

#### **Program**

(ver. of May 24, 2011)

# 3<sup>rd</sup> iNTeg-Risk Conference: New Technologies & Emerging Risks

Focus Topic 2011:

# Risk vs. Risk: Managing Emerging Risk-Benefit Tradeoffs in Complex Systems

June 7-8, 2011

Haus der Wirtschaft, Willi-Bleicher-Str. 19 70174 Stuttgart, Germany

www.integrisk.eu-vri.eu

NOTE: The Conference is taking place in conjunction and sharing venue with SRA Europe Conference (June 6-8, 2011)



#### **Conference Committee**

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F. Bagnoli, D'Appolonia, Italy

H. Behrens, DIN, Germany

A. Boenke, EC DG Enterprise and Industry, EU

A. Cipollaro, EC DG Research, EU

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#### 5 Founding members:



Bay Zoltán Foundation (www.bzaka.hu)



Institut National de l'Environnement Industriel et des Risques (www.ineris.fr)



Steinbeis GmbH & Co. KG für Technologietransfer (www.stw.de)



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ZIRN - Interdisciplinary Research Unit for Risk, Governance and Sustainable Technology, University of Stuttgart (www.zirn-info.de)

#### 5 Honorary members:











#### 5 main fields of activities in the area of sustainability, emerging risk and integrated risk management

- Project & services
- Products & tools
- · Coordination & networking
- Support to EU harmonization & standardization
- R&D



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#### The 50 Members of EU-VRi in 2011

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Netherlands
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D'Appolonia S.p.A., Italy
Demokritos - National Center for
Scientific Research, Greece
DIN - Deutsches Institut fuer
Normung a.v., Germany
DNV - Det Norske Veritas AS,
Norway

Norway DTU - Danish Technical University (Risoe National Laboratory),

Denmark

EDF - Electricité de France, France

EKON Modeling Software Systems

EDF - Electricité de France, France EKON Nodeling Software Systems Ltd. Israel EKON Nodeling Software Systems Ltd. Israel ELITE Foundation, Germany Erasmus University Rotterdam, Netheriands Expert System SuA, Italy Fraumhofer-Institut für Optronik, Systemtechnik und Bildauswertung, Germany IOSB INCOPM - Institute on Occupational Safety, Romania INERIS - Institut haibrai de l'Environnement Industriel et des Risques, France STW - Steinbeis GmbH & Co. KG für Technologierransfur, Germany IRGG - International Risk Governance Council, Switzerland ISQ - Instituto de Soldadura e Qualidade, Portugal IVF - Industrial Research and Development Corporation, Sweden JRC/EC - Communities, Joint Research Conter, Belgium JST - Jozef Stefan Institute, Slovenia

Ani - Dozef Stefan Institute,
Slovenia
Slovenia
RMM-VIN - European Virtual
Institute on Knowledge-based
Multifunctional Materials, Belgium
LABEIN - TECNALIA, Spain
HIT - Management Intelligenter
Technologien GmbH, Germany
NIS - Petrolaum Industry of
Serbia, Serbia
OECD - Organisation for Economic
Co-operation and Development,
France
OttoUNI - Otto-upparticulation

France OttoUNI - Otto-von-Guericke-Universität Magdeburg, Germany PROMIS@Service Sari,

riturals governice Sart, Lisembourg SINTEF - Stiftetsen SINTEF, Niorway SP - Technical Research Institute of Sweden, Sweden Swiss Re - Swiss Reinsurance Company, Switzerland SWISSI - Scherheitsinstitut, Switzerland

Switzerland Swissi España - Instituto Suizo para la Promoción de la Seguridad,

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TECHALIA - Fundacion Tecnalia
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TÜV SÜD Industrie Service GmbH,

TÓV SUD Industrie Service GmbH, Germany URL - Universidad Ramon Liuli Fundación Privada, Spain V\$B - Technical University of Ostrava, Crech Republic VTT - Technical Research Centre of Finland, Finland ZIRN - Interdisciplinary Research Unit for Risk, Governance and Sustainable Technology, University of Stuttpart, Germany



With great confidence and pleasure, we extend herewith the invitation to attend the

# 3<sup>rd</sup> iNTeg-Risk Conference: **New Technologies & Emerging Risks**

with this year's annual topic "Risk vs. Risk – Managing Emerging Risk-Benefit Tradeoffs in Complex Systems"

Stuttgart June 7-8, 2011

As in the preceding years, the main purpose of the Conference is to provide a forum at which partners involved in the EU "flagship project" iNTeg-Risk ("Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related, Risks", <a href="www.integrisk.eu-vri.eu">www.integrisk.eu-vri.eu</a>), will openly and thoroughly discuss the results obtained in the project, both among themselves and with all other interested parties. We expect 92 papers/presentations which is a respectable number for a single project conference, even for a project as large as iNTeg-Risk. The Conference is a great opportunity both for project partners to communicate their results to the "outside world" and for those, not participating in the project, to learn about the project results.

This year, the Conference will be focused on to the issues dealing with risk-risk tradeoffs, multiple and interconnected emerging risks of New Technologies and presentation of the current iNTeg-Risk results: iNTeg-Risk early warning system RiskEars, emerging risk mapping (RiskAtlas of iNTeg-Risk), emerging risk management framework (iNTeg-Risk ERMF), emerging risk communication, methods and tools for emerging risk analysis. The Conference will be accompanied by 2 specialized workshops and will take place in conjunction with the SRA Europe Annual Meeting conference. This will be an additional opportunity for the entire risk community to share sessions on risk governance, communication, analysis and management and to enjoy the pleasant ambience of Haus der Wirtschaft in Stuttgart.

