

Technical and Scientific Publications of Marc A. Maes

Publications are listed in inverse chronological order

This page was last updated on 16 June 2025

Total count:

Refereed Journal Publications and Book Contributions: Current Cumulative Count: 59

Articles in refereed Conference Proceedings: Current Cumulative Count: 147

2021-2025

1) Refereed Journal Publications

Ellingwood, B., Maes M.A., Bartlett F.M., Beck A.T., Caprani C., Der Kiureghian A., Dueñas-Osorio L., Galvão N., Gilbert R., Li J., Matos J., Mori Y., Papaioannou I., Parades R., Straub D., Sudret B (2024). Development of methods of structural reliability. *Structural Safety*, 102474, ISSN 0167-4730, Vol.41,3-4, <https://doi.org/10.1016/j.strusafe.2024.102474>.
(<https://www.sciencedirect.com/science/article/pii/S0167473024000456>)

2) Articles in refereed Conference Proceedings

Maes, M. A., and Salama, M.M. (2024). Probabilistic approaches for the analysis of pipeline inspection data. *Proceedings of the ASME 2024 International Conference on Asset Integrity Management of Critical Infrastructure*, Paper AIM-CI 2024-119036, Orlando, February.

Maes, M.A. and Heroes, Y. (2023). Decision making in the age of ultracrepidarianism. *Proceedings of the 12th International Forum on Engineering Decision Making (IFED2023)*, Stoos, Switzerland, 5-8 December.

Maes, M.A. and Heroes, Y. (2023). Wilting rationalism in technical decision making. *Proceedings of the 14th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP14*, Dublin, Ireland, 9-13 July.

Maes, M.A., Breitung, K.W. and Dann, M.R. (2021). At issue: the Gaussian autocorrelation function. *Proceedings 18th International Probabilistic Workshop*, Eds. Matos JC et al., Springer ISBN 978-3-030-73616-3, Guimaraes, May.

2016-2020

1) Refereed Journal Publications

Maes, M.A. (2019). Misconceptions and stereotypes regarding experts providing support for decision making, *Civil Engineering and Environmental Systems*, Vol. 36, Issue 1, June 2019.

Dann, M.R. and Maes, M.A. (2018). Stochastic corrosion growth modelling for pipelines using mass inspection data. *Reliability Engineering and System Safety*, Vol. 180(C), pp 245-254.

Maes, M.A., Dann, M.R., and Caspeele, R. (2017). The extraordinary in decision making: myth, apology, or opportunity. *Sustainable and Resilient Infrastructure*, Vol. 2 no. 4.

Sinickas, A, Jamieson, B., and Maes, M.A. (2016). Snow avalanches in western Canada: investigating change in occurrence rates and implications for risk assessment and mitigation. *Structure and Infrastructure Engineering*, Vol. 12 no. 4, pp. 490-498, DOI: 10.1080/15732479.2015.1020495.

2) Articles in refereed Conference Proceedings

- Maes, M.A (2019). Extremes in subexponential conditions. Web-published in the Proceedings of the 11th International Forum on Engineering Decision Making (IFED2019), Sydney Harbour National Park, December.
- Thomas, G.A.N. and Maes, M.A. (2019). Design situations and limit state verification for Arctic Structures. Proceedings 25th OMAE2019 Int. Conf. on Port and Ocean Engrg POAC 2019, Delft, June.
- Dann, M.R. and Maes, M.A. (2019). Value of information-based inspection planning using a population approach. Proceedings IABSE symposium: Towards a resilient environment, risk and asset management, Guimaraes, March.
- Maes, M.A (2018). Expert support for decision making: eight myths and eight red flags. Web-published in the Proceedings of the 10th International Forum on Engineering Decision Making (IFED2018), ISBN 13: 978-0-88953-420-9, Lake Louise, May.
- Breitung, K, and Maes, M.A. (2018). Series systems and disjunctive programming. Proceedings of the 19th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, June, Zurich, Switzerland.
- Maes, M.A. (2018). Myths and flaws in expert support for risk-informed decision making. Proceedings of the joint ICVRAM ISUMA uncertainties conference, Florianopolis, SC, Brazil, April.
- Brehm, E. and Maes, M.A. (2017). Target reliability of steel silos. Web-published proceedings of ICOSAR'17, Vienna, August.
- Maes, M.A., Dann, M.R., and Caspeele, R. (2016). Unknowable unknowns and extremes-beyond-extremes in decision making: myth, apology, or opportunity. Web-published in the Proceedings of the 9th International Forum on Engineering Decision Making (IFED2016), Stoops, Switzerland, December.
- Maes, M.A. (2016). Risk-based codification of structural design and assessment: benefits and challenges. Proceedings of the 3rd IOGP Offshore Structural Reliability Conference, eds. T. Moan and A. Nejad, Stavanger, 14-16 September, pp 153-156.
- Maes, M.A. and Dann, M.R. (2016). Freak events, black swans, and unknowable unknowns; impact on risk-based design. Proceedings of the 14th Int. Prob. Workshop, Ghent, Belgium, December.

