Sensitivity analysis school: wrap up

Andrea Saltelli

Centre for the Study of the Sciences and the Humanities (SVT) – University of Bergen (UIB)

Institut de Ciència i Tecnologia Ambientals (ICTA) – Universitat Autonoma de Barcelona (UAB)

Summer School on Sensitivity Analysis – SAMO 2016, Villa Orlandi, Anacapri – July 4–8, 2016
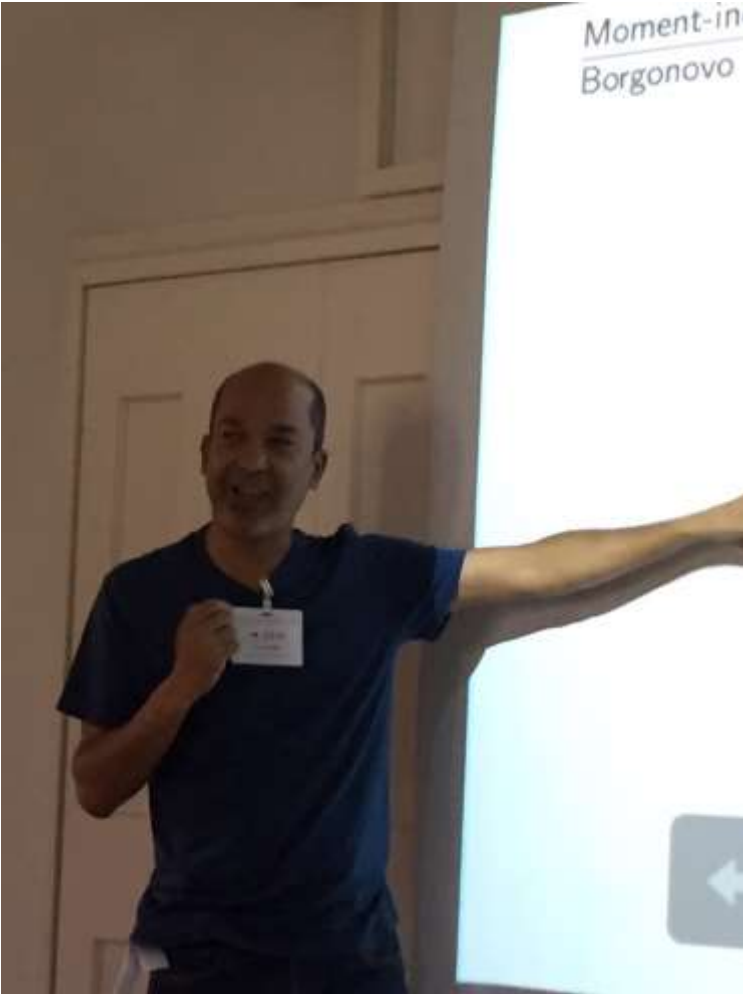
andrea.saltelli@uib.no
@andreasaltelli

Ninth SAMO Summer school
Tenth in Ranco in 2017?