Last but not least, the Conference will take place in the 5<sup>th</sup> year of existence of EU-VRi what will be appropriately noted.

We are looking forward to welcoming you in Stuttgart.

(A. Jovanovic, iNTeg-Risk Project Coordinator, CEO EU-VRi)

(O. Renn, President EU-VRi)





#### Program

#### PRE-CONFERENCE WORKSHOPS (details on workshops will follow in due course) June 6, 2011

- W 1. iNTeq-Risk workshop on Key Performance Indicators proposed and/or applied in iNTeg-Risk ERRAs: Elaboration, specification and further usage
- W 2. iNTeg-Risk workshop on Emerging risks: contributing factors

#### NOTE:

The pre-conference workshops are intended for groups of 15-80 people with presentations from different authors and collegial discussions. The workshop coordinators may, but need not necessarily be the chairpersons and moderators.

#### MAIN CONFERENCE June 7-8, 2011

We expect a strong presence of high-level representatives from government, regulatory agencies and standardization brokers, EU directorates, industry and other organizations. The conference will take place in conjunction with SRA Europe 20th Annual Meeting providing the delegates with an opportunity to share their experiences and knowledge with participants attending the SRA Europe meeting. The two conferences will have joint plenary meetings on Tuesday and Wednesday allowing the participants to attend some of the SRA sessions and vice-versa.

#### ACCOMPANYING EVENTS (iNTeg-Risk project internal) June 6-10, 2011

- Project meetings for single project activities (Workpackage and Task meetings) June 6 & 10, 2011
- International Advisory Board (IAB) Meeting June 8, 2011, 17:00 - 19:00
- **Project General Assembly (GA)** June 9, 2011, 9:00 - 11:00
- Project Executive Board (EB) Meeting June 9, 2011, 11:30 - 13:30
- **ERRA-Integration Delphi-Workshop** June 9, 2011, 15:00 – 19:00
- Preparation meeting for Exploitation Strategy Seminar for iNTeg-Risk project

June 9, 2011, 15:00 - 18:00

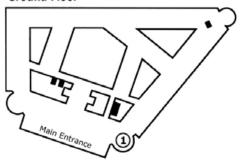
#### SPONSORS/SUPPORT

- Stiftung Umwelt- und Schadensvorsorge (Foundation for Environmental and Damage Prevention, www.stiftung-schadenvorsorge.de)
- EU, DG RTD, through iNTeg-Risk project



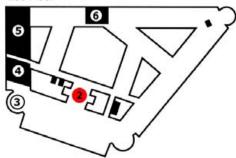
#### **Conference Rooms**

#### **Ground Floor**



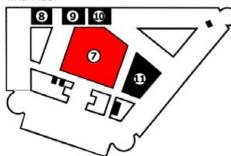
(1) "Konferenzraum Tübingen"

1st Floor



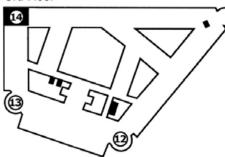
- (2) Registration, Information
- (3) "Turm A"
- (4) "Foyer Bertha-Benz-Saal"
- (5) "Bertha-Benz-Saal"
- (6) "Konferenzraum Mannheim"

#### 2nd Floor



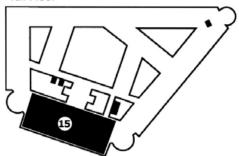
- (7) "König-Karl-Halle"
- (8) "Konferenzraum Reutlingen"
- (9) "Konferenzraum Ulm"
- (10) "Konferenzraum Heilbronn"
- (11) "Foyer König-Karl-Halle"

#### 3rd Floor



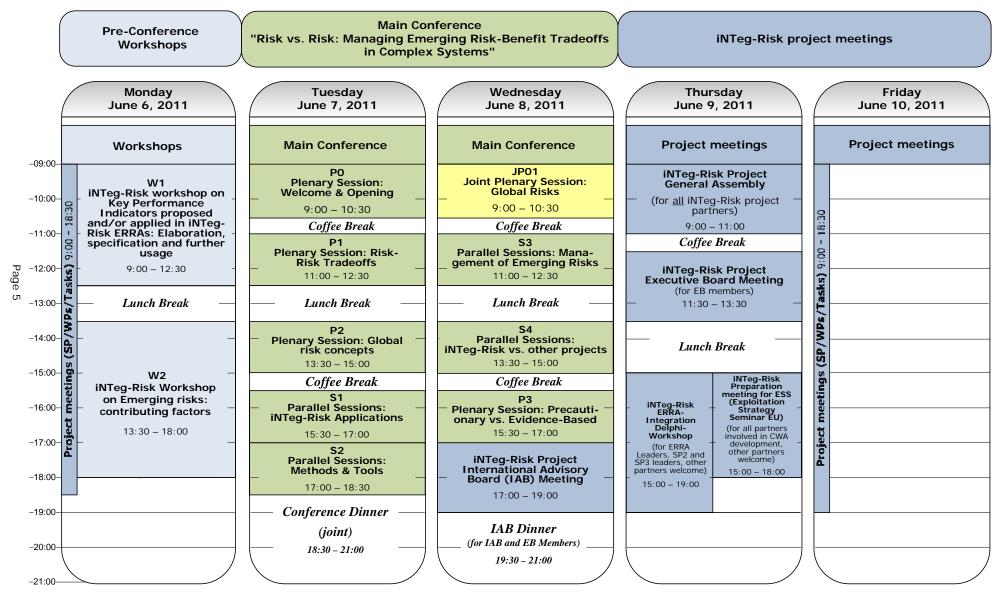
- (12) "Studio B"
- (13) "Studio A"
- (14) "Konferenzraum Freiburg"