2012-2015

1) Refereed Journal Publications

- Naess, A., Maes, M.A., and Dann, M.R. (2014). Chapter 9: Enhanced Monte Carlo for reliability-based design and calibration. *Computational Methods in Stochastic Dynamics*, Vol. 2, Editors: Papadrakakis, M, Stefanou, G. and Papadopoulos, Springer-Verlag, New York.

2) Articles in refereed Conference Proceedings

- Dann, M.R. and Maes, M.A. (2015). Probabilistic mass ILI data analysis using a population-based approach. Proceedings of the 10th Rio Pipeline Conference, Rio de Janeiro, 22-24 September.
- Maes, M.A. and Milke, M.W. (2015). Present-day challenges in rational decision making. Web-published in the Proceedings of the 8th International Forum on Engineering Decision Making (IFED2015), Hieizan, Shiga, Japan, 6-9 May.
- Dann, M.R. and Maes, M.A. (2015). Population-based approach to estimate corrosion growth in pipelines. Proceedings of ICASP 2015, July 2015, Vancouver, Canada.
- Breitung, K. and Maes, M.A. (2015). Estimating event probabilities using zero failure data. Proceedings of ICASP 2015, July 2015, Vancouver, Canada.
- Dann, M.R., Maes, M.A., and Salama, M.M. (2015). Pipeline corrosion growth modeling for in-line inspection data using a population-based approach. Proceedings of the 34th OMAE2015, published on CD, St. John's, June.
- Reybrouck, N., Maes, M.A., Caspeele, R., Taerwe, L., and Criel, P. (2014). Modelling of the effect of random environmental influences on the stochastic creep in concrete members. Proceedings of the 12th Int. Prob. Workshop, November, Weimar, Germany.
- Maes, M.A. (2014). Calibration methodologies. IOGP Offshore Structural Reliability Conference, Houston, 16-18 September.
- Salama, M.M. and Maes, M.A. (2014). Assessment of pipeline integrity based on successive inspection data. Proceedings of OMAE2014, published on CD, paper #24519, San Francisco, June.
- Sinickas, A., Maes, M.A., and Jamieson, B. (2013). Assessing the effects of changing climate on snow avalanche activity in Canada. Web-published in the Proceedings of the 7th International Forum on Engineering Decision Making (IFED2013), Shoal Bay, Australia, 11-14 December.
- Salama, M.M. and Maes, M.A. (2013). Characterization of the uncertainties in the inspection results of intelligent UT pigs. Proceedings of OMAE2013, published on CD, paper #11168, Nantes, June.
- Maes, M.A., Van Colie, R., Caspeele, R., Gao M., and Dann, M.R. (2013). Probabilistic FAD and ductile tearing assessment. Proceedings of OMAE2013, published on CD, paper #10046, Nantes, June.
- Maes, M.A. and Naess, A. (2012). Sequential selection of an optimal operating window. Reliability and Optimization of Structural Systems, Eds A. Der Kiureghian and A. Hajian, Proceedings of the 16th IFIP WG7.5 Working Conference, pp. 9-16.
- Dann M.R., Maes, M.A., and Naess, A. (2012). Enhanced Monte-Carlo using two scaling or design factors. Fifth Asian-Pacific Symposium on Structural Reliability and its Applications (SAPSSRA), Singapore, May.
- Maes, M.A. and Naess, A. (2012). Selecting an optimal window of opportunity within a finite horizon. Web-published in the Proceedings of International Forum on Engineering Decision Making, IFED2012, Lake Louise, January.
- Maes, M.A. (2012). Information versus uncertainty: Reliability based decision making for pipeline integrity management. PRCI-2012 Research Exchange Meeting, Mesa, February.

