



ECCE-GSCE-WCCE International Conference Seismics-2014

“Seismic design and rehabilitation of buildings”

May 29-30, 2014

Georgia, Tbilisi,

Organizers:

European Council of Civil Engineers (ECCE)

Georgian Society of Civil Engineers (GSCE)

World Council of Civil Engineers (WCCE)

Ministry of Regional Development and Infrastructure of Georgia

Conference program

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Thursday, 29th May 2014

Venue: G. Nikoladze Auditorium, Administrative building of GTU

8.00–8.50 Registration

9.00 – Opening Ceremony

Chair: Acad. Archill Prangishvili – Rector of Georgian Technical University

Welcome speeches:

- President of Georgian Society of Civil Engineers – Iuri Svanidze
- President of the European Council of Civil Engineers – Prof. Fernando Branco
- President of the World Council of Civil Engineers – Mr. Tomas Sancho

9.30 – “Antiseismic Policy of Greece”

Prof^a. Evangelia-Linda Pelli (Europ. Cent. for Prevention and Forecasts of Earthquakes)

10.15 – “Seismic Risk Mitigation Studies. The Portuguese Experience”

Prof. Alfredo Campos Costa (National Laboratory for Civil Engineering)

11.00 – Discussion

11.15 – Coffee break

11.30 – “Seismic Behavior of Buildings”

Prof. Peter Fajfar (Univ. of Ljubljana)

12.15 – Discussion

12.30 – Lunch

14.30 – “The EUROCODE 8 – Applications to Buildings and Bridges”

Prof. João Azevedo (IST - Univ. of Lisbon)

15.15 – **“To unified system of equations of continuum mechanics and some mathematical problems in seismology”**

T. Vashakmadze, Iv. Javakhishvili Tbilisi State University, Georgia

15.30 **“Improvement of buildings seismic resistance by application of seismic insulation”**

A.Sokhadze, M. Bediashvili (Georgian Technical University)

16.00 – Discussion

16.15 – Coffee break

16.30 – **“Modeling aspects of wave generation processes in reservoirs under seismic action”.**

T. Gvelesiani, G. Berdzenashvili, G. Jinjikhashvili, Georgian Technical University, Tbilisi, Georgia; The Israel Electric Corporation Ltd, Haifa, Israel

16.45 – **“Oscillation properties of tsunami type waves due to an earthquake in reservoirs”**

T. Gvelesiani, T.Chelidze, G.Jinjikhashvili; Georgian Technical University, Tbilisi, Georgia; European Center “Geodynamical Hazards of High Dams”, Tbilisi, Georgia; The Israel Electric Corporation Ltd, Haifa, Israel.

17.00 – **“Development of low-rise energy-efficient construction in Ukraine”**

Savytskyi M., Iurchenko Iev., Koval O., Babenko M, State Higher Educational Institution "Dniepropetrovsk`s State Academy of Civil Engineering and Architecture", Dniepropetrovsk, Ukraine

17.15 – **“Super-plasticizers in Technology of Manufacturing of Energy-Saving Aerated-Sandwich Articles”**

Z. Karumidze, M. Turdzeladze, Georgian Technical University

17.30 – **“Loss Estimation Modeling for Earthquake Scenarios”**

N. Tsereteli, V. Alania, O. Varazanashvili, V. Arabidze, T. Mukhadze, T. Gugeshashvili, E. Tsereteli, Institute of Geophysics of TSU,

Agricultural University of Georgia, Levan Samkharauli National Forensics Bureau, Institute of Geography of TSU, Tbilisi, Georgia

17.45 – “Problems of preservation-modernization of urban housing stock and reliability of existing building structural systems in conditions of increased seismicity of territory of Georgia”

N. Edisherashvili, R. Kakhidze, O. Tsitsilashvili, Batumi Shota Rustaveli State University

18.00 – “Design and construction of tower cantilever seismic resistance steel framework system”

N. Edisherashvili, Georgian Aviation University

18.15 - Closure

Friday, 30th May 2014

AGENDA

9.00 – **"Seismic Structural Consolidation of Historical and Monumental Buildings Using FRP and the Most Recent Technologies"**

Prof. Andrea Giannantoni (Univ. of Ferrara, Italy)

9.45 – **"Seismic Structural Consolidation of Historical and Monumental Buildings Using Steel: Interventions on Foundations and Elevations"**

Prof. Massimo Mariani (Univ. of Perugia)

10.30 – Discussion

11.00 – Coffee break

11.30- ***"Changes in Seismic Response due to Ground Surface Subsidence in Mexico City"*** Prof. Raúl Aguilar Becerril (Univ. Iberoamericana, Mexico)

12.15 – Discussion

12.30 – Lunch

- 14.30 – **“Seismic Rehabilitation of Reinforced Concrete Structures”**
Prof. Tugrul Tankut (Middle East Technical University, Ankara, Turkey)
- 15.15- **“Results of survey of prestressed concrete beams reinforced with basaltplastic bars”**
J. Gigineishvili, LTD “PROGRESI”, Tbilisi, Georgia
- 15.30 – **“Expert assessment of carrying capacity stiffening diaphragms carrying capacity under seismic impacts”**
V. Maksymenko, N. Maryenkov, Research Institute of Building Industry, Research Institute of Building Constructions, Kyiv, Ukraine
- 15.45 – **“Simulation of seismic action for Tbilisi city with local seismological particularities and site effects”**
P. Rekvava, K. Mdivani, Georgian National Association for Engineering Seismology and Earthquake Engineering, Tbilisi, Georgia
- 16.00 – Discussion
- 16.15 – Coffee break
- 16.30 – **“Details of large-panel buildings seismic analysis”**
Yu. Nemchynov, N. Maryenkov, A. Khavkin, K. Babik, State enterprise “State research institute of building constructions”, Kiev, Ukraine; V. Kolchunov, I. Yakovenko, T. Tugaj, National aviation university, Kiev, Ukraine
- 16.45 – **“The decrease of seismic forces for multistory reinforce concrete shear wall-frame buildings with application of seismic isolation”**
T.L. Dadayan, Kh.G. Vardanyan, Yerevan state university of architecture and construction, Yerevan, Republic of Armenia
- 17.00 – **“Estimation metro influence on structures adjacent buildings”**
M. Barabash, Institute of airports, National Aviation University

17.15 – **“Study of non-linear oscillation of tower buildings caused by pulse displacement of ground with consideration of physical non-linearity of material”**

G. Kipiani, M. Kalabegashvili, D. Tabatadze, Georgian Technical University

17.30 – **“Research of transverse vibrations of building as discrete-continual system with consideration of caused by shock effect pulse impacts (earthquake, blast, etc)”**

R. Tskvedadze, D. Jankarashvili, M. Nikoladze, D. Kipiani, Georgian Technical University

17.45 - **“Rikoti tunnel operational problems and seismic stability”**

M. Kalabegishvili, I.Gudjabidze, Z. Lebanidze, Georgian Technical University

18.00 - **“Reliability of ultimate load-carrying capacity of architectural monuments long term in seismically active regions” -**

G. Chanukvadze, National Agency for Cultural Heritage Protection of Georgia

18.15 – **“Perspectives of application of continuous and fiber basalt fiber for construction and rehabilitation of motor roads and airports runaways”**

J. Gigineishvili, LTD “PROGRESI”, Tbilisi, Georgia

Beliatinski A.A, Kraiushkina E.V. National Aviation University<amplt;br>Ukraine

18.30 – **“Sanation of panel buildings”**

R.A. Veselovski, J. Gigineishvili

18.45 – Closing ceremony

19. 00 – Closure