#### 4th Floor



(15) "Mia-Seeger-Saal"

# 3rd iNTeg-Risk Conference 2011 - Overview





#### **Pre-Conference Workshops**

#### iNTeg-Risk Workshop on

Key Performance Indicators proposed and/or applied in iNTeg-Risk ERRAs: Elaboration, specification and further usage

June 6, 2011 9:00 - 12:30

#### Stuttgart

Haus der Wirtschaft, Room Bertha-Benz-Saal Willi-Bleicher-Strasse 19, 70174 Stuttgart

#### About the workshop

The workshop will focus on Key Performance Indicators (KPIs) provided as part of the project result coming from 17 case studies - so called Emerging Risk Representative industrial Applications (ERRAs) - that were carried out in the first two years of iNTeg-Risk project.

More details available under: <a href="http://www.eu-vri.eu/fwlink/?LinkID=318">http://www.eu-vri.eu/fwlink/?LinkID=318</a>
For registration navigate to: <a href="http://www.eu-vri.eu/fwlink/?LinkID=317">http://www.eu-vri.eu/fwlink/?LinkID=318</a>

## iNTeg-Risk Workshop on Emerging risks: contributing factors

June 6, 2011 13:30 - 18:30

#### Stuttgart

Haus der Wirtschaft, Room Bertha-Benz-Saal Willi-Bleicher-Strasse 19, 70174 Stuttgart

#### About the workshop

This workshop will begin by describing the twelve factors and the importance of understanding them from a systems perspective. Such a perspective is especially relevant when considering complex systems, and it is from complex systems that emerging risks often arise. Examples will be given to help put the factors into context and demonstrate their impact on some past 'emerging' risks, as well as their relevance to the iNTeg-Risk project. Further discussion will centre on how the concept of contributing factors can be turned into concrete guidance for overcoming obstacles to emerging risk anticipation and response and what practitioners can learn from these IRGC tools.

More details available under: <a href="http://www.eu-vri.eu/fwlink/?LinkID=319">http://www.eu-vri.eu/fwlink/?LinkID=319</a>
For registration navigate to: <a href="http://www.eu-vri.eu/fwlink/?LinkID=316">http://www.eu-vri.eu/fwlink/?LinkID=316</a>



# **Agenda**

# Main Conference June 7, 2011

08:30 - 09:00	Registration and getting together	(Coffee and refreshments)

P 0. iNTeg-Risk Plenary Session: Opening of 3<sup>rd</sup> iNTeg-Risk Conference (König-Karl-Halle; Chair: W. Gerhardt, A. Jovanovic, O. Renn)

	Welcome and organizational introductory remarks, A. Jovanovic
	"5 years EU-VRi— Awarding the EU-VRi Medals of Merit", O. Renn An initiative to reward the outstanding contributions of individuals to activities and organization of EU-VRi has been started by EU-VRi Founding Members; 3 medals will be awarded honoring exceptional excellence, commitment and dedication.
09:00 – 10:30	Welcome EU - A. Cipollaro, Project Officer European Commission – Directorate General RTD, Directorate G (Industrial Technologies - New Generation of Products) Future Global Shocks: can we cope with the challenges? – PA. Schieb, OECD Organisation For Economic Co-Operation And Development, France From Emerging Risk Perception to Action – R. Schneider, Swiss Reinsurance Company, Zurich, Switzerland

10:30 – 11:00 Coffee break

P 1. iNTeg-Risk Plenary Session 1: Risk-Risk Tradeoffs (König-Karl-Halle; Chair: P. A. Schieb, R. Schneider, H. Trasch)

11:00 – 12:30	P 1.1.	Welcome Steinbeis: Safe Innovation as a guarantee for long-term sustainability - H. Trasch, President Steinbeis, Germany
	P 1.2.	Risk-Risk Tradeoffs - Wiener, Jonathan, Duke University, Schools of Law,
		Environment, and Public Policy, United States
	P 1.3.	Dealing With Tradeoffs Between Target and Ancillary Risks of New
		Technologies in iNTeg-Risk Project – A. Jovanovic, EU-VRi, Germany

12:30 – 13:30 Lunch (buffet)

P 2. iNTeg-Risk Plenary Session 2: Global risk Concepts on the Regional, Local and Company levels (König-Karl-Halle: Chair: U. Haug, O. Salvi, J. Wiener)

	P 2.1.	Safety Culture Development at BASF – W. Gerhardt, BASF, Germany
13:30 – 15:00	P 2.2.	Use of the Environmental Information System Baden-Württemberg for Risk
		Assessment Tasks - Opportunities and Constraints - R. Ebel, LUBW, ITZ,
		Germany; R. Mayer-Föll, Ministry of the Environment, Nature Conservation and
		Transport, UVM, Germany; Th. Usländer, Fraunhofer IOSB, Information
		Management, Germany
	P 2.3.	iNTeg-Risk Project: An Overview of the Results of 17 Emerging Risk
		Representative Applications – B. Debray, INERIS, France; M. Zarea, GDF Suez,
		France; K. Øien, SINTEF, Norway; R. Rota, Politecnico di Milano - CMIC Dpt, Italy;
		A. Jovanovic, EU-VRi, Germany