1) Refereed Journal Publications

Dann, M, A. and Maes, M.A. (2012). Assessing global change when data are sparse. International Journal of Risk Assessment and Management, Vol. 15, no. 4, pp. 349-363.

2) Articles in refereed Conference Proceedings

Maes, M.A. and Dann, M.R. (2011). A unified probabilistic treatment for in-line-inspection with respect to detectability, reportability, false call potential and depth sizing. Proceedings of the 11th International Conference on Applications of Statistics and Probability ICASP11, Zurich, August.

Naess, A., Maes, M.A., and Dann, M.R. (2011). Reliability-based Design/Calibration using Enhanced Monte-Carlo. Proceedings of COMPDYN 2011, ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering, M. Papadrakakis, N.D. Lagaros, M. Fragiadakis (eds.), Corfu, Greece, 26-28 May.

Dann, M. and Maes, M.A. (2011). Spatial hierarchical POD model for in-line inspection data. Proceedings of the 11th International Conference on Applications of Statistics and Probability ICASP11, Zurich, August.

Maes, M.A. and Thomas, G.A.N. (2011). Risk-based calibration of action factors in the new ISO 19906 Arctic offshore structures standard. Proceedings of the Arctic Technology Conference, Houston, February.

Pilisi, N., Maes, M.A., and Lewis, D.B. (2011). Deepwater drilling for Arctic oil and gas resources development: a conceptual study in the Beaufort Sea. Proceedings of the Arctic Technology Conference, Houston, February.

Naess, A., Maes, M.A., and Dann, M.R. (2011). Reliability-based design/calibration using enhanced Monte-Carlo. Proceedings of the 11th International Conference on Applications of Statistics and Probability ICASP11, Zurich, August.

2010

1) Refereed Journal Publications

Faber, M.H. and Maes, M.A. (2010). Sustainable management of life safety risks. International Journal of Engineering under Uncertainty: hazards, assessment and mitigation, Vol. 2 no.1-2, pp. 9-17.

2) Articles in refereed Conference Proceedings

Dann, M., Maes, M. A., and Salama, M.M. (2010). Burst limit state reliability for fiber-wrapped steel pipe. Proceedings of the 8th International Pipeline Conference, Paper IPC2010-31008, Calgary, Canada, September.

Zhang, S., Nishijima, K., Maes, M.A., and Faber, M.H. (2010). Object-oriented Bayesian networks for stochastic finite elements. Proceedings of the 15th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, Munich, April, Taylor and Francis.

Naess, A. and Maes, M.A. (2010). Reliability-based design/calibration using enhanced Monte-Carlo. Web-published in the Proceedings of International Forum on Engineering Decision Making, IFED2010, Stoos, December.

Dann, M.R. and Maes, M.A. (2010). Borrowing information for rare hazard modeling. Web-published in the Proceedings of International Forum on Engineering Decision Making, IFED2010, Stoos, December.

2009

1) Refereed Journal Publications

Nishijima, K., Maes, M.A., Goyet, J., and Faber, M.H. (2009). Reliability acceptance criteria for components of complex systems. *Structural Safety*, Vol. 31 no. 2, March, pp. 168-178.

Glowienka, S., Graubner, C.A., and Maes, M.A. (2009). Reliability of unreinforced masonry consisting of large sized units. *Masonry International*, Vol. 21, March, pp. 13-24.

Maes, M.A., Dann M., and Midtgaard, A.K. (2009). Spatial hazard rate modeling using Hierarchical Bayes methods. *Australian Journal of Structural Engineering*, Vol. 9 no. 1, pp. 45-54.

2) Articles in refereed Conference Proceedings

Maes, M.A., Dann, M.R. and Breitung, K.W. (2009). Reliability-based integrity assessment of structural systems subject to heterogeneous deterioration and large-scale inspection uncertainty. Proceedings published on CD, ICOSSAR'09, Osaka, September.

Maes, M.A., Faber, M.H and Dann M.R. (2009). Hierarchical modeling of pipeline defect growth subject to ILI uncertainty. Proceedings of the 27th Offshore Ocean and Arctic Engineering Conference, Honolulu, US, June, OOAEE2009-79470, 12 pages.

