CURRICULUM VITAE

Assoc. Prof. Dr. Kazuyoshi Nishijima

December 2013, Kyoto, Japan

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PERSONAL INFORMATION

Name	**NISHIJIMA, Kazuyoshi**
Office	DPRI Kyoto University, Gokasho, Uji city, Kyoto, Japan, 611-0011
Telephone	+81(0)774384165
E-mail	nishijima.kazuyoshi.5x@kyoto-u.ac.jp
Homepage	www.dpri.kyoto-u.ac.jp/web_e/index_topics.html
Nationality	Japan
Date of birth	13 August 1978 (35 years old)

WORK EXPERIENCE

Occupation/position	**Associate Professor**
Employer	Disaster Prevention Research Institute, Kyoto University
Date	Since 09.2013
Type of sector	University
Main activities and responsibilities	Research, teaching, and outreach

Occupation/position	**Associate Professor of Engineering Decision Analysis**
Employer	Technical University of Denmark, Denmark
Dates	01.2011 – 08.2013
Type of sector	University
Main activities and responsibilities	Research, supervision of PhD students, and teaching

Occupation/position	**Senior research associate** (Oberassistent)
Employer	Institute of Structural Engineering, ETH Zurich, Switzerland
Dates	04.2009 – 12.2010
Type of sector	University
Main activities and responsibilities	Research and teaching

WORK EXPERIENCE (continued)

Occupation/position	**Scientific research assistant / PhD**
Employer	Institute of Structural Engineering, ETH Zurich, Switzerland
Dates	12.2004 – 03.2009
Type of sector	University
Main activities and responsibilities	Research and teaching assistant
Occupation/position	**Consulting engineer, director**
Employer	Matrisk GmbH, Zurich, Switzerland
Dates	Since 2007
Type of sector	Company
Main activities and responsibilities	Consulting
Occupation/position	**Working student**
Employer	Munich Re, Munich, Germany
Dates	09.2004 - 11.2004
Type of sector	Company
Main activities and responsibilities	Business assistance

EXTERNAL RESEARCH STAY

Place	Kyoto University, Japan
Period	2010-2011 (6 months in total)
Title	Visiting research associate

EDUCATION

Title of qualification	**Doctor of Sciences (Dr. sc. ETH Zurich)**
Dates	12.2004 – 03.2009
Organization	Institute of Structural Engineering, ETH Zurich, Switzerland
Principal subjects	Civil engineering, sustainability
Position	**PhD student**
Dates	04.2003 – 11.2004
Organization	Graduate School of Frontier Sciences, The University of Tokyo, Japan
Principal subjects	Civil engineering
Title of qualification	**Master of Environmental Studies**
Dates	04.2001 – 03.2003
Organization	Graduate School of Frontier Sciences, The University of Tokyo, Japan
Principal subjects	Civil engineering, natural hazards

LANGUAGE SKILLS

Mother tongue	Japanese
Other languages	English (Excellent)
	German (Good)

AWARDS AND SCHOLARSHIPS

Award	**Wind Engineering Award (shourei-sho)**
Date	2005
Organization	Japan Association for Wind Engineering (JAWE)
Award	**Award for excellent master thesis**
Date	2003
Organization	The University of Tokyo
Grant	**Research fellowship for young scientists, DC1**
Period	04.2003 – 08.2004
Organization	Japan Society for the Promotion of Science (JSPS)
Grant	**Scholarship student**
Period	04.1997 – 03.2001
Organization	Kinoshita scholarship foundation