15:00 – 15:30 Coffee break

S 1. iNTeg-Risk Parallel Sessions – Emerging Risk Representative Applications

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15:30 – 17:00 S	<ol> <li>S. 1.1.1. Overview of ERRA A1 on Carbon Capture and Storage – J. Wilday, J. Buston, Health and Safety Laboratory, United Kingdom; R. Farret, INERIS, France; L. Breedveld, 2B, Italy; N. Paltrinieri, Health and Safety Laboratory, United Kingdom</li> <li>S. 1.1.2. Addressing Emerging Risks related to LNG regasification Terminals – G. Uguccioni, S. Benucci, D'Appolonia SpA, Italy; R. Rota, V. Busini, M. Derudi, E. Marzo, Politecnico di Milano, Italy; A. Tugnoli, V. Cozzani, Università di Bologna, Italy; O. Aneziris, NCSR Demokritos, Greece; I. Vela, BAM - Bundesanstalt für Materialforschung und –prüfung, Germany</li> <li>S. 1.1.3. Evacuation of a Complex Underground Facility – M. Wietek, VSH, Switzerland; J. Hugosson, SP, Sweden; F. Leismann, STUVA, Germany; F. Fouillen, INERIS, France Papers presentation 25' each, 15' Discussion</li> </ol>



#### Session 1.2. Emerging Risks in New Material and Products

(Studio A; Chair: U. Krause, R. Zöllner)

- S 1.2.1. Dust Explosions as a Destructive Threat to Solids Handling Industries: Case Studies of Hazards and Means and Measures to Avoid Injuries and Losses S. Penno, Index e.V., Germany
- S 1.2.2. A Generic Approach for Hazard Prevention in Large Storages of Combustible Wastes

   <u>I. Vela</u>, U. Krause, BAM, Germany
- S 1.2.3. Method to Management of the Emerging Risks Connected with the Introduction Of Advanced Engineering Materials <u>J. Trebicki</u>, K. Dolinski, IPPT, Poland
- S 1.2.4. Easy-to-use Nano Control Banding Tool for Risks Related to Working with Nanomaterials: Stoffenmanager Nano <u>A. Pronk</u>, S. Spaan, B. Duuren-Stuurman, E. Tielemans, W. Fransman, TNO, Netherlands; H. Heussen, K. Verbist, Expert Centre for Chemical Risk Management, Arbo Unie, Netherlands

Papers presentation 20' each, 10' Discussion

# Session 1.3. ERs in New Production Technologies and Production Networks (Heilbronn: Chair: H. B. Andersen, L. van Wijk)

- S 1.3.1. Safety challenges from subcontracting Review <u>J. Thommesen</u>; H. B. Andersen, DTU, Management Engineering, Denmark
- S 1.3.2. On-line risk monitoring and assessment methodology and techniques for emerging risk in petrochemical plants <u>G. Lenkey</u>, P. Rózsahegyi, E. Bodnár, R. Somogyvári, Bay Zoltan Foundation, Hungary
- S 1.3.3. Risk issues and good practices related to subcontracting Interview study <u>J. Thommesen</u>; H. B. Andersen, DTU, Management Engineering, Denmark
  S 1.3.4. How Can Emerging Risk Areas Learn from a Consideration of Past "Atypical Events"?
- S 1.3.4. How Can Emerging Risk Areas Learn from a Consideration of Past "Atypical Events"? – <u>J. Buston</u>, G. Atkinson, N. Paltrinieri, Health and Safety Laboratory, United Kingdom; N. Dechy, INERIS, France; E. Salzano, IRC-CNR, Italy; L. van Wijk, JRC Ispra, Italy

Papers presentation 20' each, 10' Discussion

#### Session 1.4. Emerging Risks and Related Policies

15:30 - 17:00

(Tübingen; Chair: J. Larrañeta, E. Salzano)

- S 1.4.1. The ERRA D2 Tool: A New Approach to Support Emerging Risks Management in Energy Sector Companies <u>J. López de Ipiña</u>, I. Padillo, J. Rubio, TECNALIA, Spain; A. Moreno Ucelay, J. L. Lirón, Iberdrola SA, Occupational Safety Area, Spain; J. Goitia, L. Azpiazu, Iberdrola Distribución SAU, Spain
- S 1.4.2. Human Risk Assessment of Single Exposure in Chemical Incidents P. Bos, K. Mahieu, RIVM, Netherlands; M. Ruijten, Crisistox Consult, Netherlands; U. Gundert-Remy, Bundesinstitut für Risikobewertung, Germany; S. Bull, Health Protection Agency, United Kingdom; E. Nielsen, Danish Technical University, Denmark; S. Tissot, J.-M. Vincent, INERIS, France; M. Wood, Joint Research Center, Italy; G. Cassel, P. Leffler, Swedish Defence Research Agency, Sweden; D. Russell, Health Protection Agency, United Kingdom; A. Zitting, T. Santonen, M. Heinälä, Finnish Institute of Occupational Health, Helsinki, Finland
- S 1.4.3. A New Set of KPIs and a New Methodology for NATECH (Natural-Technological) Risk Assessment E. Krausmann, JRC, Italy; E. Salzano, Istituto di Ricerche sulla Combustione, CNR, Italy; V. Cozzani, R. Rota, CONPRICI, Italy; O. Aneziris, DEMOKRITOS, Greece; A. Vallee, B. Affeltranger, M. Reimeringer, Ch. Mazri, INERIS, France
- S 1.4.4. Integrated, multilingual Management for Operations and Maintenance: 2 ways how Europe can support SMEs to recognise and manage existing and emerging risks C. Berbenni-Rehm, PROMIS@Service Sarl, Luxembourg; R. Gowland, United Kingdom Papers presentation 20' each, 10' Discussion

