

1. [Nuclear Reports published as a result of the joint ec/usnrc project](#) (7)
2. [Reports published on the project uncertainty analysis of the probabilistic accident consequence code cosyma using expert judgement \(under the fourth ec-framework programme\)](#) (10)
3. [Ecosystems / public health](#) (47)
4. [Civil Aviation / structural reliability](#) (24)
5. [Information security](#) (1)
6. [Natural Hazards](#) (31)
7. [Climate](#) (9)
8. [Banking/Finance](#) (4)
9. [Reports](#) (55)
10. [Code, Data, Analysis](#)

**1. Nuclear Reports published as a result of the joint ec/usnrc project on uncertainty analysis of probabilistic accident consequence codes (under the Third EC-Framework Programme)**

- 1.1. F.T. Harper, L.H.J. Goossens, R.M. Cooke, S.C. Hora, M.L. Young, J. Päsler-Sauer, L.A. Miller, B. Kraan, C. Lui, M.D. McKay, J.C. Helton and J.A. Jones *Probabilistic accident consequence uncertainty study: Dispersion and deposition uncertainty assessment* (1994) Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities NUREG/CR-6244, EUR 15855 EN, SAND94-1453, Washington/USA, and Brussels-Luxembourg, November 1994, published January 1995. Volume I: Main report, Volume II: Appendices A and B, Volume III: Appendices C, D, E, F, G, H
- 1.2. R.M. Cooke, L.H.J. Goossens and B.C.P. Kraan *Methods for CEC/USNRC accident consequence uncertainty analysis of dispersion - Performance based aggregating of expert judgements and PARFUM method for capturing modeling uncertainty* (1995) Prepared for the Commission of European Communities, EUR 15856, Brussels-Luxembourg, June 1994, published 1995
- 1.3. J. Brown, L.H.J. Goossens, F.T. Harper, B.C.P. Kraan, F.E. Haskin, M.L. Abbott, R.M. Cooke, M.L. Young, J.A. Jones S.C. Hora, A. Rood and J. Randall (1997) *Probabilistic accident consequence uncertainty study: Food chain uncertainty assessment* Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities NUREG/CR-6523, EUR 16771, SAND97-0335 Washington/USA, and Brussels-Luxembourg, March 1997, published June 1997. Volume 1: Main report, Volume 2: Appendices.
- 1.4. L.H.J. Goossens, J. Boardman, F.T. Harper, B.C.P. Kraan, R.M. Cooke, M.L. Young, J.A. Jones and S.C. Hora *Probabilistic accident consequence uncertainty study: Uncertainty assessment for deposited material and external doses* (1997) Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities, NUREG/CR-6526, EUR 16772, SAND97-2323 Washington/USA, and Brussels-Luxembourg, September 1997, published December 1997. Volume 1: Main report, Volume 2: Appendices

- 1.5. F.E. Haskin, F.T. Harper, L.H.J. Goossens, B.C.P. Kraan, J.B. Grupa and J. Randall (1997) *Probabilistic accident consequence uncertainty study: Early health effects uncertainty assessment* Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities NUREG/CR-6545, EUR 16775, SAND97-2689 Washington/USA, and Brussels-Luxembourg, November 1997, published December 1997. Volume 1: Main report, Volume 2: Appendices
- 1.6. M. Little, C.M. Muirhead, L.H.J. Goossens, F.T. Harper, B.C.P. Kraan, R.M. Cooke and S.C. Hora (1997) *Probabilistic accident consequence uncertainty study: Late health effects uncertainty assessment* Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities, NUREG/CR-6555, EUR 16774, SAND97-2322 Washington/USA, and Brussels-Luxembourg, September 1997, published December 1997. Volume 1: Main report, Volume 2: Appendices
- 1.7. L.H.J. Goossens, J.D. Harrison, F.T. Harper, B.C.P. Kraan, R.M. Cooke and S.C. Hora (1998) *Probabilistic accident consequence uncertainty study: Uncertainty assessment for internal dosimetry* Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities, NUREG/CR-6571, EUR 16773, SAND98-0119 Washington/USA, and Brussels-Luxembourg, February 1998, published April 1998 Volume 1: Main report, Volume 2: Appendices

**2. Reports published on the project uncertainty analysis of the probabilistic accident consequence code cosyma using expert judgement (under the fourth ec-framework programme)**

- 2.1. *Radiation Protection and Dosimetry Special Issue* , vol. 90 no 3, 2000.
- 2.2. R.M. Cooke, L.H.J. Goossens, B.C.P. Kraan (2000) *Probabilistic Accident Consequence Uncertainty Assessment Procedures Guide Using Expert Judgement* EUR 18820EN European Commission. Luxembourg 2000, Euratom.
- 2.3. L.H.J. Goossens, J.A. Jones, J. Ehrhardt, B.C.P. Kraan (2001) *Probabilistic Accident Consequence Uncertainty Assessment Countermeasures Uncertainty Assessment* EUR 18821EN European Commission. Luxembourg 2001, Euratom.
- 2.4. J.A. Jones, J. Ehrhardt, F. Fischer, I. Hasemann, L.H.J. Goossens, B.C.P. Kraan, R.M. Cooke (2001) *Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA Uncertainty from the Atmospheric Dispersion and Deposition Module* EUR 18822EN European Commission. Luxembourg 2001, Euratom.
- 2.5. J.A. Jones, J. Brown, F. Fischer, I. Hasemann, L.H.J. Goossens, B.C.P. Kraan, R.M. Cooke (2001) *Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA: Uncertainty from the Food Chain Module* EUR 18823EN European Commission. Luxembourg 2001, Euratom.
- 2.6. J.A. Jones, F. Fischer, I. Hasemann, L.H.J. Goossens, B.C.P. Kraan, R.M. Cooke (2001) *Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA Uncertainty from the Health Effects Module* EUR 18824EN European Commission. Luxembourg 2001, Euratom.
- 2.7. J.A. Jones, F. Fischer, I. Hasemann, L.H.J. Goossens, B.C.P. Kraan, R.M. Cooke (2001) *Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA Uncertainty from the Dose Module* EUR 18825EN European Commission. Luxembourg 2001, Euratom.

- 2.8. J.A. Jones, J. Ehrhardt, L.H.J. Goossens, F. Fischer, I. Hasemann, B.C.P. Kraan, R.M. Cooke (2001) *Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA Uncertainty from the Complete System* EUR 18826EN European Commission. Luxembourg 2001, Euratom
- 2.9. J.A. Jones, B.C.P. Kraan, R.M. Cooke, L.H.J. Goossens, F. Fischer, I. Hasemann (2001) *Probabilistic Accident Consequence Uncertainty Assessment Using COSYMA Methodology and Processing Techniques* EUR 18827EN European Commission. Luxembourg 2001, Euratom.
- 2.10. Klügel, J-U., (2008) "Seismic Hazard Analysis — Quo vadis?" *Earth-Science Reviews* 88, 1–32

### 3. Ecosystems / public health

- 3.1. Goossens, L.H.J., Cooke, Roger M., Woudenberg, F., and van der Torn, P. "Probit relations of hazardous substances through formal expert judgement". *Loss Prevention and Safety Promotion in the Process Industries*, vol. II., p. 173-182, 1995, Elsevier Science B.V.
- 3.2. Goossens, L.H.J., Cooke, Roger M., Woudenberg, F. and van der Torn, P. (1998) "Expert judgement and lethal toxicity of inhaled chemicals" *Journal of Risk Research* Vol. 1 (2), pp. 117-133, 1998.
- 3.3. Tuomisto J.T, Wilson A., Cooke R.M., Tainio M., Evans J.S. (2005) "Mortality in Kuwait due to PM from oil fires after the Gulf War: Combining expert elicitation assessments" (2005) *Epidemiology*, Volume 16 (5) September 2005 p. S74-S75
- 3.4. Evans J.S., Wilson A, Tuomisto JT, Tainio M, Cooke RM (2005) "What risk assessment can tell us about the mortality impacts of the Kuwaiti oil fires" *Epidemiology*, Volume 16 {5} September 2005 p.S137-S138
- 3.5. Burgman, M. (2005) *Risk and Decisions for Conservation and Environmental Management*, Cambridge University Press, Cambridge, UK.
- 3.6. Van der Fels-Klerx, H.J., Cooke, R.M., Nauta, M.J., Goossens, L.H.J., Havelaar, A.H. (2005) "A Structured Expert Judgement Study For A Model of Campylobacter Transmission During Broiler Chicken Processing" *Risk Analysis* 25 No. 1, 2005, pp 109-124.
- 3.7. Cooke, R.M. Wilson, A.M., Tuomisto, J.T. Morales, O. Tainio, M. and Evans, J.S.. (2007) A Probabilistic Characterization of the Relationship Between Fine Particulate Matter and Mortality: Elicitation of European Experts. *Environmental Science and Technology* 2007 Sep 15;41(18): pp 6598-6605.
- 3.8. Kurowicka, D., Cooke, R.M. Goossens, L. and Ale, B.J.M, (2008) Expert Judgment study for Placement Ladder Bowtie, *Safety Science*, [Volume 46, Issue 6](#), July 2008, Pages 921–93.
- 3.9. Radboud J. Duintjer Tebbens, Kimberly M. Thompson, M.G. Myriam Hunink, M.D., Thomas M Mazzuchi, Daniel Lewandowski, Dorota Kurowicka, Roger M. Cooke, (2008) "Uncertainty And Sensitivity Analyses Of A Dynamic Economic Evaluation Model For Vaccination Programs" *Medical Decision Making* 2008
- 3.10. Arie H. Havelaar, Ángela Vargas Galindo, Dorota Kurowicka, Roger M. Cooke (2008) Attribution of Foodborne Pathogens Using Structured Expert Elicitation, *Foodborne Pathogens and Disease*, October 2008, 5(5): 649-659. doi:10.1089/fpd.2008.0115