RESEARCH PROJECTS

Title	**Theme D: Problem oriented accurate impact assessment**
Period	Since 04.2013 (ongoing)
Fund organization	Program for Risk Information on Climate Change, Ministry of Education, Culture, Sports, Science & Technology, Japan
Responsibility	Research
Title	**Academic Network for Disaster Resilience to Optimise Educational Development (ANDROID)**
Period	11.2011 – 10.2014
Fund organization	Lifelong Learning Programme
Responsibility	Work package coordination, research
Title	**Hierarchical modeling of flood risk for engineering decision analysis**
Period	Since 01.2011 (ongoing)
Fund organization	Technical University of Denmark, Denmark
Responsibility	PhD supervision
Title	**Projection of the change in future weather extremes using super-high-resolution atmospheric models**
Period	04.2010 – 03.2012
Fund organization	Kakushin program, Ministry of Education, Culture, Sports, Science & Technology, Japan
Responsibility	Research
Title	**Real time decision support in the face of evolving natural hazards**
Period	08.2009 – 07.2012
Fund organization	Swiss National Science Foundation (SNF), Switzerland
Responsibilities	Project management, supervision of a PhD student, and research
Title	**Development of stochastic typhoon model in Northwest Pacific region and its application to portfolio loss estimation**
Period	01.2007 – 09.2009
Fund organization	AON Benfield, United Kingdom and Japan
Responsibilities	Project management, supervision of a PhD student, and research
Title	**Decision theoretical framework for sustainable decision making in civil engineering**
Period	10.2006 – 09.2009
Fund organization	Swiss National Science Foundation (SNF), Switzerland
Responsibilities	Research

INDUSTRIAL PROJECTS (Selected)

Title	**Reliability analysis of offshore structures subject to steel fatigue**
Task	External review on the reliability assessment
Period	August 2011 – December 2011
Client	Talisman energy, Canada
Responsibility	Consulting

Title	**Technical support for probabilistic analysis of insured portfolio loss estimation by typhoon events**
Task	Expert advice
Period	Since June 2011
Client	AON Benfield, United Kingdom/Japan
Responsibility	Consulting

Title	**PEGASOS refinement project**
Task	External review on the treatment of uncertainty in the project
Period	2008 – 2010
Client	Swisselectric, Switzerland
Responsibility	Consulting

Title	**Development of framework for inspection and maintenance of FPSO's**
Task	Modeling of FPSO's using Bayesian probabilistic networks
Period	2007-2009
Client	Bureau Veritas, France
Responsibility	Consulting

TEACHING ACTIVITIES

Course title	**Fire Risk Management (11B05)**
Level and place	Post-master level, Technical University of Denmark
Approx. number of students	25
Hours	9 x 3 hours
Period	2012
Role	Course co-responsible

Course title	**Probabilistic Modeling in Civil Engineering (11376)**
Level and place	Master level, Technical University of Denmark
Approx. number of students	50-100
Hours	13 x 4 hours
Period	2012-2013
Role	Course responsible

Course title	**PhD course on Engineering Risk and Decision Analysis (11620)**
Level and place	PhD level, Technical University of Denmark

Approx. number of students	5
Hours	13 x 2 hours
Period	2011-2013
Role	Course responsible
Course title	**Lecture series on Probability-based Engineering Analysis and Design**
Level and place	PhD level, Technical University of Denmark
Approx. number of students	10
Hours	15 x 1 hour
Period	2011, 2012
Role	Course responsible
Course title	**Probabilistic Modeling in Civil Engineering**
Level and place	PhD level, Technical University of Denmark
Approx. number of students	7
Hours	13 x 2 hours
Period	2011
Role	Course responsible
Course title	**Consequence modeling (Master of Advanced Studies in Natural Hazards Management)**
Level and place	Master of Advanced Studies, ETH Zurich
Approx. number of students	10
Hours	4 x 45 minutes
Period	2010
Role	External lecturer
Course title	**Risk assessment (Master of Advanced Studies in Natural Hazards Management)**
Level and place	Master of Advanced Studies, ETH Zurich
Approx. number of students	10
Hours	3 x 45 minutes
Period	2010
Role	External lecturer
Course title	**PhD seminar: Probabilistics in Engineering (101-1110-00L)**
Level and place	PhD level, Institute of Structural Engineering, ETH Zurich
Approx. number of students	10
Hours	13 x 75 minutes
Period	2007 - 2009
Role	Coordinator

TEACHING ACTIVITIES (Continued)

Course title	**Method of finite elements II (exercises)**
Place	Master level, Institute of Structural Engineering, ETH Zurich
Approx. number of students	3
Hours	13 x 2 hours
Period	2008
Role	Teaching assistant (exercise development, lecturing, examination)
Course title	**Statistics and probability theory (exercises)**
Level and place	Undergraduate second semester level Institute of Structural Engineering, ETH Zurich
Approx. number of students	50
Hours	13 x 90 minutes
Period	2005 - 2007
Tasks	Teaching assistant (exercise development, lecturing, examination)

