

**INTERNATIONAL SYMPOSIUM ON  
SEISMIC EVALUATION OF  
EXISTING NUCLEAR FACILITIES**

**Vienna, Austria, 25-29 August 2003**

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**TENTATIVE PROGRAMME**  
(as of 16 July 2003)

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## TIMETABLE

### Monday, 25 August 2003

08:00	Registration	
10:00	Welcoming and Opening Addresses	
10:30	Session A	Opening Session
12:00	Lunch Break	
13:30	Session B	Questions related to Seismic Input Motion
14:30	Poster Presentations	
16:30	Discussion	
17:30	Reception	

### Tuesday, 26 August 2003

09:00	Session C	Assessment of Structures, Systems and Components
10:30	Poster Presentations	
12:00	Discussion	
13:00	Lunch Break	
14:00	Session D	Legal and Regulatory Framework
15:30	Coffee break	
16:00	Session E	Panel Session: Expectations from International Co-operation in the Field of Earthquake Engineering

### Wednesday, 27 August 2003

09:00	Session F	Experience Feedback of Seismic Evaluation and Upgrades
11:00	Poster Presentations	
12:30	Discussion	
13:30	Lunch Break	
	Afternoon Free	

### Thursday, 28 August 2003

09:00	Session G	Preparation in Case of a Seismic Event
10:00	Poster Presentations	
11:00	Discussion	
12:00	Lunch Break	
13:30	Session H	Research and Development
14:30	Poster Presentations	
16:00	Discussion	

### Friday, 29 August 2003

09:00	Session I	Closing Session
10:15	Coffee break	
10:45	Session I (cont'd)	
11:30	General Conclusion and Closing Statement	
12:00	Closing of the Symposium	

**Display of posters: Monday to Friday, 25-29 August 2003**

**Monday, 25 AUGUST 2003**

**8:00 – 10:00**                      **Registration**

**10:00**                                      **Opening of the Conference**  
**T. Taniguchi, Deputy Director General, IAEA**  
**A. Hadjian, USA**  
**P. Labbé, IAEA**

**10:30 – 12:00**                      **SESSION A:**  
**OPENING SESSION**

**Chair:**                                      **A. Hadjian, USA**

<i>No. of Paper</i> <i>IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member</i> <i>State/Organization</i>	<i>Title of Paper</i>
41 Keynote lecture	<b>J.D. Stevenson</b>	USA	The economic effect of using indirect (experience data) versus direct methods (analysis and test) in NPP seismic design and re-evaluation
42 Keynote lecture	<b>P. Sollogoub</b>	France	The activities of the OECD/NEA in the field of earthquake engineering and the co-operation with the IAEA
<i>12:00-13:30</i>	<i>Lunch Break</i>		

13:30 – 17:30

**SESSION B:  
QUESTIONS RELATED TO SEISMIC INPUT  
MOTION**

**Chair:**

**N. Chokshi, USA**

**Co-Chair:**

**J. Riera, Brazil**

<i>No. of Paper IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
43 Invited	<b>Y. Fukushima</b> T. Saiki A. Asano Y. Ohno Y. Ohashi T. Watanabe	Japan	Re-evaluation of strong seismic motion from the Median Tectonic Line for an existing NPP in Shikoku, Japan
44 Invited	<b>M.K. Kostov</b>	Bulgaria	Site specific CAV estimation

**14:30 – 16:30    *Poster Presentations***

<i>No. of Poster IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Poster</i>
01P	<b>M.A. Abdel Aziz</b>	Egypt	Application of microearthquake survey at Inshas site, Egypt
04P	<b>C. Berge-Thierry</b> O. Scotti F. Bonilla	France	Seismic hazard assessment in France and associated uncertainties
05P	<b>K.R. Berryman</b> M. Stirling	New Zealand	Earthquake ground motion and fault hazard studies at the Lucas Heights Research Reactor facility, Sydney, Australia: evolution of methods and changes in results
08P	<b>M. Celebi</b>	USA	Recovered mainshock motions and those inferred from aftershocks of August 17, 1999, Izmit (Turkey) earthquake
10P	<b>S. El-Hemamy</b>	Egypt	Seismic hazard assessment of the underground tanks in Inshas area
12P	<b>C. Fischer</b>	Czech Republic	Accurate description of non-stationary random seismic excitation

15P	<b>A.M. Haifani</b> B. Rohman	Indonesia	Evaluation of seismic hazard in Bandung Research Reactor
19P	<b>Quang Hiep Le</b>	Vietnam	Evaluation of seismic hazards at three sites proposed for construction of a nuclear power plant in Vietnam
11P	<b>G. Molchan</b> T. Kronrod G.F. Panza	Italy	The shape of empirical and synthetic isoseismals: comparison for Italian earthquakes of $M \leq 6$
28P	<b>S. Noda</b> K. Yashiro	Japan	Response spectra for design purpose applicable to near field earthquakes
33P	<b>H. Wenzel</b> B. Theilen-Willige	Austria	The use of LANDSAT ETM and ERS data for the detection of faults for seismic microzonation

