

Professor Liviu Librescu Memorial Symposia

at the

TS2009: The 8th International Congress on Thermal Stresses

<http://thermalstresses.mechse.illinois.edu>



**Professor Liviu Librescu
(August 18, 1930 – April 16, 2007)**

**University of Illinois at Urbana-Champaign
May 31 - June 4, 2009**

Librescu Symposia Session # 1: PIEZO EFFECT

No.	Authors	Title of Contribution	Corresponding Author
1-1	A. Baghdasaryan, M. Belubekyan	The Problem of Reflection of Shear Wave from a Boundary of Piezoelectric Media of Class 6mm	M. Belubekyan, Professor, National Academy of Sciences, Institute of Mechanics, Yerevan, Armenia, mbelubekyan@yahoo.com armenb2000@yahoo.com
1-2	A. Elsayaf, F. Ashida, S. Sakata	Optimum Design of a Piezo-Composite Disk for Control of Thermal Stress	F. Ashida, Professor, Department of Electronic and Control System Engineerings, Shimane University, Japan ashida@ecs.shimane-u.ac.jp
1-3	T. Tauchert, F. Ashida	Least-Squares Residual Solution to an Inverse Problem of a Piezo-thermo-elastic Cylinder	T. Tauchert, Professor, Department of Mechanical Engineering, University of Kentucky, USA tauchert@engr.uky.edu
1-4	N. Sumi	Thermal, Electrical and Mechanical Response of a Piezoceramic Thin Film with Damping	N. Sumi, Professor, Faculty of Education, Shizuoka University, Shizuoka, Japan einsumi@ipc.shizuoka.ac.jp
1-5	G. F. Abdelal and Z. Gurdal	Transient Heat Conduction of Variable Stiffness Composite Laminate	Dr. Gasser Farouk Abdelal, Research Assistant Professor, Aerospace Structures, Faculty of Aerospace Engineering Delft University of Technology, Netherlands G.F.AbdelalGamaz@TUDelft.nl

Librescu Symposia Session # 2: THERMAL STRESSES # 1

2-1	C. K. Chao, C.K. Chen, F. M. Chen	Thermoelastic Interaction between a Point Heat Source and a Coated Elliptic Hole	C.K. Chao, Professor, Department of Mechanical Engineering, National Taiwan University of Science and Technology, 43 Keelung Road, Section 4, Taipei, Taiwan, ckchao@mail.ntust.edu.tw
2-2	T. Hata	Thermal Stress-Focusing Effect Following Dynamically Transforming Strains in a Cylindrical Zirconia Inclusion	T. Hata, Professor, Department of Engineering Education, Faculty of Education, Shizuoka University, Japan toshhata@silk.ocn.ne.jp
2-3	T.-C. Chen, C.-H. Ho, J.-C. Lin, L.-W. Wu	Thermal Stress of Strip in Preheating Furnace of Continuous Annealing Line (CAL)	Tei-Chen Chen, Professor Department of Mechanical Engineering National Cheng Kung University Tainan 701, Taiwan, ROC. ctcx831@mail.ncku.edu.tw
2-4	V. Meleshko, Y. Tokovyy	Thermal stresses in a finite elastic cylinder	Y. Tokovyy, Professor, Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, Ukraine, Department of Mechanical Engineering, National Taiwan University, Taiwan, R.O.C., tokovyy@gmail.com
2-5	Y. Tokovyy, C.-C. Ma	Thermal stresses in a rectangle under sliding built-in support of opposite sides	Y. Tokovyy, Pidstryhach Institute for Applied Problems of Mechanics and Mathematics, Ukraine, Department of Mechanical Engineering, National Taiwan University, Taiwan, R.O.C., tokovyy@gmail.com