- 3.11. Rothlisberger, J.D., Lodge, D.M. Cooke, R.M. and Finnoff, D.C. (2009) “Future declines of the binational Laurentian Great Lakes fisheries: recognizing the importance of environmental and cultural change” *Frontiers in Ecology and the Environment*; doi:10.1890/090002
- 3.12. Neslo R.E.J, and Cooke, R.M.,(2011) “Modeling and Validating Stakeholder Preferences with Probabilistic Inversion” *Applied Stochastic Models in Business and Industry*.
- 3.13. Kurowicka, D. Bucura, C. Cooke, R.M. and Havelaar, A. (2010) Probabilistic Inversion in Priority Setting of Emerging Zoonoses, *Risk Analysis*, Vol. 30, No. 5, 2010 DOI: 10.1111/j.1539-6924.2010.01378.x
- 3.14. Kurowicka, D. Nauta, M. Jozwiak,, K. 1 and Cooke, R.M. (2010) “Updating Parameters of the Chicken Processing Line Model” *Risk Analysis*, Vol. 30, No. 6, 2010 DOI: 10.1111/j.1539-6924.2010.01379.x
- 3.15. Sarah J. Teck, Benjamin S. Halpern, Carrie V. Kappel, Fiorenza Micheli, Kimberly A. Selkoe, Caitlin M. Crain, Rebecca Martone, Christine Shearer, Joe Arvai, Baruch Fischhoff, Grant Murray, Rabin Neslo, and Roger Cooke (2010) Using expert judgment to estimate marine ecosystem vulnerability in the California Current, . *Ecological Applications*, 20(5), 2010, pp. 1402–1416 2010 by the Ecological Society of America
- 3.16. Burgman, M. Carr, A. Godden, L. Gregory, R. McBride, M. Flander, L. Maguire, L.(2010) “Redefining expertise and improving ecological judgement” under review *Conservation Letters*.
- 3.17. Burgman, M. McBride, M., Ashton, R., Speirs-Bridge, A., Flander, L., Wintle, B., Fidler, F., Rumpff, L. and Twardy, C., (2011) “Perception of expertise and performance of experts: How do they compare?”
- 3.18. Villie Flari, Qasim Chaudhry, Rabin Neslo and Roger Cooke (2011) Expert judgment based multi-criteria decision model to address uncertainties in risk assessment of nanotechnology-enabled food products *J Nanopart Res (2011) 13: 1813–1831; DOI 10.1007/s11051-011-0335-x*
- 3.19. Martin, T.G. Burgman, M.A., Fidler, F.F. , Kuhnert, P.M. , Low-Choy, S., McBride, M. , and Mengersen, K., (2011 ) eliciting expert knowledge in conservation science *Conservation biology*, volume 26, no. 1, 29–38 2011 *Conservation biology c* \_2011 society for conservation biology Doi: 10.1111/j.1523-1739.2011.01806.x
- 3.20. Tyshenko, M.G., S. ElSaadany, T. Oraby, M. Laderoute, J. Wu, W. Aspinall and D. Krewski (2011) Risk Assessment and Management of Emerging Blood-Borne Pathogens in Canada: Xenotropic Murine Leukaemia Virus-Related Virus as a Case Study for the Use of a Precautionary Approach. Chapter in: *Risk Assessment* (ISBN 979-953-307-765-8).
- 3.21. Tyshenko, M.G., ElSaadany, S., Oraby, T., Darshan, S., Catford, A., Aspinall, W., Cooke, R. and Krewski, D. (2012) Expert judgement and re-elicitation for prion disease risk uncertainties. *International Journal of Risk Assessment and Management*, 16(1-3), 48-77. doi:10.1504/IJRAM.2012.047552
- 3.22. Tyshenko, M.G., S. ElSaadany, T. Oraby, S. Darshan, W. Aspinall, R. Cooke, A. Catford, and D. Krewski (2011) Expert elicitation for the judgment of prion disease risk uncertainties. *J Toxicol Environ Health A.*; 74(2-4):261-285.

- 3.23. Oraby, T., Tyshenko, M.G., Westphal, M., Darshan, S., Croteau, M., Aspinall, W., Elsaadany, S., Cashman, N. and Krewski, D. (2011) Using Expert Judgments to Improve Chronic Wasting Disease Risk Management in Canada. *Journal of Toxicology and Environmental Health*, in press. Volume 74, Issue 2-4, 2011 Special Issue: Prion Research in Perspective 2010
- 3.24. Rothlisberger, J.D. Finnoff, D.C. Cooke, R.M. and Lodge, D.M. (2012) "Ship-borne nonindigenous species diminish Great Lakes ecosystem services" *Ecosystems* (2012) 15: 462–476 DOI: 10.1007/s10021-012-9522-6
- 3.25. Halpern, B.S., Longo, C McLeod. C.L., Cooke, Roger M., Fischhoff, B., Samhuri, J.F., Scarborough, C. (2013) Elicited preferences for components of ocean health in the California Current, *Marine Policy* 42 (2013) 68–73.
- 3.26. Cashman, N.R., Tyshenko, M.G., Cheung, R., Aspinall, W., Wong, M. and Krewski, D. (2019) Prion disease risk uncertainties associated with urine-derived and recombinant fertility drugs. *International Journal of Risk Assessment and Management* 22 (2), 109-127. doi: 10.1504/IJRAM.2019.101292
- 3.27. Colson, Abigail R., Sweta Adhikari, Ambereen Sleemi, and Ramanan Laxminarayan. (2015) "Quantifying Uncertainty in Intervention Effectiveness with Structured Expert Judgment: An Application to Obstetric Fistula." *BMJ Open*, 1–8. doi:10.1136/bmjopen-2014-007233.
- 3.28. Fischer K, Lewandowski D, Janssen M P. Estimating unknown parameters in haemophilia using expert judgement elicitation. *Haemophilia*. 2013 Sep;19(5):e282-e288.
- 3.29. Cooke, R.M., Wittmann, M.E., Lodge, D.M., Rothlisberger, J.D., Rutherford E.S., Zhang, H. and Mason, D.M. (2014) "Out-of-Sample Validation for Structured Expert Judgment of Asian Carp Establishment in Lake Erie", *Integrated Environmental Assessment and Management*, open access. DOI: 10.1002/ieam.1559 <http://onlinelibrary.wiley.com/doi/10.1002/ieam.1559/abstract> Hald, T.
- 3.30. Koch, Benjamin J., Filoso, S., Cooke, R. M. Hosen, J. D., Colson, A.R. Febria, Catherine M., Palmer, M. A. , (2015) Nitrogen in stormwater runoff from Coastal Plain watersheds: The need for empirical data, reply to Walsh , *Elementa* DOI 10.12952/journal.elementa.000079. <https://www.elementascience.org/articles/79>
- 3.31. Aspinall, W. Devleeschauwer, B. Cooke, R.M., Corrigan, T., Havelaar, A.H., Gibb, H., Torgerson, P., Kirk, M., Angulo, F., Lake, R., Speybroeck, N., and Hoffmann, S. (2015) World Health Organization estimates of the relative contributions of food to the burden of disease due to selected foodborne hazards: a structured expert elicitation. *PLOS ONE*, : January 19, 2016 DOI: 10.1371/journal.pone.0145839, <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0145839>
- 3.32. Zhang, H, Rutherford E.S., Mason, D.M., Breck, J,T,, Wittmann M.E., Cooke R.M., Lodge D.M., Rothlisberger J.D., Zhu X., and Johnson, T B., (2015) Forecasting the Impacts of Silver and Bighead Carp on the Lake Erie Food Web, *Transactions of the American Fisheries Society*, Volume 145, Issue 1, pp 136-162, DOI:10.1080/00028487.2015.1069211
- 3.33. Koch, Benjamin J., Febria, Catherine M. , Cooke, Roger M. Hosen, Jacob D. , Baker, Matthew E. , Colson, Abigail R. Filoso, Solange, Hayhoe, Katharine,