#### Session 1.5. GRUNDTVIG

(Bertha-Benz-Saal; Chair: O. Renn, University of Stuttgart, ZIRN)

S 1.5.1. "Save Your Energies" - Designing Energy Concepts for Reducing Risks of Climate Change - Session for the lifelong learning partnership GRUNDTVIG -

Moderator: O. Renn, University of Stuttgart, Germany, Panelists:

- Roger Strand (University of Bergen, Norway)
- Gisela Wachinger (Dialogik, Germany)
- Päivi Tirkkonen (University of Jyväskylä, Finland)
- William Leiss (University of Ottawa, USA)

#### S 2. iNTeg-Risk Parallel Sessions 2 – Dealing with Emerging Risk: Methods and Tools

# Session 2.1. Framework and Paradigm for Emerging Risk Management (Bertha-Benz-Saal; Chair: V. Cozzani, C. Duval) S 2.1.1. Development of An Integrated Risk Analysis Method in Order to Treat the Different Sides of the ERMF – C. Duval, Y. Dien, EDF-R&D, France S 2.1.2. An Assessment Framework for Risk Communication Challenges – K. Øien, SINTEF, Safety Research, Norway S 2.1.3. Obstacles to Emerging Risk Anticipation – W. North, Stanford University, USA; M. V. Florin, IRGC, Switzerland; other authors, Steering Committee of the IRGC project on Emerging Risks, Switzerland S 2.1.4. iNTeg-Risk Framework for Emerging Risks Management - A. Jovanovic, EU-VRi, Germany; O. Renn, ZIRN Uni Stuttgart, Germany; R. Schneider, Swiss Re, Switzerland; D. Balos, R-Tech, Germany Papers presentation 20' each, 10' Discussion



Early Recognition, Monitoring and Integrated Management of Emerging, New Technology Related, Risks

#### Session 2.2. Risk-Risk Tradeoffs & Early Warning Signals

(Tübingen; Chair: A. Kishimoto, E. Rosa)

- S 2.2.1. Resolving Risk-Risk Dilemmas by Reframing Objectives and Options: Lessons from 'Smart-Wear' – T. Assmuth, Finnish Environment Institute, Environmental Policy Centre, Finland
- S 2.2.2. Bridging Silos: Risk Governance and Cross-Domain Risks E. Rosa, Washington State University, United States
- S 2.2.3. Risk Tradeoff Analysis of Substance Substitution: Scope, Framework and Metrics H. Kajihara, A. Kishimoto, National Institute of Advanced Industrial Science and Technology, Research Institute of Science for Safety and Sustainability, Japan
- S 2.2.4. The Atypical Incident Scenarios: Longstanding Issues Commonly Disregarded as Improbable and New Issues Due To Emerging Technologies N. Paltrinieri, V. Cozzani, Università di Bologna, Dipartimento di Ingegneria Chimica, Mineraria e delle Tecnologie Ambientali, Italy; E. Salzano, Consiglio Nazionale delle Ricerche, Istituto di Ricerche sulla Combustione, Italy; N. Dechy, IRSN Institut de Radioprotection et de Süreté Nucléaire, France; J. Buston, J. Wilday, Health and Safety Laboratory (HSL), Fire & Process Safety Unit, United Kingdom

Papers presentation 20' each, 10' Discussion

#### Session 2.3. Key Performance Indicators and Risk Perception

(Heilbronn; Chair: K. Grieger, H. Pacaiova)

- S 2.3.1. A Communicative Approach to Understanding the Association Between Procedural Performance and the Legitimacy Of Outcomes Th. Webler, SERI, United States
- S 2.3.2. Advantages and Disadvantages of KPI in Risk Management Process <u>H. Pacaiova</u>, A. Nagyova, J. Namesanska, Technical University of Kosice, Department of Safety and Quality Production, Slovakia
- S 2.3.3. Emerging Nanotechnologies and Risk Perception <u>K. Grieger</u>, H. B. Andersen, Technical University of Denmark, Denmark

17:00 - 18:30

Papers presentation 25' each, 15' Discussion

#### Session 2.4. Methodologies for Dealing with Emerging Risks I

(Freiburg; Chair: Y. Malmen, M. Ström)

- S 2.4.1. Qualitative vs. Quantitative Data Quality Objectives for Complex Multi-pathway Risk Assessments What Should Reasonable People Who are Not Statisticians Do? <u>K. Butler</u>, Ch. Lambert, R. Countway, McDaniel Lambert, Inc., United States
- S 2.4.2. On the Way to a UML Model Of Handling Of Risks Related To Emerging Technologies <u>M. Ström</u>, Swerea IVF AB, Operations Development, Sweden; D. Andersson, Swerea IVF AB, Electronics Production, Sweden
- S 2.4.3. 3DHaz Emerging Hazard Analysis Using 3D Plant Models <u>Y. Malmén</u>, K. Virolainen, VTT Technical Research Centre of Finland, Finland; T. Keskitalo, Pöyry Finland Oy, Finland
- S 2.4.4. Managing Emerging Risk Trade-Offs along the Life-Cycle: the Case of CCS <u>L. Breedveld</u>, 2B, Italy; J. Wilday, HSL, United Kingdom; M. Cordella, M. Löscher, A. Jovanovic, EU-VRi, Germany