Librescu Symposia Session # 3: BUCKLING AND STABILITY

3-1	H. Hilton	Attenuation of thermal creep buckling of columns through designer viscoelastic material properties and tailored servo-controls	Harry H. Hilton, Professor Emeritus of Aerospace Engineering, Aerospace Engineering Department (AE) University of Illinois at Urbana-Champaign 104 S. Wright Street, 316 TALBOT LAB., MC-236, Urbana, IL 61801-2935 USA h-hilton@illinois.edu
3-2	G.Y. Baghdasaryan, M.A. Mikilyan, P. Marzocca	Thermo-elastic stability of superconductive shell in a homogeneous magnetic field	M.A. Mikilyan, Research Scientist, Armenia Academy of Sciences, Yerevan, Armenia, mmikilyan@web.am
3-3	D.J. Hasanyan	Thermal instability of MEMS under the influence of magnetic field accounting of Casimir forces	D. Hasanyan, Visiting Professor, University of South Carolina, davreshh@yahoo.com
3-4	D. Weichert	Limit States of Structures Under Thermo-mechanical Loads	Dieter Weichert, Univ.-Prof. Dr.-Ing. Director, Institute of General Mechanics Aachen University of Technology Templergraben 64, D-52056 AACHEN Germany, weichert@iam.rwth-aachen.de
3-5	N. Rizzi, V. Varano	Flexural-torsional postbuckling behaviour of thin-walled frames	Nicola Rizzi, Professor, Università degli Studi Roma Tre, Roma Italia, nlr@uniroma3.it
3-6	In Lee, Eun-Ho Kim and J.-H. Roh	Thermal buckling and deformation of aerospace structures and their improvement with shape memory alloys	In Lee, Professor & Doctor, Department of Aerospace Engineering, Korea Advanced Institute of Science & Technology (KAIST) Yuseong-gu, Daejeon 305-701, Korea (Tel) +82-42-350-3717 (E-mail) inlee@kaist.ac.kr

Librescu Symposia Session # 4: THERMAL STRESSES # 2

4-1	A. Szekeres, P. Elesztos, E. Enikov	Thermal Stresses (TS), Thermomechanics (TM), and Thermo-Hygro-Mechanics (THM)	A. Szekeres, Professor, Dept. Applied Mechanics, Technical University Budapest BUDAPEST, HUNGARY, szekeres@mm.bme.hu
4-2	R.V. Goldstein and V.A. Pinsker	Uncoupled quasi-steady thermoelastic stresses in semi-space heated by surface point-like heat source	R.V. Goldstein, Professor, Institute for Problems in Mechanics, Russian Academy of Science, Moscow, Prospect Vernadskogo, 101, Moscow, 117526, Russia goldst@ipmnet.ru
4-3	R. Sturm, J. Grum	Residual Stresses after Laser Surface Remelting as a Function of Microstructure Constituents	J. Grum, Professor, Faculty of Mechanical Engineering, Aškerčeva 6, SI-1000 Ljubljana, Janez.Grum@fs.uni-lj.si
4-4	T. Yang S. Huang Runzhe, Y. Tao Ren	Analysis of Thermal Expansion and Stresses of a Steam Turbine Cylinder	Shuhong Huang, Professor, School of Energy and Power Engineering, Huazhong University of Science and Technology, Wuhan, 430074 P.R.China renfu.li@me.gatech.edu

Librescu Symposia Session # 5: DELAMINATION, FIBER REINFORCED MATERIALS

5-1	A. Tylikowski	Influence of delaminations on critical speed of rotating shafts with thermoactive fibers	A. Tylikowski, Professor, Warsaw University of Technology, Institute of Machine Design Fundamentals, Poland, alicjakst@neostrada.pl
5-2	H. Suemasu	Debonding between Liner and FW Layer of Cryogenic Composite Pressure Vessel	Hiroshi Suemasu, Professor, Department of Mechanical Engineering Sophia University, 7-1 Kioicho Chiyodaku, Tokyo 102-8554, Japan, suemasu@sophia.ac.jp
5-3	Kostas Soldatos	On forming flows of fibre-reinforced resins reinforced by fibres resistant in bending	Kostas Soldatos, Professor, Theoretical Mechanics, University of Nottingham, Nottingham NG7 2RD, UK, etzkps@maths.nottingham.ac.uk