Next SAMO Conference: SAMO 2016 (Reunion, France)
November 30th December 3rd with Thierry
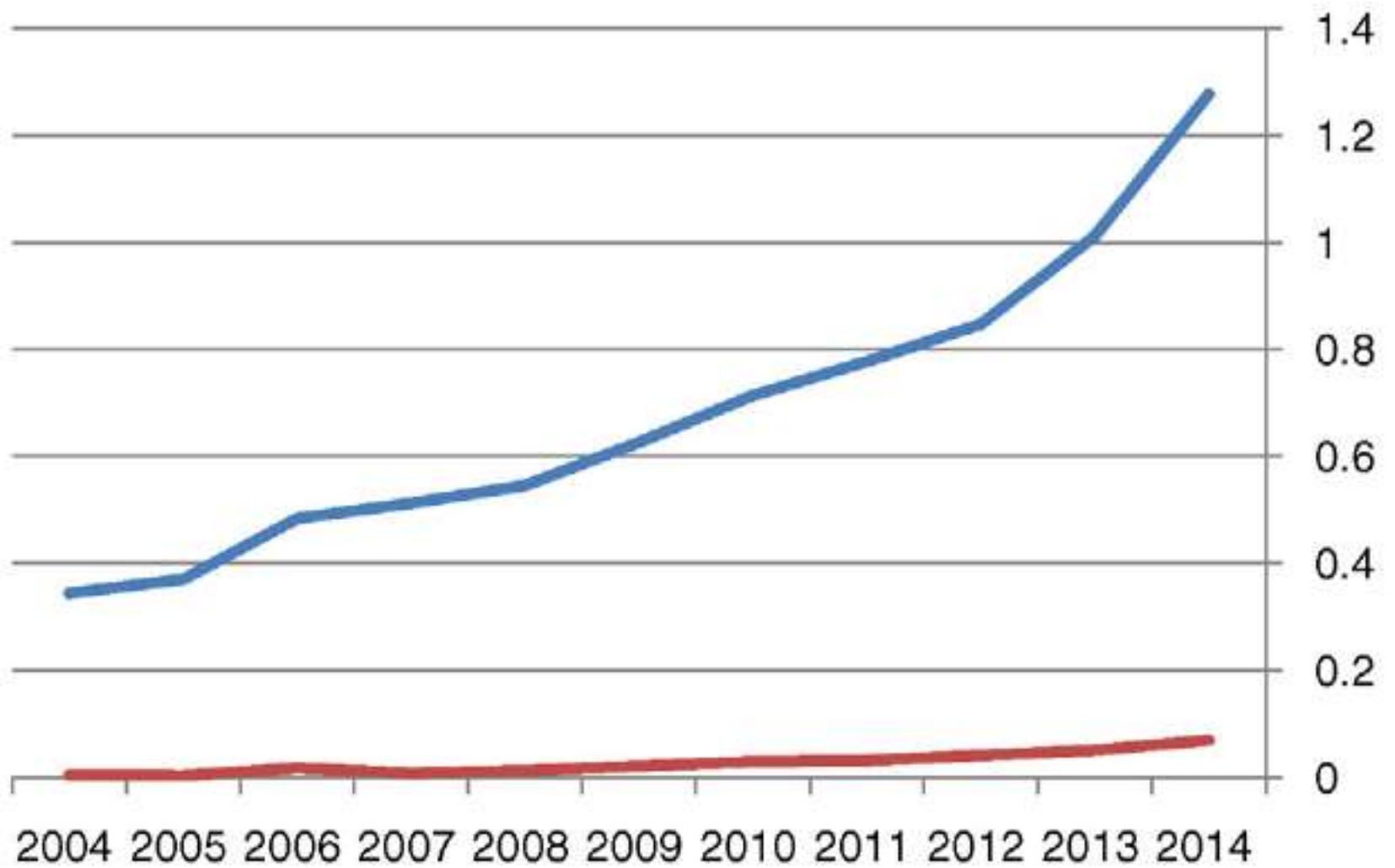

Mauritius

Reunion

Next?

SAMO 2019: Barcelona, Spain [proposal]

Hospital de la Santa Creu i Sant Pau Barcelona, Catalonia, Spain, designed by the Catalan modernist architect Lluís Domènech i Montaner, built between 1901 and 1930 (Source Wikipedia).

OAT is still the most largely used technique in SA. Out of every 100 papers with modelling & SA only 4 are 'global' in the sense discussed here.

Ferretti, F., Saltelli A., Tarantola, S., 2016, Trends in Sensitivity Analysis practice in the last decade, Science of the Total Environment, http://dx.doi.org/10.1016/j.scitotenv.2016.02.133

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

——— TOT_SA/TOT_MOD (%)