Papers presentation 20' each, 10' Discussion

#### Session 2.5. Special Issues in Management of Emerging Risks

(Ulm; Chair: S. Kovacs, G. Lenkey)

- S 2.5.1. Smart Grids Risk on a Non-Classic Information Measure I. Purica, FCCEA, Romania
- S 2.5.2. Risk, the End is Nigh? A. G. Hessami, Vega Systems & University of East London, System of Systems Engineering, United Kingdom
- S 2.5.3. Managing Emerging Risks New Bottles for a New Wine... and for Old Wine as Well! <u>Y. Dien</u>, C. Duval, EDF R&D, Management of Industrial Risks, France
- S 2.5.4. Evaluate Possible Technologies for e-Learning / Web-Based Courses for the iNTeg-Risk European Master on Emerging Risks – P. Lerena, Swiss Safety Institute, Switzerland

Papers presentation 20' each, 15' Discussion

**Posters first conference day** (König-Karl-Halle; Coordinator: M. Löscher; the time table of presentations will be indicated at each poster)

		The following posters will be presented throughout the day in König-Karl Halle		
09:00 – 18:00	PO 1.	Rapid Fingerprinting Technique of Oil Spill Based on the Concentration-		
			Synchronous-Matrix-Fluorescence Spectroscopy and Chemometrics – Ch. Wang, W.	
			Ren, M. Tang, J. Zhang, Beijing Normal University, China	
	18.00	PO 2.	A Comparative Study of the Main Existing Methods and Software Tools for Analysis	
	10.00		and Modeling of Domino Effects – F. Kadri, Université de technologie de Troyes,	
		Institut Charles Delaunay, UMR CNRS, France		
	PO 3.	Integrated Technologies For Improving Atmospheric Risk and Impact Assessment		
			Models And Studies – N. Ajtai, Z. Török, H. Stefānie, A. Ozunu, Babes-Bolyai	
			University, Environmental Sciences and Engineering, Romania	

18:30 - 21:00

Conference Dinner (joint dinner with SRA Europe Conference)



#### June 8, 2011

#### JP 1. iNTeg-Risk/SRA Europe Joint Plenary Session

	Global Risks: A Broader Perspective ( <u>König-Karl-Halle</u> ; Chair: W. Leiss, J. López de Ipiña, K. Øien)
	"Best Graduate Student / Young Scientist Award", A. Jovanovic Two special prizes, 1,000 € in total, financed by Stiftung Umwelt- und Schadensvorsorge (Foundation for Environmental and Damage Prevention, www.stiftung-schadenvorsorge.de) will be awarded to 2 outstanding iNTeg-Risk Conference papers or posters, authored by graduate students or young scientists.
09:00 – 10:30	JP 1.1. Welcome Baden-Württemberg International: Provider of New Technologies and related services for economic development and international cooperation – H. Neuland, Baden-Württemberg International, Germany
	JP 1.2. Global Systemic Risks with Catastrophic Potential – W. Leiss, University of Ottawa, McLaughlin Centre for Risk Assessment, Canada
	JP 1.3. <b>To Count or to Judge?</b> – E. Rosa, Washington State University, United States
	JP 1.4. Risk governance deficits in the multiple risk situation: the Great East Japan Earthquake, Tsunami, and Fukushima nuclear accident – A. Kishimoto, RISS, AIST, Japan

10:30 - 11:00 Coffee break

#### S 3. iNTeg-Risk Session 3 (parallel) – Management of Emerging Risks

#### Session 3.1. Early Warnings and Risk Mitigation (Tools)

(König-Karl-Halle; Chair: A. Jovanovic, L. van Wijk)

- S 3.1.1. Infrastructure for Spatial Information in Europe (INSPIRE) Towards
  Interoperability of Data Sets for Risk Prevention and Management <u>M. Tuchyna</u>, A.
  López Alós, P. Smits, R. Tomas, Institute for Environment and Sustainability, JRC,
  EC, Italy
- S 3.1.2. The RiskClock: A way to improve monitoring of emerging risks related to New Technologies <u>A. Jovanovic</u>, P. Klimek, D. Balos, EU-VRi, Germany; R. Schneider, Swiss Re, Switzerland
- S 3.1.3. Software Interoperability in Risk Analysis: A Possible Way Forward? <u>L. van Wijk</u>, S. Contini, L. Fabbri, V. Matuzas, European Commission, Joint Research Centre, Italy; M. Binda, THS Informatica, Italy
- S 3.1.4. An Agent-Based Model Tool for Analyzing Perception of Emerging Risks <u>P. Klimek</u>, A. Jovanovic, R. Lim, EU-VRi, Germany; R. Schneider, Swiss Re, Switzerland

# Papers presentation 20' each, 10' Discussion Session 3.2. Findings from iNTeg-Risk Related Projects

(Ulm; Chair: R. Hutter, H. Wenzel)