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*16:30 – 17:30 Discussion*

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*17:30 – 19:00 Reception*

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TUESDAY, 26 AUGUST 2003

09:00 – 13:00

**SESSION C:  
ASSESSMENT OF STRUCTURES, SYSTEMS  
AND COMPONENTS**

**Chair:**

**R. Danisch, Germany**

**Co-Chair:**

**V. Renda, European Commission**

<i>No. of Paper</i> <i>IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member</i> <i>State/Organization</i>	<i>Title of Paper</i>
45 Invited	<b>C.H. Hofmayer</b> C. Miller Y. Wang J. Costello	USA	Displacement based seismic design methods
46 Invited	<b>A. Ghojarah</b> A. El Sheikh M. Elgohary	Canada	Effect of near-fault ground motion on the response of concrete structures
47 Invited	<b>R. Masopust</b>	Czech Republic	Draft acceptance criteria for seismic verification of structures and equipment of RBMK and WWER-type nuclear power plants based on the relevant Russian design standards

**10:30 – 12:00 Poster Presentations**

<i>No. of Poster</i> <i>IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member</i> <i>State/Organization</i>	<i>Title of Poster</i>
35P	<b>P.C. Basu</b>	India	Seismic fragility of reinforced concrete frame
03P	<b>V.S. Beliaev</b>	Russian Federation	Seismic re-evaluation of existing nuclear power plant structure
38P	<b>A. Dorfmann</b>	Austria	Cavitation damage in seismic bearings of existing nuclear facilities
13P	<b>L. Gerashchenko</b>	Ukraine	Seismic stability estimation of designed nuclear power plant civil structures
18P	<b>H.S. Kushwaha</b> A.K. Ghosh K.K. Vaze G.R. Reddy	India	Seismic evaluation and strengthening of structures equipment and piping of nuclear facilities

14P	<b>D. Makovička</b> D. Makovička Jr.	Czech Republic	Seismic resistance of a ventilation stack of a reactor building
29P	<b>J.K. Sinha</b> A. Rama Rao R.K. Sinha	India	Realistic seismic qualification using the updated finite element model for in-core components of reactors

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*12:00 – 13:00 Discussion*

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*13:00 – 14:00 Lunch Break*

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**14:00 – 15:30**

**SESSION D:  
LEGAL AND REGULATORY FRAMEWORK**

**Chair:**

**P.C. Basu, India**

<i>No. of Paper IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
48 Invited	<b>H. Shibata</b>	Japan	Observations on some difficulties of revising the current licensing criteria and scenarios on technical procedures for seismic design
49 Invited	<b>J. Sanchez Cabañero</b>	Spain	Regulatory framework for Spanish NPP seismic re-evaluation: past practice, current Periodic Safety Review and future life extension trends
50 Invited	<b>J.A. Donald P. Ford</b>	UK	A regulatory view of seismic evaluation in the UK
<i>15:30 – 16:00</i>	<i>Coffee Break</i>		

**16:00 – 17:30**

**SESSION E: PANEL SESSION:  
EXPECTATIONS FROM INTERNATIONAL CO-  
OPERATION IN THE FIELD OF EARTHQUAKE  
ENGINEERING**

**Moderator:**

**A. Gürpınar, IAEA**

**Panellists:**

**M.A. Abdel Aziz**                      Egypt  
**J.K. Sinha**                                India  
**M. Bagherpour**                        Islamic Republic of Iran  
**A. Uribe-Carvajal**                       Mexico  
**M.T. Mian**                                Pakistan  
**A. Altinyollar**                            Turkey

Presentations by the panellists followed by a discussion



WEDNESDAY, 27 AUGUST 2003

09:00 – 13:30

**SESSION F:  
EXPERIENCE FEEDBACK OF SEISMIC  
EVALUATION AND UPGRADES**

**Chair:** V.V. Kostarev, Russian Federation  
**Co-Chair:** M.K. Ravindra, USA

<i>No. of Paper IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
51 Invited	<b>T. Katona</b>	Hungary	The seismic upgrading of Paks NPP
52 Invited	<b>A.J. Murphy</b>	USA	Seismic re-evaluation of US NPPs and implications for other US nuclear facilities
53 Invited	<b>S. Kawahara</b> K. Takashima	Japan	An example of Japanese practice of seismic re-evaluation of an NPP
54 Invited	<b>N. Simos</b> K. Perkins J. Ramsey	USA	On the significance of International Synergy in addressing safety at existing nuclear reactor facilities. Is Armenia NPP a success story?

