions are made using outputs from **models** (e.g. aircraft design, climate change ...).
- Model outputs are always **uncertain** (even if we know all the inputs and can solve them exactly).
- Need to quantify uncertainty in information obtained from models (**UQ**) and **communicate** them to decision makers.
- **Decision makers** need to be able to understand uncertainties and balance with external factors and personal uncertainties.

The M2D Network focuses on decision making that relies on uncertain information from **models**.

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It aims to bring together academics & end-users from currently disjoint communities:

- **Uncertainty Quantification** (Applied Mathematics, Statistics, Engineering, ...)
- **Modelling** (Application specialists, eg in Healthcare, Climate,...)
- **Social Science of Decision Making** (Psychology, Philosophy, Economics, Decision Science, ...)
- **Communication of Uncertainty** (Arts, Humanities, ...)

Our activities focus on three key themes:

- 1 **Uncertainty Quantification**
- 2 **From Models to Decisions**
- 3 **Communication & Visualisation of Uncertainty**

- To establish an **interdisciplinary** decision making under uncertainty **community** in the UK.
- To define a **research agenda** to address how to improve decision making under uncertainty in real-world problems.
- To pump prime research projects via short **feasibility studies** to tackle substantive **interdisciplinary** research problems involving models, uncertainty and decisions.

- Annual **M2D Conference**.
(Next one: Cambridge, June 2018)
- Consult with members to develop **research agenda**.
(Currently trialling online **discussion group**)
- Allocate **feasibility funding** (every 3 months).
(Next deadline: **11th October 2017**)

- **Pilot Projects** (up to £25K, 6 months)

Must involve at least two distinct disciplines, have **end-user engagement**, with a clear aim to undertake groundwork leading to a more substantial grant application.

- **Early Career Researcher** (up to £10K, 3 months)
- **Embedded Researcher** (up to £10K, 3 months)
- **Workshops, sandpits, short courses.**

Membership

To receive our electronic newsletter, information about events, and to be eligible to apply for funds, sign up as a **member** at:

www.models2decisions.org

