Ilia Vekua – 100

IUTAM Symposium
23-27 April, 2007, Tbilisi

RELATION OF SHELL, PLATE, BEAM, AND 3D MODELS

Final Program

IU AM   IUTAM SYMPOSIUM
ON
RELATION OF SHELL, PLATE, BEAM,
AND 3D MODELS

Dedicated to Centenary of Ilia Vekua

Iv. Javakhishvili Tbilisi State University (TSU)
Faculty of Exact and Natural Sciences
I. Vekua Institute of Applied Mathematics (VIAM)
April 23 – 27, 2007, Tbilisi, Georgia

Final Program

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Ilia Tavkhelidze (TSU)
Tamaz Vashakmadze (TSU)

Monday, April 23

9^{00}-10^{00} **Registration**

10^{00}-11^{00} **Opening Ceremony** (VIAM, I.Vekua Lecture-Hall)
George Khubua (Rector of Iv.Javakhishvili Tbilisi State University, Georgia)
Natia Jokhadze (Acting Director of the Georgian National Science Foundation, Georgia)
Dick H. Van Campen (IUTAM Secretary-General, Netherlands)

11^{00}-11^{45} **Opening Lecture**
Bojarski Bogdan (Poland)
Life and scientific activity of Ilia Vekua

Lunch

14^{30}-15^{30} **Meeting with the President of the Georgian Academy of Sciences**

16^{00}-17^{00} **Visit to Mtatsminda Pantheon**

18^{00} **Jubilee Session (Rustaveli State Theatre)**
20^{30} **Reception by the Ministry of Education and Science (Palace of Youth)**

Tuesday, April 24

VIAM, Room of Seminars

10^{00}-11^{30} **Mang, Herbert A.; Aigner E.; Lackner R.; Eberhardsteiner J.; Piegl M.; Wistuba M.; Blab R. (Austria)**
Multiscale assessment of low-temperature performance of flexible pavements

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10^{35}-11^{05} Aghalovyan, Lenser A. (Armenia)
An asymptotic method of solving three-dimensional boundary value problems of statics and dynamics of thin bodies

11^{10}-11^{40} <u>Altenbach, Holm</u>; Johannes, Meenen (Germany)
On the different possibilities to derive plate and shell theories

Coffee Break

11^{55}-12^{25} Bagdoev, Alexander; <u>Safaryan, Yuri</u> (Armenia)
3D investigation of bending free vibrations in ferromagnetic rectangular free supported plates

12^{30}-13^{00} Birsan, Mircea (Romania)
Recent developments in the theory of Cosserat elastic shells and applications

13^{05}-13^{35} Duduchava, Roland (Georgia)
Partial differential equations on hypersurfaces and shell theory

Lunch

15^{00}-15^{30} Chipot, Michel (Switzerland)
On anisotropic singular perturbations problems

15^{35}-16^{05} Hansen, Jorn S. (Canada)
A hierachical beam and plate modelling theory based on homogenization

16^{10}-16^{40} Jaiani, George (Georgia)
Physical and mathematical moments and analysis of peculiarities of setting of boundary conditions for cusped shells and beams

Coffee Break

17^{00}-18^{00} Round Table

19^{30} Symposium Banquet

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Wednesday, April 25

10^{00} Excursion

Thursday, April 26

VIAM, Room of Seminars

10^{00}-11^{30} Belubekyan, Vagharshak (Armenia)
Stability of a rectangular plate with account of
transverse shear deformations
10^{35}-11^{05} Lorenzo, Freddi (Italy)
Variational dimension reduction in non linear
elasticity: a Young measure approach
11^{10}-11^{40} Meunargia, Tengiz (Georgia)
The method of a small parameter for I. Vekua's
nonlinear and nonshallow shell models

Coffee Break

**11^{55}-12^{25} Bagdoev, Alexander; Vardanyan, Anna;
Vardanyan, Sedrak (Armenia)**
The analytical and numerical investigation of free
bending vibrations of ferromagnetic cylindrical shell
by exact space treatment
12^{30}-13^{00} Chinchaladze, Natalia (Georgia)
Vibration of an elastic plate under action of an
incompressible fluid
13^{05}-13^{35} Gavrilova, Elena (Bulgaria)
Joint vibrations of a rectangular shell and gas in it

Lunch

15^{00}-15^{30} Kienzler, Reinhold; Bose D. K. (Germany)
Material conservation laws established within a
consistent plate theory

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15³⁵-16⁰⁵ <u>Oguamanam, Donatus C.D.</u>; McLean C.; Hansen Jorn S. (Canada)

The extension and application of the hierarchical beam theory to piezoelectrically actuated beams

16¹⁰-16⁴⁰ Shavlakadze, Nugzar (Georgia)

Problems of the mathematical theory of elasticity for plates with elastic inclusions

Coffee Break

17⁰⁰-18⁰⁰ Round Table

Friday, April 27

VIAM, Room of Seminars

10³⁵-11⁰⁵ Paroni, Roberto (Italy)

Thin walled elastic beams: a rigorous justification of vlasov theory

11¹⁰-11⁴⁰ <u>Schlebusch, Rainer</u>; Zastrau, Bernd (Germany)

On the simulation of textile reinforced concrete layers by a surface–related shell formulation

Coffee Break

11⁵⁵-12²⁵ Vashakmadze, Tamaz (Georgia)

On basic systems of equations of continuum mechanics and some mathematical problems for anisotropic thin-walled structures

12³⁰-13⁰⁰ Sheng Zhang (USA)

On the value of shear correction factor in beam, arch, plate and shell models

13⁰⁵-13³⁵ <u>Avalishvili, Mariam</u>; Avalishvili, Gia; Gordeziani, David (Georgia)

Hierarchical modeling of multistructures

Lunch

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15⁰⁰-15⁴⁵ Closing Lecture:

     Podio-Guidugli, Paolo (Italy)

     Validation of classical beam and plate models by variational convergence

15⁴⁵-16¹⁵ Closing Ceremony