- Loperfido, J.V. , Stoner, Anne M.K. , Palmer, Margaret A. , (2015) Suburban watershed nitrogen retention: Estimating the effectiveness of storm water management structures, *Elementa*, DOI 10.12952/journal.elementa.000063 <https://www.elementascience.org/articles/63>
- 3.34. Hoffmann, S. Aspinall, W. Cooke, R.M., Cawthorne, A., Corrigan, T. Havelaar, A. Gibb H., Torgerson, P. Kirk, M. Angulo, F., Lake, R. Speyboeck, N. Devleeschauwer, B. Hald, T. (2015) Research Synthesis Methods in an Age of Globalized Risks: Lessons from the Global Burden of Foodborne Disease Expert Elicitation, accepted for publication in *Risk Analysis*.
- 3.35. Hald, T. Aspinall, W. Devleeschauwer, B. Cooke, R.M., Corrigan, T., Havelaar, A.H., Gibb, H., Torgerson, P., Kirk, M., Angulo, F., Lake, R., Speybroeck, N., and Hoffmann, S. (2015) World Health Organization estimates of the relative contributions of food to the burden of disease due to selected foodborne hazards: a structured expert elicitation. *PLOS ONE*, : January 19, 2016 DOI: 10.1371/journal.pone.0145839
- 3.36. Colson, A. Cooke, R.M., Lutter, Randall, (2016) How Does Breastfeeding Affect IQ? Applying the Classical Model of Structured Expert Judgment, *Resources for the Future*, RFF DP16-28 <http://www.rff.org/research/publications/how-does-breastfeeding-affect-iq-applying-classical-model-structured-expert>
- 3.37. Morales Napoles, O. Hanea, A.M. Worm, D. (2013) Experimental results about the assessments of conditional rank correlations by experts: Example with air pollution estimates. *Proceedings 22nd European Safety and Reliability Conference "Safety, Reliability and Risk Analysis: Beyond the Horizon"* (pp. 1359-1366). London, UK: Taylor & Francis Group
- 3.38. Colson, A.R., Megiddo, I., Alvarez-Uria, G., Gandra, S., Bedford, T. Morton, A., Cooke, R.M., Laxminarayan, R., (2019) "Quantifying Uncertainty about Future Antimicrobial Resistance: Comparing Structured Expert Judgment and Statistical Forecasting Methods", accepted at *PLoS One*.
- 3.39. Cashman, N.R., Tyshenko, M.G., Cheung, R., Aspinall, W., Wong, M. and Krewski, D. (2019) Prion disease risk uncertainties associated with urine-derived and recombinant fertility drugs. *International Journal of Risk Assessment and Management* 22 (2), 109-127. doi: 10.1504/IJRAM.2019.101292
- 3.40. Barons MJ, Aspinall W. (2020) Anticipated impacts of Brexit scenarios on UK food prices and implications for policies on poverty and health: a structured expert judgement approach. *BMJ Open* 2020;10:e032376. doi:10.1136/bmjopen-2019-032376
- 3.41. Elizabeth Beshearse, Beau B Bruce, Gabriela F Nane, Roger M Cooke, Willy Aspinall, Tine Hald, Stacy M Crim, Patricia M Griffin, Kathleen E Fullerton, Sarah A Collier, Katharine M Benedict, Michael J Beach, Aron J Hall, Arie H Havelaar (2020) Attribution of Illnesses Transmitted Commonly by Food and Water in the United States to Comprehensive Transmission Pathways using Structured Expert Judgment, for CDC, approved and appearing
- 3.42. Elizabeth Beshearse, Beau B. Bruce, Gabriela F. Nane, Roger M. Cooke, Arie H. Havelaar (2020) Validation of Attribution Results of Salmonellosis in the United States to Comprehensive Transmission Pathways using Structured Expert Judgment

- 3.43. Sparks, R.S.J., Aspinall, W.P., Brooks-Pollock, E., Danon. L., Cooke, R., Barclay, J. and Scarrow, J. (2020) A novel approach for evaluating contact patterns and risk mitigation strategies for COVID-19 in English Primary Schools with application of Structured Expert Judgement. MedRxiv 2020.08.13.20170068; <https://doi.org/10.1101/2020.08.13.20170068>
- 3.44. Sparks, R.S.J., Aspinall, W.P., Cooke, R. and Scarrow, J.H. (2020) Quantifying threat from COVID-19 infection hazard in Primary Schools in England. MedRxiv 2020.08.07.20170035; <https://doi.org/10.1101/2020.08.07.20170035>
- 3.45. Sparks, R. S. J., Aspinall, W. P., Brooks-Pollock, E., Cooke, R. M., Danon, L., Barclay, J. , Scarrow, J. H. and Cox,,(2021) "A novel approach for evaluating contact patterns and risk mitigation strategies for COVID-19 in English primary schools with application of structured expert judgement", The Royal Society, 6–9 Carlton House Terrace, London SW7 5QR, UK
- 3.46. Beshearse, Elizabeth, Beau B. Bruce, Gabriela F. Nane, Roger M. Cooke, Willy Aspinall, Tine Hald, Stacy M. Crim, Patricia M. Griffin, Kathleen E. Fullerton, Sarah A. Collier, Katharine M. Benedict, Michael J. Beach, Aron J. Hall, Arie H. Havelaar (2021) "Attribution of Illnesses Transmitted by Food and Water to Comprehensive Transmission Pathways Using Structured Expert Judgment, United States", *Emerging Infectious Diseases* • www.cdc.gov/eid • Vol. 27, No. 1, January 2021, DOI: <https://doi.org/10.3201/eid2701.200316>
- 3.47. Aspinall WP, Sparks RSJ, Woodhouse MJ, Cooke RM, Scarrow JH, the CoMMInS Project. 2021 Pupils returning to primary schools in England during 2020: rapid estimations of punctual COVID-19 infection rates. *R. Soc. Open Sci.* 8: 202218. <https://doi.org/10.1098/rsos.202218>

#### 4. Civil Aviation / structural reliability

- 4.1. Cooke, R.M. & Jager, E. (1998) "Failure Frequency of Underground Gas Pipelines", *Risk Analysis*, vol. 1, no 4, 511-527, 1998.
- 4.2. Cooke, R.M., E. Jager, D. Lewandowski (002) "Reliability model for underground gas pipelines" *Probabilistic Safety Assessment and Management* E.J. Bonano, A.L. Camp, M.J. Majors, R.A. Thompson (eds), Elsevier, 2002; 1045-1050.
- 4.3. Cooke, R.M., Eric Jager and D. Lewandowski "Reliability Model for Underground Gas Pipelines" (2003) *Case Studies in Reliability and Maintenance*. Edited by Wallace R. Blischke, D.N. Prabhakar Murthy; p. 423-446, ISBN: 0-471-41373-9, 2003, John Wiley and Sons, Inc.
- 4.4. Cooke, R.M. and Slijkhuis, Karen A. (2003) "Expert Judgment in the Uncertainty Analysis of Dike Ring Failure Frequency" *Case Studies in Reliability and Maintenance*. Edited by Wallace R. Blischke, D.N. Prabhakar Murthy; p. 331-352, ISBN: 0-471-41373-9, 2003, John Wiley and Sons, Inc.
- 4.5. Brown A.J. and Aspinall W.P. (2004) Use of expert opinion elicitation to quantify the internal erosion process in dams. In *Proc: The 13th Biennial British Dams Society Conference*: University of Kent, Canterbury, 22-26th June 2004; 16pp (<http://www.britishdams.org/2004conf/synopses/brown.pdf>).
- 4.6. Cooke, R.M. and Goossens L.H.G.(2004) "Expert judgement elicitation for risk assessments of critical infrastructures" *Journal of Risk Research* vol. 7 issue 6, 2004, ISSN 1366-9877, pp 643-657.