Librescu Symposia Session # 6: FRACTURE, ELASTOVISCOPLASTICITY AND COLLISIONS

6-1	R. Li, G. Kardomateas	Characteristics of Thermal Fracture in Composite Structures	G. Kardomateas, Professor, School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, GA 30332-0150. george.kardomateas@aerospace.gatech.edu , renfu.li@me.gatech.edu
6-2	Robert A. Arutyunyan	Thermodynamic formulation of fracture criterion for heterogeneous materials	Robert A. Arutyunyan, Chief Research Fellow, Professor, Universitetskii pr.28, Institute of Mathematics and Mechanics (NIIMM) Sankt-Petersburg State University, Petrodvoretz, Sankt-Petersburg, Russia, 198504 Robert.Arutyunyan@paloma.spbu.ru
6-3	R. Heuer	Thermally induced vibrations of linear elastic structures with spatial local nonlinearities	Dr. Rudolf Heuer, Associate Professor Vienna University of Technology, CMSD-Center of Mechanics and Structural Dynamics at the Institute for Building Construction and Technology Karlsplatz 13 / E2063, A-1040 Vienna Austria, rh@allmech.tuwien.ac.at
6-4	H. Khatam, M.-J. Pindera	Elastic-plastic response of periodic multilayers with wavy architectures subjected to thermal cycling	Marek-Jerzy Pindera, Professor of Applied Mechanics, Civil Engineering Department University of Virginia, Charlottesville, VA 22904, mp3g@virginia.edu
6-5	L. Abbas, P. Marzocca, M. Abdalla	Aero-thermo-visco-elastic Modeling of Imperfect Cylindrical Shells	Pier Marzocca, Associate Professor - Clarkson University, MAE Dept. 8 Clarkson Ave, CAMP 234, Potsdam, New York 13699-5725, pmarzocc@clarkson.edu
6-6	Yu.A. Rossikhin, M.V. Shitikova, V.V. Shitikov	Analysis of the Thermo-Elastic Rod Collision with a Heated Wall via D'Alembert's Solution in the case of Coupled Thermo-Elasticity	M.V. Shitikova, Professor, Yu.A. Rossikhin, Professor, Department of Theoretical Mechanics, Voronezh State University of Architecture and Civil Engineering, Russia shitikova@vmail.ru

Librescu Symposia Session # 7: FUNCTIONALLY GRADED STRUCTURES

7-1	M. Haupt, R. Niesner, P. Horst	Thermal-Mechanical Analysis of Functional Graded Plates Subjected to Hypersonic Flow Conditions	Matthias Haupt, Dr.-Ing., Institut fuer Flugzeugbau und Leichtbau Technische Universität Braunschweig, Hermann-Blenk-Str. 35, m.haupt@tu-bs.de
7-2	M.A.A. Cavalcante, S.P. C. Marques, M.-J. Pindera	Transient thermo-mechanical analysis of a graded cylinder by the parametric finite-volume theory	Marek-Jerzy Pindera, Professor of Applied Mechanics, Civil Engineering Department University of Virginia, Charlottesville, VA 22904, mp3g@virginia.edu
7-3	M. C. Dökmeci, G. Altay	Thin Shell Equations for a Functionally graded Piezoelectromagnetic Material	M. C. Dökmeci, Professor, Istanbul Technical University, P.K.9, Gümüşsuyu, 34437 Istanbul, Turkey, dokmeci@itu.edu.tr
7-4	S.A. Fazelzadeh, M. Hosseini	Nonlinear Analysis of Aero-thermo-elastic Functionally Graded Curved-Panel	A. Fazelzadeh, Professor, Department of Mechanical Engineering, School of Engineering Shiraz University, Shiraz, I.R. Iran, Fazelzad@Shirazu.ac.ir