- S 3.2.1. VALUESEC Mastering the Value Function of Security Measures Ch. Blobner, Fraunhofer Institute for Factory Operation and Automation IFF, Logistics and Factory Systems, Germany; R. Hutter, CESS GmbH Centre for European Security Strategies, Germany
- S 3.2.2. Comprehensive Assessment of Traffic, Environmental and Financial Impacts of Tramway Extension Using Intelligent Multi-agent Simulator MATES <u>H. Fujii</u>, S. Yoshimura, H. Uchida, The University of Tokyo, Dep. of Systems Innovation, Japan
- S 3.2.3. Results of the IRIS Project with Relevance to INTeg-Risk H. Wenzel, VCE Holding GmbH, Austria
- S 3.2.4. Architecture, Interfaces and Standards of Environmental Information Systems How to Integrate them into Risk Management Applications <u>M. Schenk</u>, M. Rudolf, Fraunhofer IOSB, Information Management, Germany

#### Papers presentation 20' each, 10' Discussion

#### Session 3.3. Risk Management and Standardization

(Heilbronn; Chair: H. Behrens, S. Jovanovic)

- S 3.3.1. Standardization in Risk Management <u>S. Limousin</u>, V. Laflèche, INERIS, France S 3.3.2. Standardization Activities within the iNTeg-Risk Project H. Behrens, DIN Deutsches Institut für Normung e.V., R&D Phase Standardization, Germany
- S 3.3.3. NanoRef: Coordination of standardization activities for Safety Related To Nanoparticles <u>O. Salvi</u>, EU-VRi, Germany; S. Engel, BASF, Germany; E. Fréjafon, O. Le Bihan, INERIS, France; S. Jovanovic, R-Tech, Germany; N. Babcsan, Bay Zoltan Foundation, Hungary

Papers presentation 25' each, 15' Discussion

#### Session 3.4. Natural Hazard Management and Insurability

(Mannheim; Chair: O. Renn)

S 3.4.1. Invited Lecture: Combining Risk and Responsibility Perspectives – J. Brinkmann, Norwegian School of Management, Norway

Moderator: O. Renn, University of Stuttgart, Germany,

Panelists: E. Rosa, V. Schetula, H. Kosow, S. Kjellgren, J. Brinkmann

12:30 - 13:30

11:00 - 12:30

#### Lunch (buffet)



#### S 4. iNTeg-Risk Session 4 (parallel) – iNTeg-Risk Project Liaisons to Other Projects & Activities

#### Session 4.1. Near Misses & Knowledge Discovery

(Heilbronn; Chair: N. Allan, S. Ansaldi)

- S 4.1.1. Discussing Near Misses to Revive the "Sleeping" Knowledge <u>S. Ansaldi</u>, P. Agnello, P. Bragatto, INAIL, Italy
- S 4.1.2. Dynamic Knowledge Management (DKM) <u>B. Debray</u>, INERIS, France, E. Kon, EKON, Israel
- S 4.1.3. An Evolutionary Approach to Identifying Emerging Risk in Complex Adaptive Systems Using Phylogenetic Analysis N. Allan, University of Bristol, Systems Centre, United Kingdom; Y. Yin, University of Bath, School of Management, UK

#### Papers presentation 25' each, 15' Discussion

Papers presentation 25' each, 15' Discussion

Session 4.2. Methodologies for Dealing with Emerging Risks II (<u>Ulm</u>; Chair: M. Gerbec, Y. Malmén)

- S 4.2.1. Experience and the Unexpected: Risk and Mitigation Issues For Operating Underground Storage Silos for Coal Fired Power Plant <u>Y. Malmén</u>, P. Auerkari, A.-M. Heikkilä, VTT, Finland; J. Sipilä, Helsingin Energia, Finland; U. Krause, BAM, Germany
- S 4.2.2. Two-Stage Stochastic Mixed Integer Linear Programming J. Cui, TU Dortmund, Germany
- S 4.2.3. Effective Key Performance Indicators on Integration of Risk Related Information into Land Use Planning Process D. Kontić, <u>M. Gerbec</u>, B. Kontič, Jozef Stefan Institute, Slovenia

#### 13:30 - 15:00

#### Session 4.3. Benchmarking

(Tübingen; Chair: L. Breedveld, D. Leonte)

- S 4.3.1. Comprehensive Ex-Ante Evaluation of New Emerging Technologies/Risks and Their Approval B. Kontić, D. Kontič, <u>M. Gerbec</u>, Jozef Stefan Institute, Slovenia
- S 4.3.2. An Exposition into the Diversity of Risk Applications and Implications for their Integrated Management in Organizations D. Leonte, NICNAS, Australian Department of Health and Aging, Australia
- S 4.3.3. Benchmark Study on International Functional Safety Standards <u>F. Massé</u>, INERIS, France; R. Tiennot, LigeronFrance; J.-P. Signoret, Total, France; Ph. Blancart, PSA Peugeot Citroën, France; G. Dupin, RATP, France; L. Marle, IMdR, France Papers presentation 25' each, 15' Discussion

#### Session 4.4. Uncertainties and Systemic Risks

(König-Karl-Halle; Chair: P. Bragatto, Ch. Huang)

- S 4.4.1. Estimation of Uncertainty for Emerging Technologies and Implications to Risk Management <u>F. Markert</u>, I. Kozine, Technical University of Denmark, Management Engineering, Safety, Reliability & Human Factors, Denmark
- S 4.4.2. Some Issues on Experimental Riskology Ch. Huang, Beijing Normal University, Academy of Disaster Reduction and Emergency Management, China
- S 4.4.3. Inspection Planning of Pressure Vessels in Service <u>P. Bragatto</u>, INAIL, DIPIA, Italy; C. Delle Site, INAIL, DCC, Italy; A. Faragnoli, C-ENG, Italy Papers presentation 25' each, 15' Discussion