- 4.7. B.J.M. Ale, L.J. Bellamy, A.L.C. Roelen, R.M. Cooke, L.H.J. Goossens, A.R. Hale, D. Kurowicka, E. Smith, (2005) Development of a causal model for air transport safety, *Proceedings of IMECE2005, 2005 ASME International Mechanical Engineering Congress and Exposition* November 5-11, 2005, Orlando, Florida USA IMECE2005-79374
- 4.8. Ale, B.J.M. Bellamy, L.J., Boom, R. van der, Cooper, J., Cooke, R.M., Goossens, L.H.J., Hale, A.R., Kurowicka, D., Morales, O. Roelen, A.L.C. and Spouge, J. (2009). "Further development of a Causal model for Air Transport Safety (CATS); Building the mathematical heart." *Reliability Engineering & System Safety*, Vol. 94, No. 9. (September 2009), pp. 1433-1441. doi:10.1016/j.res.2009.02.024 Key: citeulike:5143231
- 4.9. Ale, B.J.M. (2006), L.J. Bellamy, R.M. Cooke, L.H.J. Goossens, A.R. Hale, A.L.C. Roelen, E. Smith, Towards a causal model for air transport safety – an ongoing research project, *SAFETY SCIENCE*, Volume 44, Issue 8, October 2006, Pages 657-673.
- 4.10. Ale, B., Bellamy, L.J., Cooke, R.M., Duyvis, M., Kurowicka, D. Lin, P.H., Morales, O., Roelen, A. Spouge, J. (2009) "Causal Model for Air Transport Safety, Final Report" Ministerie van Verkeer en Waterstaat, Directoraat-Generaal Luchtvaart en Maritieme Zaken, ISBN 10:90 369 1724-7; ISBN 13: 978 90 369 1724-7, The Hague, The Netherlands
- 4.11. Forys, M.B., Kurowicka, D., Peppelman, B. (2013) "A probabilistic model for a gas explosion due to leakages in the grey cast iron gas mains" *Reliability Engineering & System Safety* volume 119, issue, year 2013, pp. 270 - 279.
- 4.12. Jaiswal, K.S., Wald, D.J., Perkins, D., Aspinall, W.P. and Kiremidjian, A.S. (2014) Estimating structural collapse fragility of generic building typologies using expert judgment. Chap 117 in: *Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures* (eds: Deodatis, G., Ellingwood, B.R., Frangopol, D.M.), CRC Press; 879-886.
- 4.13. Scourse, E., Aspinall, W.P. and Chapman, N. (2014) Using expert elicitation to characterise long-term tectonic risks to radioactive waste repositories in Japan. *Journal of Risk Research* doi: 10.1080/13669877.2014.971334
- 4.14. Goodheart, B. (2013). Identification of causal paths and prediction of runway incursion risk by means of Bayesian belief networks. *Transportation Research Record: Journal of the Transportation Research Board*, (2400), 9-20.
- 4.15. Scourse, E., Aspinall, W., Chapman, N. and Sparks, S. (2017) Expert judgement elicitation: application to science issues in siting facilities for geological disposal of nuclear waste. Ch. 18 in: *Geological Repository Systems for Safe Disposal of Spent Nuclear Fuels and Radioactive Waste* (eds. Apte, M. & Ahn, J.), Elsevier, 529-550
- 4.16. Ioannou, I., Aspinall, W., Rush, D., Bisby, L. and Rossetto, T. (2017) Expert judgment-based fragility assessment of reinforced concrete buildings exposed to fire. *Reliability Engineering & System Safety*, 167, 105-127.
- 4.17. Hincks, T., Aspinall, W. and Sparks, S. (2017) Application of Bayes Network analysis to RWGD siting: expert estimation of geological barrier effects due to climate change, Ch. 19 in: *Geological Repository Systems for Safe Disposal of Spent Nuclear Fuels and Radioactive Waste* (eds. Apte, M. & Ahn, J.), Elsevier,

551-581.

- 4.18. Kosgodagan, A., Morales Napoles, O., Maljaars, J., & Courage, W. (2016). Expert judgment in life-cycle degradation and maintenance modelling for steel bridges. In J. Bakker, D. M. Frangopol, & K. van Breugel (Eds.), *IALCCE 2016: The Fifth International Symposium on Life-Cycle Civil Engineering*, 16-19 September 2016: *Life-Cycle of Engineering Systems: Emphasis on Sustainable Civil Infrastructure*. (pp. 1-7). CRC Press. DOI: 10.1201/9781315375175-283
- 4.19. Kosgodagan-Dalla Torre, A, Yeung, TG, Morales Napoles, O, Castanier, B, Maljaars, J & Courage, WMG 2017, 'A Two-Dimension Dynamic Bayesian Network for Large-Scale Degradation Modeling with an Application to a Bridges Network' *Computer-Aided Civil and Infrastructure Engineering*, vol 32, no. 8, pp. 641-656. DOI: 10.1111/mice.12286
- 4.20. Earth Dams in Mexico: Morales-Nápoles, O., Delgado-Hernández, D.J., De-León-Escobedo, D., Arteaga-Arcos, J.C. (2014) A continuous Bayesian network for earth dams' risk assessment: Methodology and quantification. *Structure and Infrastructure Engineering*, 10 (5), pp. 589-603.
- 4.21. Delgado-Hernández, D.-J., Morales-Nápoles, O., De-León-Escobedo, D., Arteaga-Arcos, J.-C. (2014) A continuous Bayesian network for earth dams' risk assessment: an application *Structure and Infrastructure Engineering*, 10 (2), pp. 225-238.
- 4.22. Jaiswal, K.S., Wald, D.J., Perkins, D., Aspinall, W.P. and Kiremidjian, A.S. (2014) Estimating structural collapse fragility of generic building typologies using expert judgment. Chap 117 in: *Safety, Reliability, Risk and Life-Cycle Performance of Structures and Infrastructures* (eds: Deodatis, G., Ellingwood, B.R., Frangopol, D.M.), CRC Press; 879-886.
- 4.23. Larkin, P., Gracie, R., Shafiei, A., Dusseault, M., Sarkarfarshi, M., Aspinall, W. and Krewski, D. (2019) Uncertainty in risk issues for carbon capture and geological storage: findings from a structured expert elicitation', *Int. J. Risk Assessment and Management*, Vol. 22, Nos. 3/4, pp 429–463. doi:10.1504/IJRAM.2019.103335
- 4.24. Larkin, P., Gracie, R., Shafiei, A., Dusseault, M., Sarkarfarshi, M., Aspinall, W. and Krewski, D. (2019) Risk management in carbon capture and geological storage: insights from a structured expert elicitation, *Int. J. Risk Assessment and Management*, Vol. 22, Nos. 3/4, pp 404–428. doi:10.1504/IJRAM.2019.103334

## 5. Information security

- 5.1. Ryan, J.C.H. Mazzuchi, T.A. Ryan, D.J., Lopez de la Cruz, J. and Cooke, R.M. (2012) “Quantifying information security risks using expert judgment elicitation”, *Computers & Operations Research Journal* 39, 774-784. doi:10.1016/j.cor.2010.11.013

## 6. Natural Hazards

- 6.1. Woo G. and Aspinall W.P. (1993) Expert judgement in making decisions on mining hazards. In: *Rockbursts and Seismicity in Mines* (ed. Young R.P.), *Proceedings 3rd. Intl. Symp. on Rockbursts and Seismicity in Mines*; Kingston, Ontario, 16-18 August 1993; 279-283.

- 6.2. Aspinall, W.P. (1997) Elicitation of expert opinions for decision-making: concepts, experience and issues. Paper presented to The Royal Society IDNDR conference “Extreme Natural Disasters - Mitigating Strategies for the 21st Century”, March 10, 1997; London.
- 6.3. Aspinall W. and Cooke R.M. (1998) Expert judgement and the Montserrat Volcano eruption. Proceedings of the 4th International Conference on Probabilistic Safety Assessment and Management PSAM4, September 13th -18th 1998, New York City, USA (eds. Ali Mosleh and Robert A. Bari), Vol.3, 2113-2118.
- 6.4. Aspinall W.P., Loughlin S.C., Michael F.V., Miller A.D., Norton G.E., Rowley K.C., Sparks R.S.J. and Young S.R. (2002) The Montserrat Volcano Observatory: its evolution, organisation, role and activities. In: Druitt, T.H. & Kokelaar, B.P. (eds) The eruption of Soufrière Hills Volcano, Montserrat, from 1995 to 1999. Geological Society, London, Memoir.
- 6.5. Aspinall W.P., Woo G., Voight B. and Baxter P.J. (2003) Evidence-based volcanology: application to eruption crises. *Journal of Volcanology & Geothermal Research*, 123, 273-285.
- 6.6. Aspinall, W.P. (2006) Structured elicitation of expert judgment for probabilistic hazard and risk assessment in volcanic eruptions. In: Mader, H.M., Coles, S.G., Connor, C.B. & Connor, L.J. (eds) *Statistics in Volcanology*. Special Publications of IAVCEI, 1. Geological Society, London, 15-
- 6.7. Aspinall, W.P. (2006) Structured elicitation of expert judgment for probabilistic hazard and risk assessment in volcanic eruptions. Chapter 2, in IAVCEI Volume *Statistics in Volcanology*, 31pp.
- 6.8. Sparks, R.S.J., Aspinall, W.P. et al. (2013) Risk and uncertainty assessment of volcanic hazards. In “Risk and Uncertainty assessment in Natural Hazards.” Rougier, J.C., Sparks R.S.J., Hill, L. (eds). Cambridge University Press, Chapter 11, 364-397.
- 6.9. Martí, J., W. P. Aspinall, R. Sobradelo, A. Felpeto, A. Geyer, R. Ortiz, P. Baxter, P. Cole, J. Pacheco, M.J. Blanco, C. Lopez (2008). A long-term volcanic hazard event tree for Teide-Pico Viejo stratovolcanoes (Tenerife, Canary Islands). *Journal of Volcanology and Geothermal Research*, 178, 543-552.  
[doi:10.1016/j.jvolgeores.2008.09.023](https://doi.org/10.1016/j.jvolgeores.2008.09.023)
- 6.10. Queiroz, G., J. M. Pacheco, J.L. Gaspar, W.P. Aspinall, J.E. Guest and T. Ferreira. (2008). The last 5000 years of activity at Sete Cidades volcano (São Miguel Island, Azores): Implications for hazard assessment. *Journal of Volcanology and Geothermal Research*, 178, 562-573. [doi:10.1016/j.jvolgeores.2008.03.001](https://doi.org/10.1016/j.jvolgeores.2008.03.001)
- 6.11. Neri, A., Aspinall, W.P., Cioni, R., Bertagnini, A., Baxter, P.J., Zuccaro, G., Andronico, D., Barsotti, S., Cole, P.D., Esposti Ongaro, T., Hincks, T.K., Macedonio, G., Papale, P., Rosi, M., Santacroce, R., Woo, G. (2008) Developing an Event Tree for Probabilistic Hazard and Risk Assessment at Vesuvius. *Journal of Volcanology & Geothermal Research*, 178, 397-415.  
[doi:10.1016/j.jvolgeores.2008.05.014](https://doi.org/10.1016/j.jvolgeores.2008.05.014)
- 6.12. Aspinall, W.P. (2012) Comment on “Social studies of volcanology: knowledge generation and expert advice on active volcanoes” by Amy Donovan, Clive Oppenheimer and Michael Bravo [*Bull Volcanol* (2012) 74:677-689] *Bulletin of Volcanology*, 74, 1569-1570. doi: 10.1007/s00445-012-0625-x