——— TOT_GSA/TOT_MOD (%)
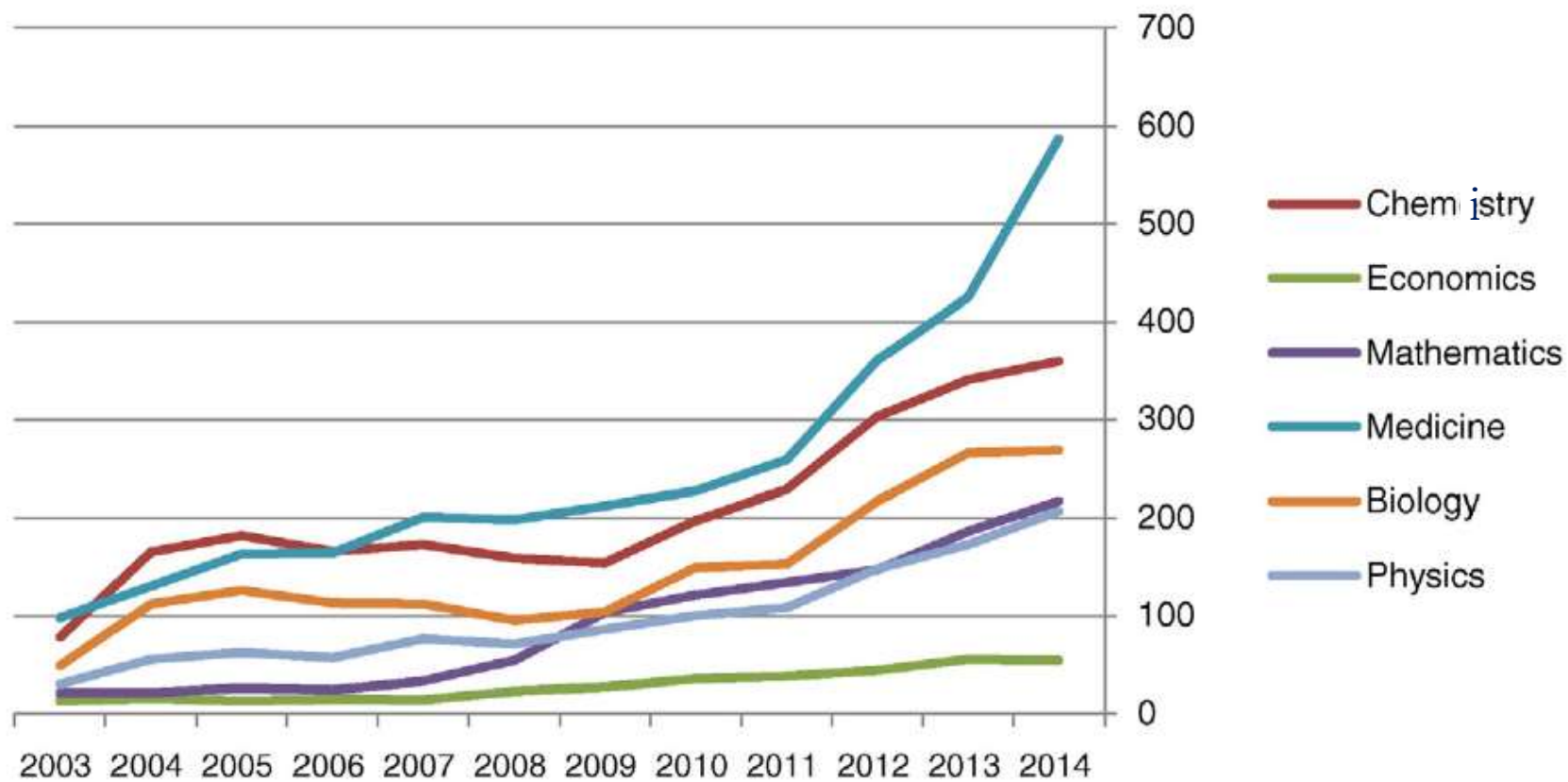
Fig. 4. GSA in the different scientific domains.