PHD STUDENT SUPERVISION

Name, period	Rocco Custer, since 2011 (main supervisor)
Topic	Development of a natural hazard risk model framework with application to flood risk
Institute	Technical University of Denmark
Name, period	Shuoyun Zhang, 2010-2013
Topic	Decision strategy on infrastructure under climate change
Institute	ETH Zurich, Switzerland
Name, period	Annett Anders, since 2009 (main supervisor)
Topic	Real-time decision making in the face of natural hazard events
Institute	Technical University of Denmark
Name, period	Mathias Graf, 2009-2012 (co-supervisor)
Topic	Typhoon risk modeling in northwest Pacific region
Institute	ETH Zurich, Switzerland

ACTIVITIES WITHIN ACADEMIC SOCIETY	
Membership in professional organizations	**AIJ:** Architectural Institute of Japan, member since 2001 **JAWE:** Japan Association for Wind Engineering, member since 2003 **IABSE:** International Association for Bridge and Structural Engineering Since 2013
Academic, scientific and technical committees	**ISO 3010**: ISO 3010:2001 Bases for design of structures – Seismic actions on structures, national delegate, since 2013. **IABSE:** Working Commission 1 member since 2013 **IFED**: International Forum on Engineering Decision Making, Consortium Member and Chair for 8th Forum, since 2013 **ICASP11:** 11th International Conference on Applications of Statistics and Probability in Civil Engineering, organizing committee member **IFIP WG 7.5:** International Federation for Information Processing, Working Group 7.5, Reliability and Optimization of Structural Systems, scientific and technical committee member since 2010 **JCSS:** Joint Committee on Structural Safety, member, since 2011 **ISO 2394**: ISO 2394:1998 General principles on reliability for structures Revision, organizing team member, since 2011 **IWTC:** International Workshop on Tropical Cyclones, sponsored by World Meteorological Organization (WMO), member in Working Group 4.1 Disaster Risks, Mitigation, Warning Systems, and Societal Impacts since 2010
Journal reviewing work	Australian Journal of Structural Engineering, Civil Engineering and Environmental Systems, International Journal of Risk Assessment and Management, Material and Structures, Structure and Infrastructure Engineering, Journal of Applied Meteorology and Climatology, Probabilistic Mechanical Engineering
PhD evaluation committee	Czech Technical University in Prague, Technical University of Denmark

INVITED PRESENTATIONS, LECTURES AND COURSES (ACADEMIA)

2012	Invited presentation, When one says safe enough and others disagree, Symposium commemorating '311', the Great East Japan Earthquake of 2011, Copenhagen University, Denmark, 08.03.2012.
2011	Invited presentation, Towards climate change adaptation in civil engineering, Joint Japanese-German Symposium on Urban areas in a changing climate, University of Hamburg, Germany, 25.08.2011.
2007	Invited presentation at Kyoto University, Bayesian approach for typhoon risk modeling, Kyoto, Japan, 09.08.2007.
2004	Invited presentation at Cherry Bud workshop, modeling of strong wind speed driven by typhoon and its spatial dependency with multivariate extreme value distribution, Yokohama, Japan, March 2004.

INVITED PRESENTATIONS, LECTURES AND COURSES (INDUSTRY)

2010	Course for reliability analysis and use of STRUREL, Gamesa, Sarriguren, Spain, June 2010. (2 days)
2008	Course for use of probabilistic typhoon model, Japan, AON Re Tokyo, Tokyo, Japan December 2008. (5 days)
2007	Invited seminar on development of typhoon risk model, AON Re Tokyo, Tokyo, Japan, August-September 2007. (5 days)

PUBLICATIONS

PhD thesis

Nishijima, K. (2009). Issues of sustainability in engineering decision analysis, ETH Zurich, Zurich.

Master thesis

Nishijima, K. (2003). Multi-site Hazard Analysis for Optimal Design of Building Portfolio, University of Tokyo, Tokyo (in Japanese).

Refereed journal papers

2014

Zhang, S., Nishijima, K., Maruyama, T. (2014). Reliability-based modeling of typhoon induced wind vulnerability for residential buildings in Japan, Journal of Wind Engineering and Industrial Aerodynamics, 124, pp.68-81.