11:00 – 12:30 *Poster Presentations*

<i>No. of Poster IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Poster</i>
39P	<b>A. Altinyollar</b> A.M. Köyliüoglu T. Ösdemir E. Kaya	Turkey	Seismic assessment and upgrading of TR-2 research reactor building
06P	<b>A. Blahoianu</b> R. Lojk	Canada	Seismic assessment of “early built” NPPs – A challenge for the regulator
09P	<b>A.G. Chhatre</b> S. Gupta U.P. Singh K. Giridhar S.D. Bhawsar A. Samota S.M. Ingole K.B. Dixit S.A. Bhardwaj	India	Seismic re-evaluation of Tarapur Atomic Power Plant 1 & 2

16P	<b>I. Kaliberda</b>	Russian Federation	Some results of NPP seismic stability assurance in Russia and overview of actual tasks
17P	<b>S.B. Khlabytov</b>	Russian Federation	Development of anti-seismic designing normative base of Russia
40P	<b>V. Louche</b> M.K. Ravindra W.H. Tong	France	Seismic assessment of French Nuclear Power Plants
20P	<b>N. Orbovic</b> M. Bouchon	France	Seismic assessment of existing nuclear facilities: a case study
21P	<b>N. Orbovic</b> B. Stojadinovic M. Bouchon J.T. Wiley	France USA France USA	Static and dynamic evaluation of an existing nuclear facility reinforced concrete frame structure
25P	<b>G. Rabbani</b> A. Jalil M. Moslem Uddin	Bangladesh	Seismic safety of nuclear facilities in Bangladesh in the light of recent global re-evaluation
34P	<b>P. Zadoyan</b> V. Nersesyan	Armenia	Seismic upgrading programme implementation status at the Armenian NPP

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12:30 – 13:30 *Discussion*

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*Afternoon Free*

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THURSDAY, 28 AUGUST 2003

09:00 – 12:00

**SESSION G:**

**PREPARATION IN CASE OF A SEISMIC EVENT**

**Chair:**

**P. Sollogoub, France**

**Co-Chair:**

**A. Godoy, Argentina**

<i>No. of Paper IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
55 Invited	<b>G.F. Panza</b> A. Peresan A.I. Gorshkov A. Aoudia	Italy Italy Russian Federation Italy	Earthquake preparedness: the contribution of deterministic hazard and earthquake prediction research
56 Invited	<b>J.-D. Renard</b>	Belgium	Procedures and actions in case of earthquake: some practical aspects of their implementation for existing NPPs
<i>10:00 – 11:00 Poster Presentations</i>			
<i>No. of Poster IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Poster</i>
31P	<b>A. Uribe-Carvajal</b> S. Fernandez-Ramirez	Mexico	Ground shaking scenario for the Laguna Verde, Mexico P.P.
02P	<b>P. Acevedo</b> A. Godoy J. Colombetti	Argentina	Calibration process and initial operation experience of seismic instrumentation system at Embalse NPP
30P	<b>I. Tasič</b> R. Vidrih M. Godec A. Gosar P. Sinčič M. Živčič	Slovenia	The seismic network around the Krsko NPP
32P	<b>G.I. Varbanov</b> M. Kostov	Bulgaria	Seismic monitoring system of Unit 6, Kozloduy NPP
<i>11:00 – 12:00 Discussion</i>			
<i>12:00 – 13:30 Lunch Break</i>			

**13:30 – 17:00**

**SESSION H:  
RESEARCH AND DEVELOPMENT**

**Chair:**

**Y. Kitada, Japan**

**Co-Chair:**

**M. Elgohary, Canada**

<i>No. of Paper IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
57 Invited	<b>M. Bouchon</b> <b>J.-P. Touret</b>	France France	Results of R&D programmes in France on seismic behaviour of shear walls
58 Invited	<b>P. Labbé</b>	IAEA	The IAEA Co-ordinated Research Programme on “Safety significance of near field earthquakes”

**14:30 – 16:00**    **Poster Presentations**

<i>No. of Poster IAEA-CN-106/</i>	<i>Author(s)</i>	<i>Designating Member State/Organization</i>	<i>Title of Poster</i>
07P	<b>M. Bouchon</b> N. Orbovic B. Fouré	France	Tests on reinforced concrete low-rise shear walls under static cyclic
36P	<b>Y. Kitada</b> K. Kusama S. Oguri	Japan	Ultimate seismic loading test on RC shear wall by applying multi-axes dynamic loads
37P	<b>V.V. Kostarev</b> A. Petrenko P. Vasilyev A. Birbraer	Russian Federation	A new method for essential reduction of seismic loads on NPP’s structure, systems and components
22P	<b>A. Paskalov</b>	The Former Yugoslav Republic of Macedonia	Deterministic and probabilistic floor response spectra
24P	<b>A.V. Petrenko</b> A. Birbraer	Russian Federation	Effect of strong correlation between response seismic accelerations and its importance for evaluating of general equipment for reactor building
27P	<b>Jeong-Moon Seo</b> I.-K. Choi Y.-S. Choun J.-R. Lee	Republic of Korea	Consideration of high frequency ground motion effects on the seismic fragility of NPP components

26P	<b>Jeong-Moon Seo</b> I.-K. Choi Y.-S. Choun J.-R. Lee	Republic of Korea	A preliminary study on the seismic fragility of NPP components considering ground motions rich in high frequency contents
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*16:00 – 17:00*     *Discussion*

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