SSARS 2007

Summer Safety and Reliability Seminars
July 22-29, 2007, Gdańsk/Sopot-Jelitkowo, Poland

PROGRAMME

Organisers and Sponsors

European Safety and Reliability Association (ESRA)
Polish Safety and Reliability Association (PSRA)
Gdynia Maritime University (GMU)
Poland's Ministry of Science and Higher Education (MSHE)

Secretariat

Gdynia Maritime University
Department of Mathematics
81-225 Gdynia, ul. Morska 81-87
e-mail: ssars2007@am.gdynia.pl

Website

http://ssars2007.am.gdynia.pl

Location

Prawdzic Hotel
http://prawdzic.com.pl/
ul. Piastowska 198
80-341 Gdańsk/Sopot-Jelitkowo, Poland
e-mail: prawdzic@prawdzic.com.pl
phone: +48-58-5535015

Scientific Boards

Programme Board

Chairmen/Co-ordinators

Krzysztof Kołowrocki, Gdynia Maritime University, Poland
Enrico Zio, Politecnico di Milano, Italy

Advisory Board

Robert A. Ainsworth, International Journal of Pressure Vessels and Piping
John Andrews, Journal on Risk and Reliability
Alfred Brandowski, Polish Safety and Reliability Association
Jerzy Girtler, Polish Maritime Research
Carlos Guedes Soares, Reliability Engineering and System Safety
Napat Harpornchai, International Journal of Materials and Structural Reliability
Jerzy Jaźwiński, Exploitation Problems of Machines
Way Kuo, IEEE Transaction on Reliability
Guoping P. Liu, International Journal of Automation and Computing
Christian N. Madu, International Journal of Quality and Reliability Management
Ioannis A. Papazoglou, European Safety and Reliability Association
Hoang Pham, International Journal of Reliability, Quality and Safety Engineering
Zbigniew Smalko, Archives of Transport

Editorial Board

Heinz-Peter Berg, Germany
Agnieszka Blokus-Roszkowska, Poland
Marko Cepin, Slovenia
Jose Caldeira Duarte, Portugal
Renkuan Guo, South Africa
Bożena Kwiatuszewska-Sarnecka, Poland
Krzysztof Kołowrocki, Poland
Luca Podofillini, Switzerland
Uwe K. Rakowsky, Germany
Vadim Seleznev, Russia
Tadeusz Salamonowicz, Poland
Joanna Soszyńska, Poland
Enrico Zio, Italy

Invited Professors & Seminar Session Chairmen (Topics)

Peter van Gelder, Delft University, Netherlands (Natural Hazards Analysis and Environment Protection Modelling)
Olgierd Hryniewicz, System Research Institute, Poland, (Reliability and Safety Data Collection and Analysis)
Krzysztof Kołowrocki, Gdynia Maritime University, Poland, (System Safety and Reliability Modelling)
Way Kuo, University of Tennessee, USA (System Safety and Reliability Modelling)
Uwe Rakowsky, University of Wuppertal and Vossloh Kiepe, Germany, (System Safety and Reliability Modelling)
Enrico Zio, Politecnico di Milano, Italy, (Maintenance Modelling and Optimisation)

Organising Board

Agnieszka Blokus-Roszkowska, GMU
Sambor Guze, GMU
Bożena Kwiatuszewska-Sarnecka, GMU
Joanna Soszyńska, GMU

Seminar Rooms [Responsible Person]

Knight's Room [Sambor Guze, GMU]
Hunter's Room [Sambor Guze, GMU]

SEMINAR PROGRAMME

Time	Seminar Events
$14^{00} - 18^{00}$	Registration (Conference Desk)
$18^{00} - 20^{00}$	**Welcome Dinner - Reception** (Knight's Room)