#### 15:00 - 15:30

#### Coffee break

# P 3. iNTeg-Risk Plenary Session 3 – Panel Discussion Precautionary vs. Evidence-Based Approaches (König-Karl-Halle)

# P 3.1. Precautionary vs. Evidence-Based Approaches when Dealing with Emerging Risks – **Moderator: O. Renn**, University of Stuttgart, Germany, **Panelists**:

#### 15:30 - 16:50

- J. Wiener (US vs. Europe)
- R. Löfstedt (Implications for European and US Policy Making)
- E. Rosa (Application of Precaution to Climate Change)
- Th. Webler (Citizen preferences for risk management approaches)
- A. Jovanovic (Precautionary principle and evidence-based approach in the iNTeq-Risk framework)
- P.A. Schieb (Precautionary principle in the future)

#### 16:50 – 17.00 Closure of the conference (O. Renn, Jovanovic)

#### Posters second conference day (König-Karl-Halle; Coordinator: D. Balos)

09:00 – 15:30	PO 4. Human Errone Technical Univ PO 5. Using Human in Order to Ur Apostol, I. Ior PO 6. Reliability Ana Office of Tech PO 7. Reducing Airb	vill be presented throughout the day in König-Karl Halle cous Action Context Monitoring by Two HRA Methods – G. Petkov, versity of Sofia, Thermal and Nuclear Power Engineering, Bulgaria Key Performance Indicators Together with Expert Rationing Processes iderstand and Cope with New and Emergent Risks – S. Kovacs, G. gga, INCDPM, Romania; E. Doval, Spiru Haret University, Romania lysis and RBI Planning for Industrial Heating Vessels – A. Kozak, nical Inspection, Poland ag Induced Injuries – A. Dávila, M. Nombela, IDIADA Automotive assive Safety, Spain
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#### Venue

- Stuttgart, Haus der Wirtschaft
- Steinbeis Foundation
- Steinbeis Advanced Risk Technologies
- EUropean Virtual Institute for Integrated Risk Management (EU-VRi)

Haus der Wirtschaft, Willi-Bleicher-Str. 19 70174 Stuttgart, Germany +49 (711) 1839-5 +49 (711) 1839-781 www.stw.de

Walking from the main railway station (Hauptbahnhof): Take the main street (Koenigstrasse) for about 500 meters up to the main place Schlossplatz. Between the bookstore WITTWER and the ESPRIT, you have to turn right (kleiner Schlossplatz), go straight ahead, cross the 'Theodor Heuss Strasse' and you will reach automatically the 'Willi-Bleicher-Strasse'.

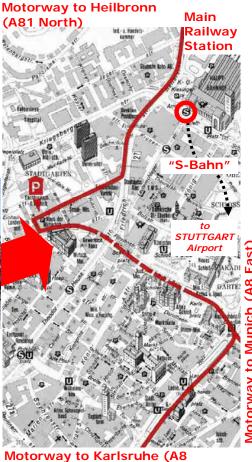
Public transportation: Take any of the subway lines ("S-Bahn") S1 to S6 (S2 or S3 from the airport!) and get off at the main railway station (Hauptbahnhof). Then follow the instructions above. Alternatively: use the tramway (the "U-Bahn") lines U9 or U14 and get off at the stop "Friedrichsbau".



By car: From the main motorways follow always "Stuttgart Zentrum" or "Stuttgart Stadtmitte". Take exits "Degerloch" when coming from Munich (Autobahn A8), exit "Vaihingen" when coming from Karlsruhe (Autobahn A8) or Zurich (Autobahn A81), or Zuffenhausen when coming from Heilbronn (Autobahn A81).

Park at "Hofdienergarage" in front of Haus der Wirtschaft (access to garage from Schellingstraße).





West) and Singen (A81 South)

#### **Hotels**

The special prices conditions are <u>arranged with CONGREX</u>. Please use the contact details provided at registration (<a href="http://www.eu-vri.eu/fwlink/?LinkID=315">http://www.eu-vri.eu/fwlink/?LinkID=315</a>)!

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For further hotel and/or other information consult <a href="http://www.stuttgart-tourist.de/ENG/hotels/hotels\_buchen.htm">http://www.stuttgart-tourist.de/ENG/hotels/hotels\_buchen.htm</a>. No special conditions would apply to these hotels.

### Registration/Fees

Registration for the Main Conference is open at:

http://www.eu-vri.eu/fwlink/?LinkID=315

#### **Registration Fees:**

Conference fees (+ VAT if applicable):

- 350 €, for iNTeg-Risk partner and members of the International Advisory Board
- 430 €, for other full delegate
- 230 €, for student delegates.

The registration includes handouts, coffee breaks, lunches, the conference reception and the conference dinner on June 7, 2011. Having registered either for SRA-Europe Meeting (June 5–8, 2011) or for 3rd iNTeg-Risk Conference (June 7–8, 2011) gives free access to both events on June 7–8, 2011.

#### Workshops fees (per workshop, + VAT if applicable):

- 150 €, for project partners and IAB members
- 250 €, for other participants.

The registration includes handouts and coffee breaks.

#### Registration:

- KPI Workshop: <a href="http://www.eu-vri.eu/fwlink/?LinkID=317">http://www.eu-vri.eu/fwlink/?LinkID=317</a>
- IRGC Workshop: <a href="http://www.eu-vri.eu/fwlink/?LinkID=316">http://www.eu-vri.eu/fwlink/?LinkID=316</a>

#### Contact:



#### EU-VRi

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