2012

Qin, J., Nishijima, K., Faber, M.H. (2012). Extrapolation method for system reliability assessment: a new scheme. Advances in Structural Engineering. 15(11), 1893-1910.

Nishijima, K., Maruyama, T., Graf, M. (2012). A preliminary impact assessment of typhoon wind risk of residential buildings in Japan under future climate change. Hydrological Research Letters, 6, 23-28.

2009

Graf, M., Nishijima, K., and Faber, M. H. (2009). Bayesian updating in natural hazard risk assessment. Australian Journal of Structural Engineering, 9(1), 35-44.

Nishijima, K., and Faber, M. H. (2009). A budget management approach for societal infrastructure projects. Structure and Infrastructure Engineering, 5(1), 41-47.

Nishijima, K., and Faber, M. H. (2009). Societal performance of infrastructure subject to natural hazards. Australian Journal of Structural Engineering, 9(1), 9-16.

Nishijima, K., Maes, M. A., Goyet, J., and Faber, M. H. (2009). Constrained optimization of component reliabilities in complex systems. Structural Safety, 31, 168-178.

2007

Nishijima, K., and Faber, M. H. (2007). Bayesian approach to proof loading of quasi-identical multi-components structural systems. Civil Engineering and Environmental Systems, 24(2), 111-121.

Nishijima, K., Straub, D., and Faber, M. H. (2007). Inter-generational distribution of the life-cycle cost of an engineering facility. Journal of Reliability of Structures and Materials, 3(1), 33-46.

Nishijima, K., Straub, D., and Faber, M. H. (2007). Sustainable decision for life-cycle based design and maintenance. Australian Journal of Civil Engineering, 4(1), pp. 59-72.

2004

Kanda, J., and Nishijima, K. (2004). Multi-site Wind and Earthquake Hazard Analysis via Multivariate Extreme Value Distribution. Proceedings of the Institute of Statistical Mathematics, 52(1), 151-173 (in Japanese).

Nishijima, K., and Kanda, J. (2004). A Multi-point Model for Annual Maximum Wind Speed via Max-Stable Process. Journal of Wind Engineering, JAWE, 99, 215-226 (in Japanese).

Nishijima, K., and Kanda, J. (2004). An optimum design approach for building portfolio. Journal of Structural and Construction Engineering, AIJ, 579, 125-132 (in Japanese).

2003

Nishijima, K., and Kanda, J. (2003). An attempt for probabilistic seismic hazard analysis considering spatial correlation of seismic intensities at two sites. Journal of Structural Engineering, 49B, 351-358.

2002

Nishijima, K., Kanda, J., and Choi, H. (2002). Estimation of Peak Factor for Non-Gaussian Wind Pressure. Journal of Structural and Construction Engineering, AIJ, 557, 79-84 (in Japanese).

Conference papers

2013

Zhang, S., Nishijima, K., and Maruyama, T. (2013). Climate model-based probabilistic assessment of wind risk for residential buildings under projected future climate, Proceedings of ICOSSAR2013 (to appear)

Custer, R. and Nishijima, K. (2013). Hierarchical decision making for flood risk reduction, Proceedings of ICOSSAR2013 (to appear)

Nishijima, K., and Anders, A. (2013). Optimization of sequential decisions by least squares Monte Carlo method, Reliability and Optimization of Structural Systems, Editors: Der Kiureghian, A., and Hajian, A., AUA Press, Yerevan, Armenia, pp.25-32.

Anders, A., and Nishijima, K. (2013). Enhanced least squares Monte Carlo method for real-time decision optimizations for evolving natural hazards, Reliability and Optimization of Structural Systems, Editors: Der Kiureghian, A., and Hajian, A., AUA Press, Yerevan, Armenia, pp.33-40.

2012

Zhang, S., and Nishijima, K. (2012). Statistics-based investigation on typhoon transition modeling, Proceedings of the Seventh International Colloquium on Bluff Body Aerodynamics and Applications (BBAA7), pp.364-373.

Custer, R., and Nishijima, K. (2012). Probabilistic disaggregation model with application to natural hazard risk assessment of portfolios, Proceedings of the 5th Asian-Pacific Symposium on Structural Reliability and its Applications (APSSRA2012), Singapore, pp.463-468.