- 6.13. Loughlin, S. C., Aspinall, W. P., Vye-Brown, C., Baxter, P. J., Braban, C., Hort, M., Schmidt, A., Thordarson, T., Witham, C. (2012) Large-magnitude fissure eruptions in Iceland: source characterisation. BGS Open File Report, OR/12/098; 231pp (available at: <http://www.bgs.ac.uk/research/volcanoes/LakiEruptionScenarioPlanning.html>)
- 6.14. Aspinall, W.P., Cooke, R.M., (2013) Expert Elicitation and Judgement. In “Risk and Uncertainty assessment in Natural Hazards.” Rougier, J.C., Sparks R.S.J., Hill, L. (eds). Cambridge University Press, Chapter 4, 64-99.
- 6.15. Hincks, T.K., Komorowski, J.-C., Sparks, S.R., and Aspinall, (2014) W.P., Retrospective analysis of uncertain eruption precursors at La Soufrière volcano, Guadeloupe, 1975-77: volcanic hazard assessment using a Bayesian Belief Network approach *Journal of Applied Volcanology* 2014, 3:3 doi:10.1186/2191-5040-3-3
- 6.16. Wadge, G. and Aspinall, W.P. (2014) A Review of Volcanic Hazard and Risk Assessments at the Soufrière Hills Volcano, Montserrat from 1997 to 2011. Ch. 24 in: *The Eruption of Soufrière Hills Volcano, Montserrat, from 2000 to 2010: Geological Society Memoirs, Vol. 39*, (edited by G. Wadge, R.E.A. Robertson and B. Voight). Geological Society: London; 439-456
- 6.17. Scourse, E., Aspinall, W.P. and Chapman, N. (2014) Using expert elicitation to characterise long-term tectonic risks to radioactive waste repositories in Japan. *Journal of Risk Research*, doi: 10.1080/13669877.2014.971334
- 6.18. Hicks, A., Barclay, J., Simmons, P. and Loughlin, S. (2014). "An interdisciplinary approach to volcanic risk reduction under conditions of uncertainty: a case study of Tristan da Cunha." *Nat. Hazards Earth Syst. Sci.* 14(7): 1871-1887. Doi: 10.5194/nhess-14-1871-2014. [www.nat-hazards-earth-syst-sci-discuss.net/1/7779/2013/](http://www.nat-hazards-earth-syst-sci-discuss.net/1/7779/2013/)
- 6.19. Bevilacqua, A., Isaia, R., Neri, A., Vitale, S., Aspinall, W.P. and eight others (2015) Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment: I. Vent opening maps. *Journal of Geophysical Research - Solid Earth; AGU*. doi:10.1002/2014JB011775
- 6.20. Neri, A., Bevilacqua, A., Esposti Ongaro, T., Isaia, R., Aspinall, W.P. and nine others (2015) Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment: II. Pyroclastic density current invasion maps. *Journal of Geophysical Research - Solid Earth; AGU*. doi:10.1002/2014JB011776
- 6.21. Gerstenberger, M. C., et al. (2016). "A Hybrid Time-Dependent Probabilistic Seismic-Hazard Model for Canterbury, New Zealand." *Seismological Research Letters*. Vol. 87 Doi: 10.1785/0220160084
- 6.22. Gerstenberger, M.C.; McVerry, G.H.; Rhoades, D.A.; Stirling, M.W. (2014) Seismic hazard modeling for the recovery of Christchurch, New Zealand. *Earthquake Spectra*, 30(1): 17-29; doi: 10.1193/021913EQS037M
- 6.23. Gerstenberger, M.C.; Christophersen, A.; Buxton, R.; Allinson, G.; Hou, W.; Leamon, G.; Nicol, A. (2013) Integrated risk assessment for CCS. p. 2775-2782; doi: 10.1016/j.egypro.2013.06.162 IN: Dixon, T.; Yamaji, K. (eds) *11th International Conference on Greenhouse Gas Control Technologies, 18th-22nd November 2012, Kyoto International Conference Center, Japan*. Elsevier. *Energy procedia* 37
- 6.24. Neri, A., Bevilacqua, A., Esposti Ongaro, T., Isaia, R., Aspinall, W.P. and nine others (2015) Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with

- uncertainty assessment: II. Pyroclastic density current invasion maps. *Journal of Geophysical Research - Solid Earth*; AGU. doi:10.1002/2014JB011776.
- 6.25. Aspinall, W. and Blong, R. (2015) Volcanic Risk Management. Chapter 70 in: *The Encyclopedia of Volcanoes, Second Edition* (eds H. Sigurdsson & four others), Academic Press ISBN 978-0-12-385938-9; pp1215-1234.
- 6.26. Christophersen, A., Deligne, N.I., Hanea, A.M., Chardot, L., Fournier, N. and Aspinall, W.P. (2018). Bayesian Network Modeling and Expert Elicitation for Probabilistic Eruption Forecasting: Pilot Study for Whakaari/White Island, New Zealand. *Frontiers in Earth Science* 6(211). Doi: 10.3389/feart.2018.00211
- 6.27. Tadini, A. et al. (2017) Assessing future vent opening locations at the Somma-Vesuvio volcanic complex: 2. Probability maps of the caldera for future Plinian/sub-Plinian event with uncertainty quantification. *J. Geophys. Res. Solid Earth*, 122, doi:10.1002/2016JB013860.
- 6.28. Tadini, A., Bisson, M., Neri, A., Cioni, R., Bevilacqua and Aspinall, W.P. (2017) Assessing future vent opening locations at the Somma-Vesuvio volcanic complex: 1. A new information geodatabase with uncertainty characterizations. *J. Geophys. Res. Solid Earth*, 122, doi:10.1002/2016JB013858 (17 June 2017).
- 6.29. Kindermann, Paulina E., Brouwer, Wietske S., van Hamel, Amber, van Haren, Mick v, Verboeket, Rik P., Nane, Gabriela F., Hanik, Lakhe, Prajapati, Rajaram, Davids, Jeffrey C., (2020) Return Level Analysis of the Hanumante River Using Structured Expert Judgment: A Reconstruction of Historical Water Levels, *Water* 2020, 12(11), 3229; <https://doi.org/10.3390/w12113229>
- 6.30. Barons, M.J. and Aspinall, W. (2020) Anticipated impacts of Brexit scenarios on UK food prices and implications for policies on poverty and health: a structured expert judgement update. arXiv:2010.15484 [econ.GN] (submitted 29 October 2020)
- 6.31. Barons, Martine J. , Anca M. Hanea, Sophia K. Wright, Katherine C. R. Baldock, Lena Wilfert, David Chandler, (2018) Assessment of the response of pollinator abundance to environmental pressures using structured expert elicitation, *Ecology and Conservation* Pages 593-604 | Received 02 Jun 2017, Accepted 14 Jun 2018, Published online: 02 Oct 2018

## 7. Climate

- 7.1. Bamber, J.L., and Aspinall, W.P., (2012) An expert judgement assessment of future sea level rise from the ice sheets, *Nature Climate Change*, PUBLISHED ONLINE: January 6, 2012 | DOI: 10.1038/NCLIMATE1778.  
<http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate1778.html>
- 7.2. Christophersen, A.; Nicol, A.; Gerstenberger, M.C. (2011) The feasibility of using seed questions for weighting expert opinion in CCS risk assessment. Canberra: Cooperative Research Centre for Greenhouse Gas Technologies. *CO2CRC Report RPT11-2868*. 14 p.
- 7.3. Hanea, D. (2009) Human Risk of Fire: Building a decision support tool using Bayesian networks, PhD Thesis, Dept. Technical Administrative Science, T.U. Delft