Monday - Morning, July 23, 2007

Time	Seminar Events
	Opening Ceremony (Hunter's Room)
$8^{00} – 8^{20}$	Welcome (*Alfred Brandowski – PSRA, Krzysztof Kołowrocki – Chairman, Ioannis A. Papazoglou – ESRA, Enrico Zio – Chairmen*) Technical Information
	Keynote Speech (Hunter's Room)
$8^{20} – 9^{00}$	Title: Reliability wave in light of the nano development *Speaker: Kuo Way* *Chair: Krzysztof Kołowrocki*
	Plenary Sessions - Presentations of Lectures (Hunter's Room)
$9^{20} – 10^{00}$	Title: Soft computing methods applied to condition monitoring and fault diagnosis for maintenance *Speaker: Zio Enrico* *Chair: Radim Briš*
$10^{00} – 10^{20}$	Break
$10^{20} – 11^{00}$	Title: Soft computing methods applied to condition monitoring and fault diagnosis for maintenance *Speaker: Zio Enrico* *Chair: Radim Briš*
$11^{00} – 11^{30}$	Coffee/Tea Time (Hotel Restaurant)
$11^{30} – 12^{30}$	Participants Individual Meetings and Discussions
$12^{30} – 14^{00}$	Lunch (Hotel Restaurant)

Time	Seminar Events
$14^{00} – 15^{30}$	Participants Individual Meetings and Discussions
$15^{30} – 16^{00}$	Coffee/Tea Time (Hotel Restaurant)
	Seminar Sessions - Presentation of Papers (Hunter's Room)
	Chair: Pieter van Gelder, Olgierd Hryniewicz
$16^{00} – 16^{20}$	Title: Stability and safety of ships: holistic and risk approach *Speaker: Kobyliński Lech*
$16^{20} – 16^{40}$	Title: Methods for the treatment of common cause failures in redundant systems *Speaker: Berg Heinz-Peter, Görtz Rudolf, Kesten Jürgen*
$16^{40} – 17^{00}$	Title: Analysis of the impact of external flooding to nuclear installations *Speaker: Berg Heinz-Peter, Fröhmel Thomas, Winter Christian*
$17^{00} – 17^{20}$	Title: *Risk assessment related to information uncertainty components* *Speaker: Rosicka Zdena*
$17^{20} – 17^{40}$	Title: Possibilities of traffic accidents and risk crash evaluation *Speaker: Stodola Jiri*
$17^{40} – 18^{00}$	Discussion on Papers Improvement and Preparation for Publication (responsible Professor: *Pieter van Gelder*)
$18^{00} – 19^{00}$	Dinner (Knight's Room)
$19^{00} – 20^{00}$	Participants Individual Meetings and Discussions

Tuesday - Morning, July 24, 2007

Time	Seminar Events
9^{00} – 9^{20}	Organizational Details and Advertisements (Hunter's Room)
	Plenary Sessions - Presentations of Lectures (Hunter's Room)
9^{20} – 10^{00}	Title: Stochastic ageing models – extensions of the classic renewal theory *Speaker: Briš Radim* *Chair: Pieter van Gelder*
10^{00} – 10^{20}	Break
10^{20} – 11^{00}	Title: Applications of semi-Markov processes in reliability *Speaker: Grabski Franciszek* *Chair: Uwe Kay Rakowsky*
11^{00} – 11^{30}	Coffee/Tea Time (Hotel Restaurant)
11^{30} – 12^{30}	Participants Individual Meetings and Discussions
12^{30} – 14^{00}	Lunch (Hotel Restaurant)