2011

Graf, M., and Nishijima, K. (2011). Issues of epistemic uncertainty treatment in decision analysis for tropical cyclone risk management, 11th International Conference on Application of Statistics and Probability in Civil Engineering (ICASP11), Zurich, Switzerland.

Anders, A., and Nishijima, K. (2011). Adaption of option pricing algorithm to real time decision optimization in the face of emerging natural hazards, 11th International Conference on Application of Statistics and Probability in Civil Engineering (ICASP11), Zurich, Switzerland.

Nishijima, K., Maruyama, T., and Graf, M. (2011). Preliminary study on impact assessment of climate change on building risks induced by typhoons in Japan, 5th International Symposium on Wind Effects on Buildings and Urban Environment (ISWE5), Wind Hazard Resilient Cities: New Challenges, Tokyo, Japan.

2010

Nishijima, K., Qin, J., and Faber, M.H. (2010). Probability integral solution by extrapolation for system reliability assessment. ISRERM2010, Shanghai, China.

Nishijima, K., Qin, J., and Faber, M.H. (2010). A scalable parametric approximation to multi-normal probability integrals. IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, Munich, Germany.

2009

Graf, M., Nishijima, K. and Faber, M.H. (2009). A probabilistic typhoon model for the northwest Pacific region. Proceedings of the 7th Asia-Pacific Conference on Wind Engineering, APCWE7, Taipei, Taiwan.

Nishijima, K., Graf, M., and Faber, M.H. (2009). Optimal evacuation and shut-down decisions in the face of emerging natural hazards. Proceedings of the 10th International Conference on Structural Safety and Reliability, ICOSSAR2009, Osaka, Japan.

2008

Graf, M., Nishijima, K., and Faber, M.H. (2008). Adaptation of typhoon risk modeling to climate changes. International Disaster and Risk Conference, IDRC, Davos, Switzerland.

Nishijima, K., Maes, M., and Faber, M.H. (2008). Probabilistic assessment of extreme events subject to epistemic uncertainties. Proceedings of the

ASME 27th International Conference on Offshore Mechanics and Arctic Engineering, OMAE2008, Estoril, Portugal.

Nishijima, K., and Faber, M.H. (2008). Implicit proof-load effect in life-cycle assessment of structural performance. IFIP WG7.5, Reliability and optimization of structural systems, Mexico.

2007 Faber, M. H., Bayraktarli, Y., and Nishijima, K. (2007). Recent Developments in the Management of Risks Due to Large Scale Natural Hazards. XVI Congreso Nacional Ingenieria Sismica, Ixtapa-Zihuatanejo, Mexico.

Nishijima, K., and Faber, M. H. (2007). A Bayesian framework for typhoon risk management. 12th International Conference on Wind Engineering, 12ICWE, Cairns, Australia.

2007 Nishijima, K., and Faber, M. H. (2007). On Structural Performance vs. Societal Economic Growth. 10th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP10, Kashiwa, Japan.

2006 Nishijima, K., and Faber, M. H. (2006). A Budget Management Approach for Societal Infrastructure Projects. IABMAS'06, 3rd International Conference on Bridge Maintenance, Safety and Management, Porto, Portugal.

Nishijima, K., and Faber, M. H. (2006). Optimal condition control of systems comprised of multiple homogenous components. 13th IFIP TC7 WG 7.5 Working Conference on Reliability and Optimization of Structural Systems, Kobe, Japan.

2005 Nishijima, K., Straub, D., and Faber, M. H. (2005). The Effect of Changing Decision Makers on the Optimal Service Life Design of Concrete Structures. Proceedings of the 4th International Workshop on Life-Cycle Cost Analysis and Design of Civil Infrastructures Systems, Cocoa Beach, Florida, 325-333.

2004 Faber, M. H., Maes, M. A., and Nishijima, K. (2004). Optimal Design and Portfolio Risk Management for Groups of Structures. Proceedings OMAE2004, 23rd International Conference on Offshore Mechanics and Arctic Engineering, Vancouver, British Columbia, Canada, [OMAE2004-51430].