- 7.4. Puig, D. and Morales, O. (2017) "The accountability imperative for quantifying the uncertainty of emission forecasts: evidence from Mexico", appearing in *Climate Policy*
- 7.5. Bamber, J., Oppenheimer, M., Kopp, R., Aspinall, W., and Cooke, R.M. (2018) structured expert judgment for ice sheets' contribution to sea level rise, in preparation.
- 7.6. Puig, D., Morales Napoles, O., Bakhtiari, F. & Landa, G. (2017) 'The accountability imperative for quantifying the uncertainty of emission forecasts: evidence from Mexico' *Climate Policy*. 18 (6), 742-751
- 7.7. Morales-Nápoles, O., Dominik Paprotny; Daniël Worm; Linda Abspoel-Bukman; Wim Courage (2017) Characterization of precipitation through copulas and expert judgement for risk assessment of infrastructure. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering* Vol. 3, Issue 4 (December 2017)
- 7.8. Bamber, J. L., Oppenheimer, Kopp, R. E., Aspinall, W.P., Cooke, Roger M., (2019) Ice sheet contributions to future sea level rise from structured expert judgement, *PNAS* first published May 20, 2019  
<https://doi.org/10.1073/pnas.1817205116>
- 7.9. Rennert, Kevin, Prest, Brian, Pizer, William, Newell, Richard, Anthoff, David, Kingdon, Cora, Rennels, Lisa, Cooke, Roger, Raftery, Adrian E. Ševčíková, Hana and Errickson, Frank (2021) The Social Cost of Carbon: Advances in Long-Term Probabilistic Projections of Population, GDP, Emissions, and Discount Rates with online appendix, *Brookings Papers on Economic Activity Working Paper* (21-28) Sept 9, 2021.

## **8. Banking/Finance**

- 8.1. Van Overbeek, F.N.A. (1999) Financial experts in Uncertainty, Masters Thesis, Department of Mathematics, Delft University of Technology, Delft.
- 8.2. Qing, X. (2002) Risk analysis for real estate investment, PhD thesis, Dept. of Architecture, TU Delft.
- 8.3. Bakker, M. (2004) "Quantifying Operational Risks within Banks According to Basel II" Masters Thesis, Delft University of Technology, Dept. of Mathematics.
- 8.4. Ismail, R and Ried, (2016) "Ask the experts", *The Actuary*, June 2016, pp 26-28.

## **9. Reports**

- 9.1. Attribution study for Robert Wood Johnson Covering Kids & Families in Pennsylvania, Washington, Nebraska, Illinois, Arkansas, and Florida, conducted by Center for Disease Dynamics, Economics & Policy, 2012.
- 9.2. Colson, Abigail R., R.M. Cooke, R. Laxminarayan. (2015) "Attributing Impact to a Charitable Foundation's Programs with Structured Expert Judgment." Working Paper. Center for Disease Dynamics, Economics & Policy.
- 9.3. Colson, Abigail R., M.A. Cohen, S. Regmi, A. Nandi, R. Laxminarayan (2015) "Structured Expert Judgment for Informing the Return on Investment in Surveillance: The Case of Environmental Public Health Tracking." Working Paper. Center for Disease Dynamics, Economics & Policy.

- 9.4. Rennert, Kevin, Prest, Brian C. Pizer, William A. Newell, Richard G., Anthoff, David, Kingdon, Cora, Rennels, Lisa Cooke, Roger Raftery, Adrian E. Ševčíková, Hana, Errickson, Frank (BPEA) (2021) The Social Cost of Carbon: Advances in Long-Term Probabilistic Projections of Population, GDP, Emissions, and Discount Rates, Brookings Papers on Economic Activity, Fall 2021 Conference, Sept 9 2021.
- 9.5. Sparks, R.S.J., Aspinall, W.P., Cooke, R. and Scarrow, J.H. (2020) Quantifying threat from COVID-19 infection hazard in Primary Schools in England. *MedRxiv* 2020.08.07.20170035; <https://doi.org/10.1101/2020.08.07.20170035> [now in press as: Aspinall, W. P., Sparks R. S. J., Woodhouse, M. J., Cooke, R. M., Scarrow, J. H. and the CoMMInS Project. (2021) Pupils returning to Primary Schools in England during 2020: rapid estimations of punctual COVID-19 infection rates. *Royal Society Open Science*, manuscript RSOS-202218.]
- 9.6. Aspinall, W. P., Sparks, R. S. J., Connor, C. B., Hill, B. E., Costa, A., Rougier, J.C. Inakura, H. and Mahony, S. H. (2021) Aso volcano: estimating the probabilistic likelihood of a future Aso4-scale eruption from stochastic uncertainty analysis of volcanological evidence using importance sampling. In: *The 5th International Workshop on Rock Mechanics and Engineering Geology in Volcanic Fields (RMEGV2021: T. Ito, T. Ohta, and M. Osada, eds) ISRM2021 Specialized Conference September 9-11, 2021, Fukuoka, Japan; 6pp. ISBN 978-4-907430-05-4*
- 9.7. Kappel, C.V., Halpern, B.S. Selkoe, K.A. Cooke, R.M 2012. Eliciting expert knowledge of ecosystem vulnerability to human stressors to support comprehensive ocean management. In: *Expert knowledge and landscape ecological applications. A.J. Perera, C.A. Drew, and C.J. Johnson (eds.). Springer, New York. <http://www.springer.com/life+sciences/ecology/book/978-1-4614-1033-1>*
- 9.8. Neslo, REJ Micheli, F, Kappel, CV, Selkoe, KA, Halpern, BS & Cooke, Roger M. (EWI Ch. Risk Analysis) (2009). Modeling stakeholder preferences with probabilistic inversion; Application to prioritizing marine ecosystem vulnerabilities. In I Linkov, E Ferguson & VS Magar (Eds.), *Real-Time and Deliberative Decision Making* (3) (pp. 265-284). Dordrecht, Netherlands: Springer.
- 9.9. Cooke, Roger M. (2007) "Stakeholder Preference Elicitation" in I. Linkov et al, (eds) *Environmental Security in Harbors and Coastal Areas*, Springer, pp 149-160.
- 9.10. Kurowicka, D., Cooke, Roger M. Goossens, L. and Ale, B.J.M. (2006) "Expert judgment study for placement ladder bowtie" *Safety and Reliability for Managing Risk* Guedes Soares & Zio (eds) Taylor and Francis Group, London ISBN 0-415-41620-56 p. 21-27.
- 9.11. Group, London ISBN 0-415-41620-56 p. 897-904. 05-79374
- 9.12. Rabin Neslo, Fiorenza Micheli, Carrie V. Kappel, Kimberly A. Selkoe, Benjamin S. Halpern Cooke, Roger M., "Modeling Stakeholder Preferences with Probabilistic Inversion: Application to Prioritizing Marine ecosystem Vulnerabilities" appearing in Linkov, I., Ferguson, E., Magar, V. (in press). *Real Time and Deliberative Decision Making: Application to Risk Assessment for Non-chemical Stressors*. Springer, Amsterdam, pp 248-271.
- 9.13. van der Fels, H.J. Havelaar, A.H., Nauta, M.J., Goossens, L.H.J. and Cooke R.M. "CARMA: food safety and expert judgement", *Probabilistic Safety Assessment and Management 2004* C. Spitzer, U.Schmocker, V.N. Dang (eds) Springer, London, 2004, 1541-1552.