When to use what

One step at the time $\cdots$

Introduction: Sensitivity Analysis, Bertrand Iooss and Andrea Saltelli, Springer Handbook in Press
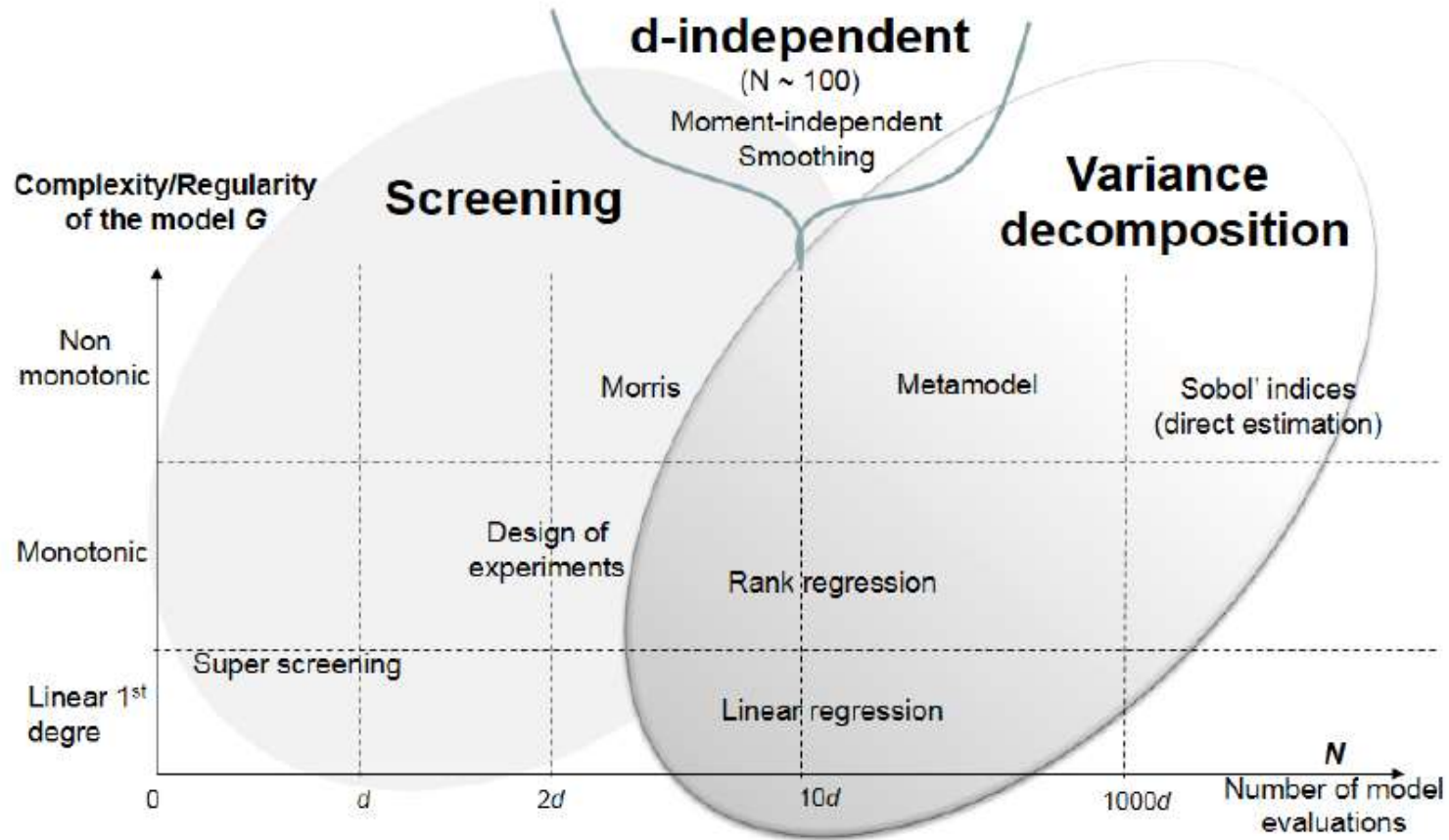

Fig. 3. Coarse classification of main global SA methods in terms of required number of model evaluations and model complexity.

Take home points

What is the question?

Confirmation or falsification?

Sensitivity analysis is not "run" on a model but on a model once applied to a case.

Sensitivity analysis should not be used to hide assumptions.

If SA shows that a question cannot be answered by the model find another question/model which can be treated meaningfully (the workhorse argument).

Stay in touch? Joint undertakings

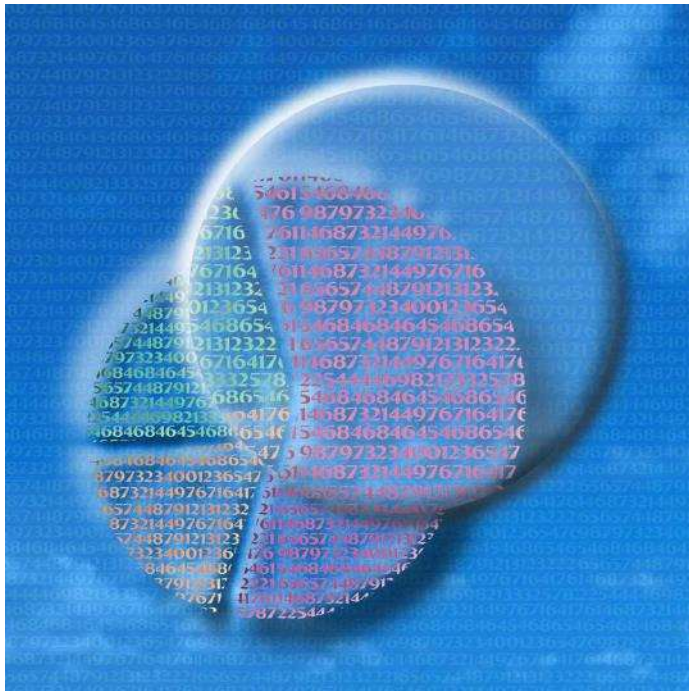An Horizon 2020 action (Coordination and support actions)?

Blogosphere #SAMO on Twitter

Joint papers. Exchange and visits

Try 'the big one' (PLOS One, Nature?)

Capri c'est fini ?

https://www.youtube.com/watch?v=qTo1q5mk9io

END