Faber, M.H. and Maes, M.A. (2009). Sustainable strategic and operational management of life safety. Web-published in the Proceedings of International Forum on Engineering Decision Making, IFED2009, Tokyo, May.

2008

1) Refereed Journal Publications

Maes, M.A. and Salama, M.M. (2008). Managing ILI inspection uncertainties. *PipeLine and Gas Technology*, Vol. 7 no. 5, June, pp. 34-41.

Maes, M.A. and Faber, M.H. (2008). Hierarchical modeling or risk-based optimization and inspection planning of complex hull structures. *Ship Technology Research (Schiffstechnik)*, Vol. 55 no. 1, January, pp. 2-11.

Faber, M. H. and Maes, M.A. (2008). Issues in societal optimal engineering decision making. *Structure and Infrastructure Engineering*, Vol. 4 no. 5, pp. 335-351.

Maes, M. A., Dann, M., and Salama M.M. (2008). Influence of grade on the reliability of corroding pipelines. *Reliability Engineering and System Safety*, Elsevier, Vol. 93 no. 3, March, pp. 447-455.

2) Articles in refereed Conference Proceedings

Maes, M.A, Dann, M.R., Breitung, K.W., and Brehm, E. (2008). Hierarchical modeling of stochastic deterioration. Proceedings of the 6th International Probabilistic

Workshop, Eds C.A. Graubner, H. Schmidt, D. Proske, T.U. Darmstadt, November, pp. 111-124.

- Maes, M.A. (2008). Factors affecting a risk-based interpretation of robustness. Proceedings of the 1st Workshop on the Robustness of Structures, COST-Action TU0601, ETH Zurich, February, pp. 83-94.
- Maes, M.A., Dann, M.R. and Faber, M.H. (2008). Hierarchical Bayes analysis of rare events using high-dispersion Poisson mixtures. Proceedings of the 27th Offshore Mechanics and Arctic Engineering Conference, Estoril, Portugal, June, Published on CD as OMAE2008-57197.
- Li, D., Maes, M.A. and Dilger, W.H. (2008). Evaluation of temperature data of the Confederation Bridge: thermal loading and movement at expansion joints. Proceedings of ASCE Structures Congress, Vancouver, Canada, April, published on CD.
- Maes, M.A. and Dann, M.R. (2008). Spatial hazard assessment based on real-time event monitoring using hierarchical Bayes. Inaugural International Conference of the Engineering Mechanics Institute (EM08), Minneapolis, May, published on CD.
- Nishijima K, Faber, M.H. and Maes, M.A. (2008). Probabilistic assessment of extreme events subject to epistemic uncertainties. Proceedings of the 27th Offshore Mechanics and Arctic Engineering Conference, Estoril, Portugal, June, Published on CD as OMAE2008-57172.
- Maes, M.A. and Salama, M.M. (2008). Impact of in-line inspection uncertainties on decision making regarding pipeline integrity. Proceedings of the annual NACE conference, New Orleans, April, published on CD.

2007

1) Refereed Journal Publications

- Maes, M.A. and Dann, M. (2007). Hierarchical Bayes methods for systems with spatially varying condition states. Canadian Journal of Civil Engineering, Vol. 34, October, pp. 1289-1298.
- Maes, M.A. and Faber, M.H. (2007). Preferences, utility and risk perception in engineering decision making. International Journal of Risk Assessment and Management, Vol. 7 no. 6/7, pp. 813-827.
- Maes, M.A. and Dann, M. (2007). A comparison of one-stage and two-stage Bayesian processes in engineering decision making. Civil Engineering and Environmental Systems, Vol. 24 no. 2, June, pp. 123-137.
- Maes, M.A. and Faber, M.H. (2007). Consequence modeling based on stated preferences. Australian Journal of Civil Engineering Vol. 4 no. 1, pp. 47-58.

2) Articles in refereed Conference Proceedings

- Li, D., Maes, M.A. and Dilger, W.H. (2007). Thermal response of the Confederation Bridge: extreme thermal loading and expansion joint movement. Proceedings of the Confederation Bridge Engineering Summit, Charlottetown, PEI, Canada, August.
- Maes, M.A. and Breitung, K.W. (2007). Hierarchical Bayes methods involving dependent condition states. Published on CD in the Proceedings of the 10th International Conference on Applications of Statistics and Probability ICASP10, Tokyo, August, paper # FA-2-5.