Tuesday – Afternoon, July 24, 2007

Time	Seminar Events
$14^{00} - 15^{30}$	Participants Individual Meetings and Discussions
$15^{30} - 16^{00}$	Coffee/Tea Time (Hotel Restaurant)
	Seminar Sessions - Presentation of Papers (Hunter's Room)
	Chair: Pieter van Gelder, Olgierd Hryniewicz
$16^{00} - 16^{20}$	Title: The ships impact in ground of port water area *Speaker: Galor Wiesław*
$16^{20} - 16^{40}$	Title: Collection and analysis of climatic measurements for the assessment of snow loads on structures *Speaker: Sadovský Zoltán, Faško Pavol, Pecho Jozef, Bochníček Oliver, Mikulová Katarína, Šťastný Pavel*
$16^{40} - 17^{00}$	Title: Adopted isochrone method improving ship safety in weather routing with evolutionary approach *Speaker: Szłapczyńka Joanna, Śmierzchalski Roman*
$17^{00} - 17^{20}$	Title: Reliability of complex system with one shot items *Speaker: Vališ David*
$17^{20} - 17^{40}$	Title: Nonlinear backstepping ship course controller *Speaker: Witkowska Anna, Śmierzchalski Roman*
$17^{40} - 18^{00}$	Discussion on Papers Improvement and Preparation for Publication (responsible Professor: *Olgierd Hryniewicz*)
$18^{00} - 19^{00}$	Participants Individual Meetings and Discussions
$19^{00} - 23^{00}$	**Picnic & Folklore** (Restaurant "Harnaś")

Wednesday - Morning, July 25, 2007

Time	Seminar Events
$9^{00} – 9^{20}$	Organizational Details and Advertisements (Hunter's Room)
	Plenary Sessions - Presentations of Lectures (Hunter's Room)
$9^{20} – 10^{00}$	Title: Fundamentals of the Dempster-Shafer theory and its applications to system safety and reliability modelling *Speaker: Rakowsky Uwe Kay* *Chair: Franciszek Grabski*
$10^{00} – 10^{20}$	Break
$10^{20} – 11^{00}$	Title: Statistical analysis of interval and imprecise data - applications in the analysis of reliability field data *Speaker: Hryniewicz Olgierd* *Chair: Roman Śmierzchalski*
$11^{00} – 11^{30}$	Coffee/Tea Time (Hotel Restaurant)
$11^{30} – 12^{30}$	Participants Individual Meetings and Discussions
$12^{30} – 14^{00}$	Lunch (Hotel Restaurant)

Time	Seminar Events
$14^{00} - 15^{30}$	Participants Individual Meetings and Discussions
$15^{30} - 16^{00}$	Coffee/Tea Time (Hotel Restaurant)
	Seminar Sessions - Presentation of Papers (Hunter's Room)
	Chair: Krzysztof Kołowrocki, Enrico Zio
$16^{00} - 16^{20}$	Title: Improvement of manufacturing cells with unreliable machines *Speaker: Elleuch Mounir, Ben Bacha Habib, Masmoudi Faouzi*
$16^{20} - 16^{40}$	Title: Analysis of component failures dependency influence on system lifetime *Speaker: Blokus-Roszkowska Agnieszka*
$16^{40} - 17^{00}$	Title: On systems multi-state safety analysis in shipping *Speaker: Dziula Przemysław, Jurdziński Mirosław. Kołowrocki Krzysztof, Soszyńska Joanna*
$17^{00} - 17^{20}$	Title: Numerical approach to reliability evaluation of two-state consecutive "k out of n: F" systems *Speaker: Guze Sambor*
$17^{20} - 17^{40}$	Title: Reliability analysis of multi-state ageing consecutive „k out of n: F" systems *Speaker: Guze Sambor, Kołowrocki Krzysztof*
$17^{40} - 18^{00}$	Discussion on Papers Improvement and Preparation for Publication (responsible Professor: *Krzysztof Kołowrocki*)
$18^{00} - 19^{00}$	Dinner (Knight's Room)
$19^{00} - 20^{00}$	Participants Individual Meetings and Discussions