- 9.14. Cooke, Roger M. and Slijkhuis, Karen A. (2003) "Expert Judgment in the Uncertainty Analysis of Dike Ring Failure Frequency" Case Studies in Reliability and Maintenance. Edited by Wallace R. Blischke, D.N. Prabhakar Murthy; p. 331-352, ISBN: 0-471-41373-9, 2003, John Wiley and Sons, Inc.
- 9.15. Cooke, Roger M., Eric Jager and D. Lewandowski (2003) "Reliability Model for Underground Gas Pipelines" Case Studies in Reliability and Maintenance. Edited by Wallace R. Blischke, D.N. Prabhakar Murthy; p. 423-446, ISBN: 0-471-41373-9, 2003, John Wiley and Sons, Inc.
- 9.16. L.H.J. Goossens and Cooke, Roger M.; Expert judgement elicitation in risk assessment; Assessment and Management of Environmental Risks, Cost-efficient Methods and Applications; Proceedings of the NATO advanced Research Workshop on Assessment and Management of Environmental Risks: Methods and Applications in Eastern European and Developing Countries; Lisbon, Portugal, Oktober 1-4, 2000; pag 411-426; ISBN: 1-4020-0025-1(PB)
- 9.17. L.H.J. Goossens, J. Ehrhardt, B.C.P. Kraan, Cooke, Roger M. Expert judgement of uncertainties in Modeling emergency actions after nuclear accidents. In: S.Kondo and K. Furuta, PSAM5 - Probabilistic Safety Assessment and Management, (PSAM5, Osaka, Japan, 27 Nov - 1 Dec 2000) Universal Academy Press, Inc., Tokyo, Japan, Volume 2, pp. 971-976; ISBN 4-946443-64-9
- 9.18. Goossens, L.H.J., Cooke, Roger M., Kraan, B.C.P., Harper, F.T.: "Results of the EC/USNRC expert judgement uncertainty analysis of accident consequence models for nuclear power plants: Project overview and lessons learned". In: Safety and Reliability, Schueller & Kafka (eds.), 1999, Vol. 2. 1999 Balkema, Rotterdam, ISBN 90 5809 1090.
- 9.19. Willy Aspinall and Cooke, Roger M., "Expert Judgement and the Montserrat Volcano Eruption" In: A. Mosleh, R.A. Bari (eds.). Probabilistic Safety Assessment and Management, Vol. 3., sept 13-18-98, New York. Springer Verlag London Limited, Great Britain, pp. 2113-2118. ISBN 3540762620.
- 9.20. Mark Little, Colin Muirhead, Louis Goossens, Roger Cooke, Bernd Kraan, Fred Harper, (1998) "Results of expert judgement assessments for the late health effects models" Joint EC/USNRC project, In: A. Mosleh, R.A. Bari (eds.); Probabilistic Safety Assessment and Management, Vol. 3., sept. 13-18-98, New York, Springer Verlag London Limited, Great Britain, pp. 1925-1930. ISBN 3540762620.
- 9.21. Karen A.H. Slijkhuis, Martijn P.C. Frijters, Cooke, Roger M., Anton C.W.M. Vrouwenvelder, "Probability of flooding: An uncertainty analysis" In: Safety and Reliability, Volume 2, Trondheim, Noorwegen. Lydersen, Hansen, & Sandtorv (eds) copyright 1998 Balkema, Rotterdam, pp. 1419-1426. ISBN 9054109661
- 9.22. L.H.J. Goossens, B.C.P. Kraan, Cooke, Roger M., J.A. Jones, J. Brown, J. Ehrhardt, I. Hasemann, F. Fischer, "COSYMA accident consequence uncertainty analysis: Procedure and first results" In: Safety and Reliability, Volume 2, Trondheim, Noorwegen. Lydersen, Hansen & Sandtorv (eds) copyright 1998 Balkema, Rotterdam, pp. 1411-1418. ISBN 9054109661
- 9.23. Harper, F., Boardman, J., Harrison, J., Little, M., Goossens, L., Brown, J., Haskin, E., Abbott, M., Cooke, Roger M., Hora, S., Joint USNR/EC Consequence Uncertainty Study: the Ingestion Pathway, Dosimetry and Health Effects Expert Judgment Elicitations and Results, in Proc. of the Intern. Topical Meeting on

- Probabilistic Safety Assessment PSA 1996, American Nuclear Society, Inc., p. 1083-1088.
- 9.24. Harper, F.T.; Goossens, L.H.J.; Cooke, Roger M.; Hora, S.C.; Miller, L.A.; Pasler-Sauer, J.; Lui, C. and Kelly, G.N., Summary of uncertainty analysis of dispersion and deposition modules of the MACCS and nr COSYMA consequence codes - A joint USNRC/CEC study, Paper presented at PSAM-II Conference, San Diego, Ca/USA, 20-25 March 1994, Vol 1, session 009.
- 9.25. Goossens, L.H.J., Cooke, Roger M., e.a. (1993) "Uncertainty Analysis of Probabilistic Accident Consequence Codes for the Nuclear Industries – A Joint CEC/USNRC Expert Judgement Study" Joint International Conference on Mathematical methods and Supercomputing in Nuclear Applications 19-23 April 1993, Karlsruhe, Germany.
- 9.26. Goossens, L. Cooke, Roger M. Woudenberg, F. and van der Torn, P. (1992) "Protocol for using expert judgment in establishing probit relations of hazardous materials". Appearing in Proceedings of the Society of Risk Analysis, Paris 1992.
- 9.27. Cooke, Roger M., and van der Weide, H. "Expert judgement for uncertainty analysis of accident consequence codes" Proceedings of the World Congress on Expert Systems, Orlando Florida 1991.
- 9.28. van Steen, J. and Cooke, Roger M., "Expert Opinions as Data Source: Methods and Experiences", v. Colombari (ed), Reliability Data collection and Use in Risk and Availability Assessments. proceedings EURODATA conference 1989, Springer verlag, Berlin 1989, 262-286.
- 9.29. Preyssl, C. and Cooke, Roger M. "Expert Judgement in Subjective & Objective Data for Risk Analysis of Spaceflight Systems". Proceedings of The International Meeting on Probability, Reliability, and Safety Assessment, April 1989.
- 9.30. Cooke, Roger M., C. Bunea, T. Charitos, T.A. Mazzuchi "Mathematical Review of ZEDB Two-Stage Bayesian Model" VGB-Report, 45 pages; ISSN: 1439-7498, 2002
- 9.31. Cooke, R.M. Goossens, L.J.H., (2000) Procedures guide for structured expert judgment Project report EUR 18820EN, Nuclear science and technology, specific programme Nuclear fission safety 1994-98, Report to: European Commission. Luxembourg, Euratom. Also in Radiation Protection Dosimetry Vol. 90 No. 3.2000, 64 7, pp 303-311.
- 9.32. Brown, J. Goossens, L.H.J. , Harper, F.T., Kraan, B., Haskin, F.E, Abbott, M.L., Cooke, Roger M., Young, M.L, Jones, J.A. Hora, S.C., Rood, A., and Randall, J., Probabilistic accident consequence uncertainty study: Food chain uncertainty assessment, NUREG/CR-6523, EUR 16771, SAND97-0335 Washington/USA, and Brussels-Luxembourg, 1997 Vol, I, II
- 9.33. Goossens, L.H.J. , J. Boardman, F.T. Harper, B.C.P. Kraan, Cooke, Roger M., M.L. Young, J.A. Jones and S.C. Hora, Probabilistic Accident Consequence Uncertainty Study: Uncertainty Assessment For Deposited Material And External Doses. NUREG/CR-6526 Washington/USA, 1997.
- 9.34. Goossens, L.H.J. Cooke, Roger M. Pasler-Sauer, J. Kraan, B. & Jones, J.A. (1994). Probability Accident Consequence Uncertainty Analysis, Vols. 1-3, (NUREG/ CR-6244, EUR 15855 EN) Brussels: USNRC and CEC DG XII.

- 9.35. Goossens, L.H.J., Harrison, J.D. , Harper, F.T., Kraan, B., Cooke, Roger M. and Hora, S.C., Probabilistic accident consequence uncertainty study: Uncertainty assessment for internal dosimetry, NUREG/CR-6571, EUR 16773, SAND98-0119, Washington/USA, and Brussels-Luxembourg, 1998, Vol. I, II.
- 9.36. Goossens, L.H.J., and Harper, F.T., (1998) "Joint EC/USNRC expert judgement driven radiological protection uncertainty analysis", Journal of Radiological Protection, Vol.18, No.4, 249-264.
- 9.37. Goossens, L.H.J., Boardman, J. , Harper, F.T., Kraan, B., Cooke, Roger M., Young, M.L., Jones, J.A. and Hora, S.C., Probabilistic accident consequence uncertainty study: Uncertainty assessment for deposited material and external doses NUREG/CR-6526, EUR 16772, SAND97-2323, Washington/USA, and Brussels-Luxembourg, 1997, Vol. I, II.
- 9.38. Goossens, L.J.H. , Cooke, Roger M., Kraan, B., Ehrhardt, J., Fischer, F., Hasemann, I. , Jones, J.A., Brown, J., A. Khursheed, A. Phipps; Uncertainty from the dose module EUR 18825EN European Commission. Luxembourg 2001, Euratom.
- 9.39. Goossens, L.J.H. , Cooke, Roger M., Kraan, B., Ehrhardt, J., F. Fischer, Hasemann, I., Brown, J., Jones, J.A., J.G. Smith ; Nuclear science and technology. Uncertainty from the food chain module, EUR 18823EN European Commission. Luxembourg 2001, Euratom.
- 9.40. Goossens, L.J.H. , Kraan, B., Cooke, Roger M., Jones, J.A., Brown, L., Ehrhardt, J., Fischer, F. , Hasemann, I., Methodology and processing techniques, EUR 18827EN European Commission. Luxembourg 2001, Euratom.
- 9.41. Goossens, L.J.H. , Kraan, B., Cooke, Roger M., Jones, J.A., Brown, J., Ehrhardt, J., Fischer, F., Hasemann, I., Nuclear science and technology. Overall uncertainty analysis, EUR 18826EN European Commission. Luxembourg 2001, Euratom
- 9.42. Goossens, L.J.H. , Kraan, B., Cooke, Roger M., Jones, J.A., Brown, J., Ehrhardt, J., Fischer, F., Hasemann, I., Uncertainty from the atmospheric dispersion and deposition module, EUR 18822EN European Commission. Luxembourg 2001, Euratom.
- 9.43. Goossens, L.J.H. , Kraan, B., Cooke, Roger M., Jones, J.A., Ehrhardt, J., Fischer, F., Hasemann, I., Uncertainty from the early and late health effects module, EUR 18824EN European Commission. Luxembourg 2001, Euratom.
- 9.44. Goossens, L.J.H. , Kraan, B., Cooke, Roger M., Jones, J.A., Ehrhardt, J., Nuclear science and technology. Countermeasures uncertainty assessment, EUR 18821EN European Commission. Luxembourg 2001, Euratom.
- 9.45. Harper, F.T., L.H.J. Goossens, Cooke, Roger M., S.C. Hora, M.L. Young, J. Päsler-Sauer, L.A. Miller, B. Kraan, C. Lui, M.D. McKay, J.C. Helton, and J.A. Jones. Probabilistic accident consequence uncertainty study: Dispersion and deposition uncertainty assessment Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities NUREG/CR-6244, EUR 15855 EN, SAND94-1453. Washington/USA and Brussels-Luxembourg, November 1994, published January 1995. Volume I: Main report, Volume II: Appendices A and B, Volume III: Appendices C, D, E, F, G, H.
- 9.46. F.E. Haskin, L.H.J. Goossens, F.T. Harper, B.C.P. Kraan and Cooke, Roger M., Probabilistic Accident Consequence Uncertainty Study: Early Health Effects