- Midtgaard, A.K., Troive, S., and Maes, M.A. (2007). Hazard mitigation based on risk analysis using qualitative in-depth accident investigation reports. Web-published in the Proceedings of International Forum on Engineering Decision Making, IFED2007, Port Stephens, December.
- Maes, M.A. and Faber, M.H. (2007). Hierarchical approach to reliability-based inspection planning of hull structures. Proceedings of the 6th int. conf. on computer applications and information technology in the maritime industries, COMPIT'07, published by INSEAN, ISBN 88-7617-002-2, Cortona, Italy, April, pp. 60-72.
- Nishijima K., Maes, M.A., Goyet, J., and Faber, M.H. (2007). Optimal reliability of components of complex systems using hierarchical system models. Electronic Proceedings of Stanford conference 'Risk acceptance and communication', Published at http://www.ripid.ethz.ch/paper_ppt.html, Stanford, California, March.
- Maes, M.A. and Faber, M.H. (2007). Spatial effects in risk-based design and maintenance of pipelines. Proceedings of the 26th Offshore Mechanics and Arctic Engineering Conference, San Diego, USA, June, Published on CD, Paper 29164, 8 pages.
- Faber, M.H., Maes, M. A., Baker, J., Vrouwenvelder, A., and Takada, T. (2007). Principles of Risk Assessment of Engineered Systems. Published on CD in the Proceedings of the 10th International Conference on Applications of Statistics and Probability ICASP10, Tokyo, August, Paper # WM-5-2.
- Maes, M.A., Dann, M., Sarkar S., and Midtgaard, A.K. (2007). Fatality rate modeling within a spatial network using hierarchical Bayes methods. Web-published in the Proceedings of International Forum on Engineering Decision Making, IFED2007, Port Stephens, December.

2006

1) Refereed Journal Publications

- Faber, M.H., Straub, D.M., and Maes, M.A. (2006). A computational framework for risk assessment of RC structures using indicators. Computer-Aided Civil and Infrastructure Engineering, Vol. 21, March, pp. 216-230.
- Maes, M.A., Fritzsons, K.E., and Glowienka, S. (2006). Structural robustness in the light of risk and consequence analysis. Structural Engineering International, Vol. 16 no. 2, May, pp. 101-107.
- Maes, M.A. and Faber, M.H. (2006). Bayesian framework for managing preferences in decision making. Reliability Engineering and System Safety, Vol. 91 no. 5, May, pp. 556-569.

2) Articles in refereed Conference Proceedings

- Maes, M.A. and Dann, M. (2006). Two-stage Bayesian processes for spatially varying condition states. Proceedings of International Forum on Engineering Decision Making, IFED2006, http://www.ifed.ethz.ch/events/secondforum_paper.html , ISBN 3-909386-62-8, Lake Louise, Canada, April.
- Maes, M.A. (2006). Exchangeable condition states and Bayesian reliability updating, keynote address. Proceedings of the 13th IFIP WG7.5 Working Conference on

Reliability and Optimization of Structural Systems, Kobe, Japan, October, Taylor and Francis, pp. 27-42.

Maes, M.A. and Salama, M.M. (2006). Impact of yield to ultimate ratio on the reliability of burst limit states. Proceedings of the 6th International Pipeline Conference, Paper IPC2006-10323, Calgary, Canada, September.

Faber, M.H., Straub, D., Maes, M.A., and Baker, J. (2006). On the quantification of robustness of structures. Proceedings of the 25th Offshore Mechanics and Arctic Engineering Conference, Hamburg, Germany, June, published on CD as Paper OMAE2006-92605, 8 pages.

Maes, M.A. and Faber, M.H. (2006). Probabilistic interpretation of robustness for structural systems. Proceedings of PSAM 8, International Conference on Probabilistic Safety Assessment and Management, New Orleans, May, Published on CD, Paper 0324, 8 pages.

Maes, M.A., Salama, M.M., and Dann, M. (2006). Reliability of burst limit states for damaged and corroded high strength pipelines. Proceedings of the 25th Offshore Mechanics and Arctic Engineering Conference, Hamburg, Germany, June, published on CD as Paper OMAE2006-92095, 8 pages.