Time	Seminar Events
$9^{00} - 9^{20}$	Organizational Details and Advertisements (Hunter's Room)
	Plenary Sessions - Presentations of Lectures (Hunter's Room)
$9^{20} - 10^{00}$	Title: Risk prediction for modern technological systems *Speaker: Duffey Romney B., Saull John W.* *Chair: Nikitas Nikitakos*
$10^{00} - 10^{20}$	Break
$10^{20} - 11^{00}$	Title: Reliability modelling of complex systems – part 1 *Speaker: Kołowrocki Krzysztof* *Chair: Jose Caldeira Duarte*
$11^{00} - 11^{30}$	Coffee/Tea Time (Hotel Restaurant)
$11^{30} - 12^{30}$	Participants Individual Meetings and Discussions
$12^{30} - 14^{00}$	Lunch (Hotel Restaurant)

Time	Seminar Events
$14^{00} – 15^{30}$	Participants Individual Meetings and Discussions
$15^{30} – 16^{00}$	Coffee/Tea Time (Hotel Restaurant)
	Seminar Sessions - Presentation of Papers (Hunter's Room)
	Chair: Way Kuo, Uwe Kay Rakowsky
$16^{00} – 16^{20}$	Title: The random failure rate *Speaker: Grabski Franciszek*
$16^{20} – 16^{40}$	Title: The model of non-renewal reliability systems with dependent time lengths of components *Speaker: Grabski Franciszek, Załęska-Fornal Agata*
$16^{40} – 17^{00}$	Title: An univariate DEMR modelling on repair effects Speaker: *Guo Renkuan*
$17^{00} – 17^{20}$	Title: Some remarks on mean time between failures of repairable systems *Speaker: Knopik Leszek*
$17^{20} – 17^{40}$	Title: Transformed conditional probabilities in the analysis of stochastic sequences *Speaker: Kudzys Antanas*
$17^{40} – 18^{00}$	Discussion on Papers Improvement and Preparation for Publication (responsible Professor: *Way Kuo*)
$18^{00} – 19^{00}$	Participants Individual Meetings and Discussions
$19^{00} – 23^{00}$	**Seminar Dinner** (Dwór "Admirał")

Friday - Morning, July 27, 2007

Time	Seminar Events
$9^{00} - 9^{20}$	Organizational Details and Advertisements (Hunter's Room)
	Plenary Sessions - Presentations of Lectures (Hunter's Room)
$9^{20} - 10^{00}$	Title: Safe ship control system *Speaker: Śmierzchalski Roman* *Chair: Lech Kobyliński*
$10^{00} - 10^{20}$	Break
$10^{20} - 11^{00}$	Title: A methodology for rating and ranking hazards in maritime formal safety assessment using fuzzy logic *Speaker: Dourmas N. Georgios, Nikitakos V. Nikitas, Lambrou A. Maria* *Chair: Romney B. Duffey*
$11^{00} - 11^{30}$	Coffee/Tea Time (Hotel Restaurant)
$11^{30} - 12^{30}$	Participants Individual Meetings and Discussions
$12^{30} - 14^{00}$	Lunch (Hotel Restaurant)

Time	Seminar Events
$14^{00} - 15^{30}$	Participants Individual Meetings and Discussions
$15^{30} - 16^{00}$	Coffee/Tea Time (Hotel Restaurant)
	Seminar Sessions - Presentation of Papers (Hunter's Room)
	Chair: Krzysztof Kołowrocki, Enrico Zio
$16^{00} - 16^{20}$	Title: The various approaches to VTS Zatoka radar system reliability analysis *Speaker: Budny Tymoteusz*
$16^{20} - 16^{40}$	Title: Recurrent neural networks for dynamic reliability analysis *Speaker: Cadini Francesco, Zio Enrico, Pedroni Nicola*
$16^{40} - 17^{00}$	Title: Optimisation of the preventive maintenance plan of a series components system with Weibull hazard function *Speaker: Duarte Caldeira José, Carlos Guedes Soares*
$17^{00} - 17^{20}$	Title: Sensitivity analysis of a fuzzy expert system for modeling dependencies in human operators emergency tasks *Speaker: Zio Enrico, Baraldi Piero, Librizzi Massimo, Podofillini Luca, Dang H. Vinh*
$17^{20} - 17^{40}$	Title: Optimising a fuzzy fault classification tree by a single-objective genetic algorithm *Speaker: Zio Enrico, Baraldi Piero, PopescuIrina Crenguta*
$17^{40} - 18^{00}$	Discussion on Papers Improvement and Preparation for Publication (responsible Professor: *Enrico Zio*)
$18^{00} - 19^{00}$	Dinner (Knight's Room)
$19^{00} - 20^{00}$	Participants Individual Meetings and Discussions