- Uncertainty Assessment. Prepared for U.S. Nuclear Regulatory Commission and Commission of European Communities, NUREG/CR-6545 EUR 16775 SAND97-2689 Washinton/USA, and Brussels-Luxembourg, 1997, published 1997, Vol. 1. Main Report Vol. 2. Appendices.
- 9.47. Cooke, R.M, and van Noortwijk, Jan (1999) Bijlagen bij het expertmeningenrapport van de onzekerheidsanalyse op de inundatiekans. Rapport ONIN-1-99007, Projectnummer: WB 1083, 1999
- 9.48. Martijn Frijters, Roger Cooke, Karen Slijkhuis, Jan van Noortwijk, Rapport ONIN-1-99006, Expertmeningen onzekerheidsanalyse. Kwalitatief en kwantitatief verslag, Projectnummer: WB 1083, 1999
- 9.49. Cooke, Roger M., Van Noortwijk J.M., "Uncertainty Analysis of Inundation Probabilities, Phase 1, TU-Delft Report 37-97, ISSN 0922-5641, Delft 1997.
- 9.50. J. Brown, L.H.J. Goossens, B.C.P. Kraan, Cooke, Roger M., J.A. Jones, J. Randall, F.T. Harper, F.E. Haskin, M.L. Abbott, M.L. Young, S.C. Hora and A. Rood, Probabilistic Accident Consequence Uncertainty Analysis, NUREG/CR-6523 EUR 16771, Vol. 1. Main Report June 1997. Vol. 2 Appendices.
- 9.51. L.H.J. Goossens, Cooke, Roger M. and B.C.P. Kraan, Evaluation of weighting schemes for expert judgement studies Final report prepared under contract Grant No. Sub 94-FIS;040 for the Commission of European Communities, Directorate-General for Science, Research and Development, XII-F-6. Delft University of Technology, Delft/NL, December 1996, 75 p.
- 9.52. Harper F.T., Hora S.C., Young M.L., Miller L.A., Lui C.H., McKay M.D., Helton J.C., Goossens L.H.J., Cooke R.M., P"asler-Sauer J., Kraan B., Jones J.A., Probability Accident Consequence Uncertainty Analysis, NUREG/CR-6244 EUR 15855EN SAND94-1453 Vol 1. Main Report January 1995. Vol 2. Appendices A.1 Expert Rationales, Unprocessed Deposition Data and A.2 Expert Rationales, Unprocessed Dispersion Data and B Short Biographies of Dispersion and Deposition Experts. Vol 3. Appendix C: Principles for Probability Assessment, Expert Identification and Selection. Appendix D: Equal and Performance Based Weighting methods for Combining Expert Judgments Appendix E: Inverse Modeling Methods Appendix F: Case Structures Appendix G: Summary of MACCS and COSYMA Consequence Codes Appendix H: Non-Gaussian Information Survey.
- 9.53. Cooke R., "Expert Judgement study on atmospheric dispersion and deposition - main report and annexes", ISSN 0922-5641 Report 91-81 TU Delft, 300 pages, 1991. Annex I "Parameter fitting for uncertain models" with Frank Vogt 21 pp. Annex II "Expert judgment for uncertainty analysis of accident consequence codes" with H. van der Weide, 30 pp.
- 9.54. Cooke, Roger M. French, S. and van Steen, J. "The use of expert judgement in risk analysis - Report to the European Space Agency" (contract no. 8051/88/NL/re(SC)) 220 p. Delft, 1990.
- 9.55. Final Report to the Dutch Ministry of Housing, Physical Planning and Environment: 1989. Vol. I Expert Judgment in Risk and Safety Studies; Main Report, Goossens, L. Cooke, Roger M. and van Steen, J. 68 pp. Vol. III Model Description Report, Cooke, Roger M., Mendel, M. and van Steen, J. 98 pp. Vol. IV

A Theory of Weights for Combining Expert Opinions, Cooke, Roger M. 36 pp.  
Vol V Case Studies, Cooke, Roger M. and van Steen. 119 pp.

### **Code, Data, Analysis**

- 10.1. Goossens, L.H.J., Cooke R.M., Kraan, B.C.P., (1998) "Evaluation of weighting schemes for expert judgment studies" In: A. Mosleh, R.A. Bari (eds.) Probabilistic Safety Assessment and Management, Vol. 3., sept 13-18-98, New York. Springer Verlag London Limited, Great Britain, 1998,pp. 1937-1942. ISBN 3540762620.
- 10.2. v. Steen, J., Goossens, L., Cooke, Roger M. "Protocols for Expert Opinion Use in Risk Analysis" 6th International Symposium Loss Preventions and Safety Promotion in the Process industries, Oslo, Norway, June 19-22 1989 Vol. 11 42-7, 42-20.
- 10.3. Cooke, Roger M., Goossens, L.H.J. (2008) TU Delft Expert Judgment Data Base, Special issue on expert judgment Reliability Engineering & System Safety, 93, 657-674, Available online 12 March 2007, Issue 5, May 2008.
- 10.4. Cooke, R.M., Wittmann, M.E., Lodge, D.M., Rothlisberger, J.D., Rutherford E.S., Zhang, H. and Mason, D.M. (2014) "Out-of-Sample Validation for Structured Expert Judgment of Asian Carp Establishment in Lake Erie", Integrated Environmental Assessment and Management, open access. DOI: 10.1002/ieam.1559  
<http://onlinelibrary.wiley.com/doi/10.1002/ieam.1559/abstract>
- 10.5. Cooke, Roger M. (2014) Validating Expert Judgments with the Classical Model" in Experts and Consensus in Social Science - Critical Perspectives from Economics, Sociology, Politics, and Philosophy. Editors: Carlo Martini and Marcel Boumans, Series title: Ethical Economy - Studies in Economic Ethics and Philosophy, Springer
- 10.6. Colson, A. and Cooke, R.M., (2017) Cross Validation for the Classical Model of Structured Expert Judgment, Reliability Engineering and System Safety, Volume 163, July 2017, Pages 109–120 <http://dx.doi.org/10.1016/j.ress.2017.02.003>
- 10.7. Colson .A., and Cooke, R.M., (2018) Expert Elicitation: Using the Classical Model to Validate Experts' Judgments. Review of Environmental Economics and Policy, Volume 12, Issue 1, 1 February 2018, Pages 113–132, <https://doi.org/10.1093/reep/rex022>  
<https://academic.oup.com/reep/article/12/1/113/4835830>
- 10.8. Loentaris, G. and Morales Napoles, O. (2018) ANDURIL - A MATLAB Toolbox for ANalysis and Decisions with UnceRtaInty: Learning from expert judgments. Accepted for publication in SoftwareX.
- 10.9. Cooke, Roger M., Marti, Deniz and Mazzuchi, Thomas A., (2020) Expert Forecasting with and without Uncertainty Quantification and Weighting: What Do the Data Say? International Journal of Forecasting, published online July 25 2020 <https://doi.org/10.1016/j.ijforecast.2020.06.007>

*SEJ applications Aug22, 2022*