Maes, M.A., Troive, S., and Fritzsos, K.E. (2006). Contrasting different reliability-based design formats for the durability of concrete structures. Proceedings of ConcreteLife'06, International RILEM-JCI Seminar on Concrete Durability and Service Life Planning, Ein-Bokek, Israel, March.

2005

1) Refereed Journal Publications and Book Contributions

Maes, M.A., Sinclair, J., and Lewis, D.B. (2005). Risk analysis of running a deepwater production test from a dynamically positioned vessel in the North Atlantic. Journal of Offshore Mechanics and Arctic Engineering, ASME, Vol. 127 no. 1, February, pp. 52-58.

2) Articles in refereed Conference Proceedings

Maes, M.A., Fritzsos, K.E., and Glowienka, S. (2005). Risk-based indicators of structural system robustness. Proceedings of the JCSS-IABSE workshop on Robustness of Structures, BRE, Watford, UK, November.

Faber, M.H. and Maes, M.A. (2005). Epistemic uncertainties and system choice in decision making. Proceedings of the 9th Int. Conf. on Structural Safety and Reliability, ICOSSAR'05, Rome, Italy, June, published on CD, abstract book p. 596, Millpress Science Publishers, 8 pages.

Maes, M.A. (2005). Order statistics of ratios. Proceedings of the 9th Int. Conf. on Structural Safety and Reliability, ICOSSAR'05, Rome, Italy, June, published on CD, abstract book p. 415, Millpress Science Publishers, 8 pages.

Faber, M.H. and Maes, M.A. (2005). On applied engineering decision making for society. Proceedings of the 12th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, May, Aalborg, Denmark, Balkema, pp. 17-30.

Abdelatif Hassanien, S.S., Maes, M.A., and Shrive, N. (2005). A hypo-ellipse approximation for bi-objective structural life cycle cost optimization problems.

- Proceedings of the 10th International Conference on Civil, Structural and Environmental Engineering Computing, published on CD, Rome, Italy.
- Faber, M.H. and Maes, M.A. (2005). Epistemic uncertainties in offshore engineering design. Proceedings of 24th Offshore Mechanics and Arctic Engineering Conference, Halkidiki, Greece, June, published on CD as Paper OMAE2005-67009, 8 pages.
- Maes, M.A. and Troive, S. (2005). Risk perception and fear factors in life-cycle costing. Published in Advances in Life-Cycle Cost Analysis and Design of Civil Infrastructure Systems. Proceedings of the 4th Int. Workshop on Conference of Life-Cycle Cost Analysis and Design of Civil Infrastructures Systems, Cocoa Beach, Florida, May, pp. 151-158.
- Maes, M.A. and Faber, M.H. (2005). Updating utilities and reconciling expert opinion. Proceedings of the 12th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, May, Aalborg, Denmark, Balkema, pp. 235-244.

2004

1) Refereed Journal Publications

- Li, D., Maes M.A. and Dilger, W.H. (2004). Thermal design criteria for deep prestressed concrete girders based on data from the Confederation Bridge. Canadian Journal of Civil Engineering, Vol. 31, pp. 813-825. This paper was selected by the Canadian Society for Civil Engineering (CSCE) as the winner of the 1994 P.L. Pratley Medal.
- Maes, M.A. and Huyse L. (2004). Editors of Reliability and optimization of structural systems, Edited Proceedings of the 11th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, 2-5 November 2003, Banff, Canada, Balkema Publishers, 385 pages.
- Maes, M.A. , Abdelatif S., and Frederking, R.G. (2004). Recalibration of partial load factors in the Canadian offshore structures standard CAN/CSA-S471. Canadian Journal of Civil Engineering, Vol. 31 no. 4, August, pp. 684-694.

2) Articles in refereed Conference Proceedings

- Maes, M.A. and Stewart, M.G. (2004). Optimizing structural safety levels on the basis of lifetime utility objectives of the individual. Proceedings of SEMC 2004, 2nd International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, Ed. Zingoni A, Balkema Publishers, p. 179 and full article published on CD.
- Maes, M.A. and Faber, M.H. (2004). Consequence modeling based on stated preferences. Proceedings of Int. Forum on Engineering Decision Making IFED2004, Stoos, Switzerland.
- Maes, M.A., Faber, M.H. and Abdelatif, S. (2004). Consequence and utility modeling in rational decision making. Proceedings of the 23rd Offshore Mechanics and Arctic Engineering Conference, Vancouver, Canada, June, published on CD as paper # 51511, 8 pages.
- Abdelatif, S. and Maes, M.A. (2004). A comparison of algorithms for structural life cycle utility optimization. Proceedings of Int. Conf. on Structural and Geotechnical Engineering and Construction Technology IC-SGECT'04, Mansoura, Egypt, March, published on CD, 17 pages.