Saturday - Morning, July 28, 2007

Time	Seminar Events
$9^{00} – 9^{20}$	Organizational Details and Advertisements (Hunter's Room)
	Plenary Sessions - Presentations of Lectures (Hunter's Room)
$9^{20} – 10^{00}$	Title: Methods for risk analysis in disaster reduction *Speaker: Van Gelder Pieter* *Chair: Olgierd Hryniewicz*
$10^{00} – 10^{20}$	Break
$10^{20} – 11^{00}$	Title: Reliability modelling of complex systems – part 2 *Speaker: Kołowrocki Krzysztof* *Chair: Heinz-Peter Berg*
$11^{00} – 11^{30}$	Coffee/Tea Time (Hotel Restaurant)
$11^{30} – 12^{30}$	Participants Individual Meetings and Discussions
$12^{30} – 14^{00}$	Lunch (Hotel Restaurant)

Time	Seminar Events
$14^{00} – 15^{30}$	Participants Individual Meetings and Discussions
$15^{30} – 16^{00}$	Coffee/Tea Time (Hotel Restaurant)
	Seminar Sessions - Presentation of Papers (Hunter's Room)
	Chair: Way Kuo, Uwe Kay Rakowsky
$16^{00} – 16^{20}$	Title: A study on the performance measures of a system operated in random environment *Speaker: Cha Ji Hwan, Mi Jie*
$16^{20} – 16^{40}$	Title: On asymptotic approach to reliability improvement of multi-state systems with components quantitative and qualitative redundancy: series and parallel systems *Speaker: Kwiatuszewska-Sarnecka Bożena*
$16^{40} – 17^{00}$	Title: On reliability improvement of multi-state systems with components quantitative and qualitative redundancy: "*m* out of *n*" systems *Speaker: Kwiatuszewska-Sarnecka Bożena*
$17^{00} – 17^{20}$	Title: Systems reliability analysis in variable operation conditions *Speaker: Soszyńska Joanna*
$17^{20} – 17^{40}$	Title: Analysis of the safety efficiency of a road network: a real case study *Speaker: Zio Enrico, Sansavini Giovanni, Maja Roberto, Marchionni Giovanna*
$17^{40} – 18^{00}$	Discussion on Papers Improvement and Preparation for Publication (responsible Professor: *Uwe Kay Rakowsky*)
$18^{00} – 20^{00}$	**Farewell Dinner** (Knight's Room)

Sunday - Morning, July 29, 2007

Time	Seminar Events
$9^{00} – 9^{20}$	Organizational Details and Advertisements (Hunter's Room)
	Seminars' Summary Sessions (Hunter's Room)
$9^{20} – 10^{00}$	Lectures and Papers Preliminary Selection for Possible Publication in Selected Scientific Journals *Chair: Krzysztof Kołowrocki, Enrico Zio*
$10^{00} – 10^{20}$	Break
$10^{20} – 11^{00}$	Lectures and Papers Preliminary Selection for Possible Publication in Selected Scientific Journals *Chair: Krzysztof Kołowrocki, Enrico Zio*
$11^{00} – 11^{30}$	Coffee/Tea Time (Hotel Restaurant)
$11^{30} – 14^{00}$	Departure

Gdynia, 06.07.2007.