Librescu Symposia Session # 8: FRICTION AND INCLUSIONS

8-1	Avetik V. Sahakyan	The influence of friction heat generation on the contact stress distribution between uniformly moving punch and elastic half-space	Dr. Avetik V. Sahakyan, Professor, Institute of Mechanics, Armenian Academy of Sciences, Yerevan, Armenia avsahakyan@gmail.com
8-2	S.M.Mkhitaryan, S.V.Verlinski, D. Aidun, P. Marzocca	Thermal stresses of joined semi-infinite homogeneous elastic plates with collinear system of inclusions	S.V. Verlinski, Associate Professor, Institute of Mechanic of National Academy of Sciences of Republic of Armenia aper2003@rambler.ru
8-3	S.M.Mkhitaryan, L.A.Shekyan, D. Aidun, P. Marzocca	Thermo-elastic modeling of joined semi-infinite homogeneous solids with circular inclusion due to a steady-heat source	S.V. Verlinski, Associate Professor, Institute of Mechanic of National Academy of Sciences of Republic of Armenia, aper2003@rambler.ru

Librescu Symposia Session # 9: MAGNETIC EFFECTS AND WELDING

9-1	M. Marin	Basic results in Elasticity of Dipolar Bodies with Stretch	Professor M. Marin, Dept. of Mathematics University of Brasov, Romania m.marin@unitbv.ro
9-2	M. Sutton, D.J. Hasanyan, X. Deng, A. G. Kamalyan	Existence and uniqueness of the solution of magneto-thermo-elastic plate	D. Hasanyan, Visiting Professor, University of South Carolina, davreshh@yahoo.com
9-3	S.H. Sargsyan, L.S. Sargsyan	Magnetoelasticity of Thin Elastic Shells and Plates on the basis of Asymmetrical Theory of Elasticity	S.H. Sargsyan, Professor, Gyumri State Pedagogical Institute, Yerevan, Armenia. slusin@yahoo.com
9-4	E. Bidzinska, Marek Sikon	Thermal couple nano-stresses effect to magnetic resonance - proposal to experimental analysis of the Cosserats medium	Marek Sikon, Professor, Cracow University of Technology, Wydział Mechaniczny, Al. Jana Pawła II/37, 51-863 Kraków, Poland, sikon@mech.pk.edu.pl
9-5	W.F. Faris, H.M. Mohammed, M.I. Ahmed, C.H. Ling	An Investigation of The Mechanical Behavior of Beams under Thermal and Electrostatic loading Including Cryogenic Effect	W.F. Faris, Director, Department of Mechanical Engineering, Faculty of Engineering, International Islamic University Malaysia, P.O. Box 10, 50728 Kuala Lumpur, Malaysia, waleed@iiu.edu.my
9-6	K. Li, D. Aidun, P. Marzocca	Numerical Investigation of the Heat Flow in Friction Stir Welding Process	Pier Marzocca, Associate Professor, Clarkson University, Mechanical and Aeronautical Engineering Dept. 8 Clarkson Ave, CAMP 234, Potsdam, New York 13699-5725, pmarzocc@clarkson.edu

Librescu Symposia Session # 10: THERMAL DAMAGE AND WAVES

10-1	K. Ghazaryan, R. Ghazaryan	On Bending Waves in an Electro-conductive Elastic Plate	K. Ghazaryan and R. Ghazaryan Institute of Mechanics, National Academy of Sciences, Armenia, ghkarren@gmail.com
10-2	W. Lv, K. Wang, S. Huang, L. Zhang	FEM Simulation on Damaging Process of Alloy 30Cr2Mo1V's Standard High Temperature Low Cycle Fatigue Testing	Kun Wang, Professor, School of Energy and Power Engineering, Huazhong Univ. of Sci. & Tech., P.R.China, renfu.li@me.gatech.edu
10-3	R. Bhattacharyya	Mean wave propagation in the thermoelastic non-simple material with memory	Rabindra Kumar Bhattacharyya, Professor Department of Applied Mathematics Calcutta University, Calcutta 700009, India. rabindrakb@yahoo.com
10-4	S. Das	Elastodynamic Response of Cracked Orthotropic Strip Under Impact Loading	Subir Das, Reader, Department of Applied Mathematics, Institute of Technology, Banaras Hindu University, Varanasi - 221 005 , INDIA. subir_das08@hotmail.com