- Faber, M.H., Maes, M. A., and Kuebler, O. (2004). Optimal design of groups of platforms. Proceedings of the 23rd Offshore Mechanics and Arctic Engineering Conference, Vancouver, Canada, June, published on CD as paper #51430, 8 pages.
- Maes, M.A. (2004). Relating lifetime utility objectives and structural safety. Proceedings of the 7th Int. Conf. on Probabilistic Safety Assessment and Management, PSAM 7 and ESREL '04, Berlin, June, eds. Spitzer C, Schmocker U and Dang VN, Springer Verlag, Vol. 4, pp. 1930-1935.
- Maes, M.A. (2004). Reliability-based thermal design criteria for concrete bridges. Proceedings of the 2nd Int. Conf. on Bridge Maintenance, Safety and Management, IABMAS '04, Kyoto, October, Eds. Watanabe, E., Frangopol, D.M., and Utsunomiya, T., Balkema Publishers, p. 937 and full article published on CD.

2003

1) Refereed Journal Publications and Book Contributions

- Maes, M.A., Pandey, M.D., and Nathwani, J.S. (2003). Harmonizing structural safety levels with life quality objectives. Canadian Journal of Civil Engineering, 30, pp. 500-510.
- Maes, M.A. (2003). Extrapolation into the unknown: modeling tails, extremes, and bounds. Chapter in Reliability-Based Design and Optimization, RBO'03, editors S. Jendo and K. Dolinski, Lecture Notes 16, Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw, Poland, pp. 177-210.
- Maes, M.A. (2003). Modelling infrastructure deterioration risks. International Journal of Modelling and Simulation, Vol. 23 no. 1, pp. 43-51.

2) Articles in refereed Conference Proceedings

- Maes, M.A., Sinclair, J., and Lewis, D.B. (2003). Risk analysis of running a deepwater production test from a dynamically positioned vessel in the North Atlantic. Proceedings of the 22nd Offshore Mechanics and Arctic Engineering Conference, Cancun, Mexico, June, published on CD as paper OMAE2003-37009 (12 pages).
- Li, D., Maes M.A. and Dilger, W.H. (2003). Extreme thermal response of concrete bridges: experiment versus design. Proceedings of the 9th International Conference on Applications of Statistics and Probability (ICASP 9), eds. A. Der Kiureghian and J. Pestano, San Francisco, Vol. 2, pp.1675-1682.
- Maes, M.A. and Faber, M.H. (2003). Issues in utility modeling and rational decision making. Proceedings of the 11th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, eds. M.A. Maes and L. Huyse, Balkema Publishers, pp. 95-104.
- Faber, M.H. and Maes M.A. (2003). Modeling of risk perception in engineering decision analysis. Proceedings of the 11th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, eds. M.A. Maes and L. Huyse, Balkema Publishers, pp. 113-122.
- Abdelatif, S. and Maes M.A. (2003). Multi-objective life cycle utility optimization. Proceedings of the 11th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, eds. M.A. Maes and L. Huyse, Balkema Publishers, pp. 353-360.

Li, D., Maes, M.A., and Dilger, W.H. (2003). Design temperature profiles for bridge decks: experimental data and extreme value analysis. Proceedings of CSCE 2003 Conference, Moncton, New Brunswick.

2002

1) Refereed Journal Publications and Book Contributions

Maes, M.A. (2002). Updating performance and reliability of concrete structures using discrete empirical bayes methods. International Journal of Offshore Mechanics and Arctic Engineering, Transactions of the American Society of Mechanical Engineers, November, Vol. 124, pp. 239-246.

Huyse, L., Maes, M.A., and Thacker, B.H. (2002). Probabilistic multi-scale modeling of materials. Chapter 1, pp 3-25, in Nano Materials and Nano-scale mechanics, eds. M. Salas, V. Harik and S.L. Luo, July, Kluwer Academic Publishers.

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