



European Nuclear Education Network Association
ENEN PhD Event 2008
International Youth Nuclear Congress 2008 in Interlaken, Switzerland, 23 September 2008

Summary report by the Secretariat

1 ENEN PhD Event

The ENEN PhD Event has been organized since 2007 with the objective to provide an opportunity for PhD students to present their work in an international forum and foster good relationship between students and professionals in the field.

The 1st ENEN PhD Event was held in conjunction with the International Youth Conference on Energetics (IYCE 2007) in Budapest, Hungary, 1 June 2007. The selected 12 PhD students presented their research and three were awarded the ENEN Prize.

In 2008 14 PhD students were selected from 11 European countries, and 13 presentations were provided as a competition. Three ENEN Prizes were given during the Award Ceremony of IYNC 2008 in 25 September 2008.

The members of the Jury of the Event 2008 are:

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|---------------------------------|---|---------|-------|
| - Emilio Minguez ¹ , | Universidad Politecnica de Madrid | Spain | CHAIR |
| - Joseph Safieh | CEA/INSTN | France | |
| - Philip Beeley | HMS Sultan | UK | |
| - Michel Giot ² | SCKCEN | Belgium | |
| - Anselm Schaefer | Institute for Safety and Reliability | Germany | |
| - Bruno Panella ³ | Pisa University for the Italian Consortium CIRTEN | Italy | |
| - Csaba Sukosd | Budapest University of Technology and Economics | Hungary | |
| - Petre Ghitescu ⁴ | University Politécnica Bucarest | Romania | |

The Event 2008 was supported by the European Commission Joint Research Centre.

2 Final program

8h-10h Session 1 Chair: Prof. Michel Giot

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- ¹ Present at the Event on 23 September 2008
² Present at the Event on 23 September 2008
³ Present at the Event on 23 September 2008
⁴ Present at the Event on 23 September 2008

Vasily Simutkin

- Division of Applied Nuclear Physics, Department of Physics and Astronomy, Uppsala University, Sweden
- Paper title “Measurement of Fragment Mass Distributions in Neutron-Induced Fission of U238 and Th232 at Intermediate Energies”

Zsuzsanna Mácsik

- Institute of Nuclear Techniques, Budapest University of Technology and Economics, Hungary
- Paper title “Development of Radioanalytical and Microanalytical Procedures for the Determination of Actinides in Environmental Samples”, *Zsuzsanna Mácsik, Nóra Vajda, Balázs Bene, Zsolt Varga*

Juan Andrés Lozano Montero

- Universidad Politécnica de Madrid, Spain
- Paper title “Development of an Analytic Nodal Difusión Solver in Multigroups for 3D Reactor Cores with Rectangular or Hexagonal Assemblies”, *Juan Andrés Lozano, José María, Aragonés, Nuria García-Herranz*

Marion Lenoir

- CEA(Commissariat à l'énergie atomique), Marcoule/DEN/DTCD/SECM/ / Laboratoire d'étude et de Développement de Matrices de Conditionnement
- Paper title “Sulphate Incorporation in Borosilicate Glasses and Melts: a Kinetic Approach”, *M. Lenoir, A. Grandjean, J.L. Dussossoy, D.R. Neuville*

10h-10h30

Break

10h30-12h30

Session 2

Chair: Prof. Emilio Minguez

Ondrej Benes

- PhD student at Institute of Chemical Technology Prague, Czech Republic
- Working at European Commission Joint Research Centre, Institute for Transuranium Elements in Karlsruhe, Germany
- Paper title “A Thermodynamic Model for the Fuel of a Molten Salt Actinide Burner”

Eleonora Bomboni

- Department of Mechanical Nuclear and Production Engineering, University of Pisa, Italy
- Paper title “New Developments in Actinides Burning with Symbiotic LWR-HTR-GCFR Fuel Cycles”

Benoit Prabel⁵

- DEN/DM2S/SEMT, CEA Saclay (Commissariat à l'énergie atomique), France
- Paper title “Predictive Modelling of Brittle Crack Propagation in Ferritic Steel with the X-FEM”, *Benoit Prabel, Stéphane Marie, Alain Combescure*

Björn Becker

- Institute of Nuclear Technology and Energy Systems, University of Stuttgart, Germany
- Institute for Reactor Safety (IRS), Forschungszentrum Karlsruhe (FZK)
- Paper title “A Stochastic Proof of the Resonant Scattering Kernel and its Application for Gen IV Reactors Type”, *B. Becker, R. Dagan, C.H.M. Broeders, G. Lohnert*

12h30-13h50

Lunch

13h50-15h20

Session 3

Chair: Prof. Bruno Panella

Fernando Sordo Balbín

- Universidad Politecnica de Madrid, Spain

⁵ Benoit Prabel cancelled his presentation due to a problem in his train ticket reservation.

- Paper title “Development of Nucle Design Criteria for Neutron Spallation Sources”, *F. Sordo, A. Abánades*

Inge Uytendhouwen

- Nuclear Material Science (NMS), SCKCEN (Belgium Nuclear Research Centre), Belgium
- Paper title “Plasma Wall Interaction Phenomena on Tungsten Armour Materials for Fusion Applications”, *I. Uytendhouwen, V. Massaut, G. Van Oost*

Wassim Khamakhen

- DER/SPRC Cadarache Center, CEA (Commissariat à l’énergie atomique), France
- Paper title “Uncertainty Evaluation of Reactivity Coefficients for a large advanced SFR Core Design“, *Wassim Khamakhen, Gérald Rimpault1*

15h40-16h10

Break

16h10-17h40

Session 4

Chair: Prof. Petre Ghitescu

Davide Bertolotto

- Laboratory for Reactor Physics and Systems Behavior (LRS) at the Paul Scherrer Institute (PSI), Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland
- Paper title “CFD Simulations of a Single-phase Mixing Experiment”, *Davide Bertolotto (1, 2) Annalisa Manera Horst-Michael Prasser(1, 3) Rakesh Chawla(1, 2)*

Donna McKendrick

- Institute of Particle Science and Engineering, School of Process, Environmental and Materials Engineering, University Leeds, UK
- Working at HMS Sultan, UK
- Paper title “Physical Modelling of Axisymmetric Turbulent Impinging Jets as used within the Nuclear Industry for Mobilisation of Sludges”, *D. McKendrick1, S. R. Biggs1, M. Fairweather1 and D. Rhodes*

Stanislav Sojak

- Faculty of Electrical Engineering and Information Technology, Slovak University of Technology, Slovakia
- Paper title “Application of the Positron Annihilation Spectroscopy for Chromium Effect Investigation in Binary Fe-Cr Alloys”, *S. Sojak, V Kršjak, V. Slugeň, S. Stanček, M. Petriska, K. Vitázek, M. Stacho*

3 Laureates of the ENEN PhD Prizes

The Jury evaluated the paper, the presentation (20 min) and discussion (10 min) submitted by each presenter and chose three equal laureates as follows:

- Inge Uytendhouwen (Belgium)
- Juan Andrés Lozano Montero (Spain)
- Zsuzsanna Mácsik (Hungary)

The ENEN Prizes were given, on behalf of the ENEN, by the IYNC 2008 organizer during the IYNC 2008 Award Ceremony on 25 September 2008.

The prize entitles the laureate to participate on behalf and with the sponsorship of the ENEN Association to either the International Youth Conference on Energetics in Budapest, Hungary, in May 2009, or the FISA – 2009 Conference “EURATOM Research and Training in Reactor Systems” in Prague, Czech, 22-24 June 2009.