Faber, M. H., and Nishijima, K. (2004). Aspects of Sustainability in Engineering Decision Analysis. Proceedings 9th ASCE Specialty Conference on Probabilistic Mechanics and Structural Reliability, Albuquerque, New Mexico, USA.

2003 Nishijima, K., and Kanda, J. (2003). Optimum Reliability for Building Portfolio Considering Spatial Correlation of Loads. 9th International Conference on Applications of Statistics and Probability in Civil Engineering, ICASP9, San Francisco, USA, 719-723.

Nishijima, K., and Kanda, J. (2003). A risk management approach for the design of building portfolios. 11th IFIP WG7.5 Working Conference on Reliability and Optimization of Structural Systems, Banff, Canada, 369-376.

2002 Kanda, J., and Nishijima, K. (2002). Wind loads and Earthquake Ground Motions as Stochastic Processes. 1st International ASRANet Colloquium, Glasgow, UK.

Workshop papers

2010 Nishijima, K., and Custer, R. (2010). Open framework for global natural hazard risk assessment. International Forum on Engineering Decision Making, Fifth IFED Forum, Stoos, Switzerland.

2009 Nishijima, K. and Faber, M. H. (2009). A macroeconomic decision framework

for sustainable design and maintenance policy making for civil infrastructure. International Forum on Engineering Decision Making, Fourth IFED Forum, Hakone, Japan.

2008 Nishijima, K., Graf, M., and Faber, M. H. (2008). From Near-real-time Information Processing to Near-real-time Decision Making in Risk Management of Natural Hazards. Inaugural International Conference of the Engineering Mechanics Institute, EM08, University of Minnesota, Minneapolis, Minnesota.

2007 Graf, M., Nishijima, K., and Faber, M. H. (2007). Bayesian updating in natural hazard risk assessment. International Forum on Engineering Decision Making, Third IFED Forum, Shoal Bay, Australia.

2007 Nishijima, K., and Faber, M. H. (2007). Societal optimal performance of infrastructure subject to natural hazards. International Forum on Engineering Decision Making, IFED, Shoal Bay, Australia.

Nishijima, K., Maes, M. A., Goyet, J., and Faber, M. H. (2007). Optimal Reliability of Components of Complex Systems Using Hierarchical System Models. Special Workshop on Risk Acceptance and Risk Communication, Stanford University, California, USA.

2006 Nishijima, K., and Faber, M. H. (2006). Optimal proof load testing of large quasi-identical component systems. International Forum on Engineering Decision Making, Lake Louise, Canada.

Baker, J. W., Straub, D., Nishijima, K., and Faber, M. H. (2005). On the Assessment of Robustness I: A General Framework. Workshop Robustness of Structures, Garston, Watford, England.

2004 Kanda, J., and Nishijima, K. (2004). Scope of Insurance Premium for Residential Houses against Seismic Risk in Japan. First Forum on Engineering Decision Making, IFED, Stoos, Switzerland.

Nishijima, K., Straub, D., and Faber, M. H. (2004). Sustainable decisions for Life-Cycle Based Design and Maintenance. First Forum on Engineering Decision Making, IFED, Stoos, Switzerland.

Books

2011 Faber, M. H., Kohler, J., Nishijima, K. (2011). Proceedings of the 11th International Conference on Applications of Statistics and Probability in Civil Engineering, Balkema Publishers, A.A./Taylor and Francis, The Netherland.

Other publications and presentations

2010 Nishijima, K., Qin, J., and Faber, M.H. (2010). 標準ガウス空間上で定義された破壊確率のスケールパラメータを用いた近似計算, 第 30 回最適設計研究会＋第 17 回信頼性設計技術 WS, Tsukuba, Japan

2009 Nishijima, K., Graf, M., and Faber, M. H. (2009). Technical note on Development of stochastic typhoon model in Northwest Pacific region and its application to portfolio loss estimation. AON Re Tokyo.

Graf, M., Nishijima, K., and Faber, M. H. (2009). User manual for Typhoon Risk Analysis. AON Re Tokyo.

2005 Nishijima, K. (2005). Probabilistic Modeling of Maximum Wind Field due to Typhoon. Natural Hazards in an Alpine Valley PhD-Workshop, Saas Tal, Switzerland.

Kazuyoshi Nishijima,

24.12.2013, Kyoto, Japan