

Welcoming remarks

Tim Bedford

Chair Cost Action IS1304

Does the world need experts?

“people in this country have had enough of experts”

If yes then

- How do we identify experts?
- How do we convince the public and politicians to listen?

L'Aquila

- Six top scientists sentenced for “falsely reassuring” the public
- Who would be a seismologist?
- Should seismologists be encouraged to say what they believe?

Italian scientist convicted over L'Aquila earthquake condemns 'medieval' court

Claudio Eva says ruling against him and five others for falsely reassuring statements over 2009 quake was 'eye for an eye'

Tom Kington in Rome

guardian.co.uk, Tuesday 23 October 2012 17.56 BST

 [Jump to comments \(200\)](#)



L'Aquila was hit by a devastating earthquake in 2009 that left 308 people dead and thousands homeless. Photograph: Giorgio Cosulich/Getty Images

An Italian physicist handed a six-year jail sentence for giving falsely reassuring statements over an earthquake has condemned as “medieval” the court that convicted him.

The need for EJ... and the problem

- Complexity of society and environment plus need for timely response means we *cannot wait* for long term empirical studies...EJ is indispensable
- BUT
 - Non-structured EJ is not satisfactory
 - Structured EJ is not yet fully developed
 - Social, legal, governmental processes not attuned to the potential or properly calibrated to the limitations

Principles of Structured Expert Judgement

- Reproducibility
 - All calculations must be reproducible
- Accountability
 - Source of expert subjective probabilities identified
- Empirical control
 - Expert assessments should be susceptible *in principle* to empirical control
- Neutrality
 - Method encourages experts to state true opinions
- Fairness
 - All experts are treated equally a-priori

Expert judgement

- What is it?
 - The use of structured or unstructured inputs from different individuals who have specialist knowledge of a particular domain.
- Where is it used?
 - Problem structuring
 - Model bounding
 - Model structuring
 - Model quantification

Expertise for Innovation...

- This topic takes us into all the areas for expert judgement...not just quantification
- Key topic for policy makers, key area for Universities in accelerating innovation, and ... potential for economic/societal impact
- How do we “get ahead” in the economy, where should we invest, how do we spread the benefits of economic growth and impact?
- Myriad of EJ issues

Management Committee

Helsinki, 25 April 2017

Prof Tim Bedford
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COST IS1304 Action on Structured Expert
Judgement

COST Action on Expert Judgement and Evidence based decision making

- The aim of the Action is to establish a multidisciplinary network of scientists and policy makers around the use of structured expert judgement to quantify scientific uncertainty in support of *evidence-based decision making*, that through new scientific development, training, and the spread of good practice, will improve understanding, communication and effectiveness in the use of scientific knowledge amongst policy makers.
- *We are near a Tipping Point* in the use of Structured Expert Judgement methods

Plans for the next phase

- New budget period starts per 1 May, and finishes in September 2017, 4 years after the inaugural MC meeting (held in Brussels)
- Key activities:
 - Final Conference held in Delft July 2017
 - 1x STSM
 - Meeting of Core Group and other key individuals focussed on final outputs (Strathclyde)
- Approved by MC via the online procedure, and now subject to contract approvals

The State of the Art in Structured Expert Judgement *3-5 July Delft*

- Final conference of the Action
- Key speakers include Roger Cooke, Bob Winkler, Justin Wagstaff, Gordon Woo, Anca Hanea, Abby Colson,
- Will look at some of the key areas we have considered, and ways to take work forward after the action
- Organisers: Tina Nane, Simon French

Book publication

- *Elicitation of preferences and uncertainty: processes and procedures*
 - Editors Luis Dias, John Quigley, Alec Morton
 - 21 Chapters, Sections on
 - processes to elicit uncertainty from experts
 - processes to elicit preferences from stakeholders or decision makers
 - cross-cutting issues
 - Applications
 - To appear in: Springer International Series in Operational Research and Management Science

Action meetings....

2014

- **Kick off** – Glasgow
- **Science, uncertainty and decision making in the mitigation of natural risks** - Rome

2015

- **Expert Judgement for Geographical and Adversarial Problems** - Madrid
- **Using Expert Judgement to enhance medical decision making** - Malta

2016

- **Food safety and security** - Dubrovnic
- **Expert Judgment in Project and Asset Management Practice and Challenges** - Delft

2017

- **Building Expertise for Innovation** - Helsinki
- **The State of the Art in Expert Judgement** - Delft

- Training Schools – Madrid/Warsaw
- Special interest group – Natural hazards: Iceland
- Special interest group – Insurance: London (x2)
- Working group meetings: Glasgow - Mathematical Methods in Reliability Research (x2 with LMS)
- Working group meetings: Warsaw – Dependence elicitation
- Working group meetings: Brussels – Applications to policy and industry

Discussion on highlights

- What are the key areas of learning?
- Where are policy makers/businesses more open to use of SEJ?
- Where are the challenges still present?
- What about “softer” issues, for example as in innovation?
- Are we nearer the “Tipping Point”? Or do we not need experts anymore?

Key points for Ahti intro

- Thanks to Ahti/Aalto/sponsors
- Innovation – key topic for businesses, policy makers, universities
- The world is changing very quickly with digital disruption everywhere... how do we anticipate, prioritize, invest, .. Make sensible decisions?
- Huge uncertainty, but modelling is challenging, and disagreement at the meta-level on what should be modelled.
- Innovation driven by technology change, consumer demand, market conditions, standards, and brute force of market control
- Who can get a handle on this? Yesterday's meeting with a VC setting up expert panels for technologies