

IFMASS 9 Programme

Send to one of the following addresses:



Professor Stojan Sedmak

Chief-Organiser of Balkan Summer Schools
IFMASS and IFMASS 9

Institute for Material Testing

Society for Structural Integrity and Life- DIVK
Bulevar vojvode Mišića 43
11000 Belgrade, Serbia and Montenegro



Professor Stefan Vodenitcharov

Organiser of IFMASS 9

Institute of Metal Science,

Bulgarian Academy of Sciences
67 Shipchenski Prohod Str., 1574 Sofia,
Bulgaria



Professor Donka Angelova

Organiser of IFMASS 9

University of Chemical Technology and
Metallurgy

8 Kliment Ohridski Blvd., 1756 Sofia,
Bulgaria

	Lecture	Lecturer
	A. Fundamentals	
1	Crack problems in structures	S. Sedmak
2	Basics of damage mechanics	D. Šumarac
3	Mathematical modelling of time-dependent fracture in advanced aerospace materials	M. Wnuk
4	Advanced structural steels	N. Radović
5	Micromechanical analysis in structural integrity assessment	M. Rakin A. Sedmak
6	Energy analysis of ΔK and ΔJ : fatigue - data presentations	D. Angelova
7	Fracture mechanics safety analysis in nuclear industry: from material properties to structural integrity	S. Vodenitcharov
8	Failure criteria based on the equivalent stress gradient	K. Hadjov
	B. Experiments and testing	
9	Residual stresses induced by welding	M. Zrilić
10	Crack problems in welded joints	K. Gerić
11	Significance of mechanical testing for structural integrity	V. Grabulov Z. Burzić
12	Testing for detection and evaluation of cracks	M. Kirić
13	Materials characterization and testing of soldered joints	B. Michel H. Walter
	C. Service problems	
14	Identification of damage in building structures using dynamical method	A. Baltov
15	Failure at elevated temperature	V. Šijački
16	Behaviour of welded structure at high temperature	B. Dogan B. Petrovski
17	Investigations on composite materials - reinforcement of steel-concrete structures	D. Dontchev K. Hadjov
18	Stress intensity factors and integrity assessment by strain gauges and photoelasticity	D. M. Constantinescu
	D. Structural integrity assessment	
19	Failure and damage in pipes	G. Pluvinage
20	Numerical analysis of welded structures for structural integrity assessment	A. Sedmak T. Maneski
21	Fracture mechanics for the "Fitness for purpose" evaluation of weldments	A. Schelev N. Lolov
22	Thermoelastic methodology for structural integrity assessment	L. Marşavina
23	Limit load calculation model of ductile failure of defective pipe and pressure vessel	I. Orynyak
24	Structural integrity assessment procedures and their application	G. Adžiev

Twenty fifth Anniversary of IFMASS



Society for Structural Integrity and Life



Bulgarian Academy of Sciences
Institute of Metal Science



University of Chemical Technology and Metallurgy - Sofia

under the auspice of
European Structural Integrity Society



organize

Ninth International Fracture Mechanics Summer School (IFMASS 9)

The Challenge of Materials and Weldments Structural Integrity and Life Assessments

from 19th to 23rd September 2005
in
GOLDEN SANDS (ZLATNI PJASÂCI)
Black Sea – Bulgaria

First Announcement

History and Perspectives – International Fracture Mechanics Summer Schools (IFMASS) began 25 years ago, in 1980, and were organised eight times, the most recent in 2003. Topical monographs were published in Serbian after each of the first seven Schools under the School titles, e.g. “Fracture Mechanics of Weldments” (IFMASS 3), “The Application of Fracture Mechanics to Life Estimation of Power Plant Components” (IFMASS 5), published in English by EMAS. The IFMASS 8 monograph “From Fracture Mechanics to Structural Integrity Assessment” was also published in English. Download is available at the website <http://divk.org.yu>

The number of participants ranged from 62 in the first School, up to 145 in IFMASS 5, and 107 in IFMASS 8. The IFMASS lecturers staff included more than 70 well known world experts, e.g.: P. Albrecht, M. Burdekin, D. Francois, H. Hoffmeister, I. Hrivnak, V. Ivanova, J. Landes, J. Joyce, H. MacHenry, A. Mazur, G. Pluvinaage, J. Radon, M. Ratwani, D. Read, K.H. Schwalbe, T. Siewert, R. Stephens, V. Troshchenko, M. Wnuk, including many lecturers from former Yugoslavia.

Two basic reasons for organising the Ninth International Fracture Mechanics Summer School (IFMASS 9) are:

- After a successful IFMASS 8, organised by DIVK in 2003 in Belgrade (Serbia) with 25 presented lectures and participants from Serbia & Montenegro, Bulgaria, Romania, Poland, Bosnia & Herzegovina, Macedonia, Slovenia, Croatia, Turkey and Albania, the extension of the School to other countries of South-Eastern Europe (SEE) will enable regular and fruitful gathering of experts in Structural Integrity in this region.

- In the SEE extended region, the annual organisation of IFMASS could attract significant number of **new young participants** and enable regional cooperation, strongly supported by the European Union these days.

New development during IFMASS had been considered by **WORKSHOP**. This time in IFMASS 9 the Workshop **New Trends in Fracture Mechanics Applications** includes nanomaterials, numerical analysis and welded structures, moderated by A. Schelev, H. Walter, G. Pluvinaage, and A. Sedmak.

Lecturers and Schedule – Lecturers from **Serbia** are mostly on lists of experienced lecturers from previous IFMASS's: Prof. Dr Katarina Gerić, Dr Vencislav Grabulov, Dr Miodrag Kirić, Prof. Dr Taško Maneski. Prof. Dr Nenad Radović, Dr Marko Rakin, Prof. Dr Aleksandar Sedmak, Prof. Dr Stojan Sedmak, Prof. Dr Vera Šijački-Žeravčić, Prof. Dr Dragoslav Šumarac, Dr Milorad Zrilić

The lecturers from **Bulgaria** are well known in materials science, welding and fracture mechanics: Prof. Dr Donka Angelova, Prof. Dr Angel Baltov, Dr D. Dontchev, Prof. Dr Kliment Hadjov, Prof. Dr Nikolay Lolov, Prof. Dr Aleksandar Schelev, Prof. Dr Stefan Vodenitcharov.

The list of lecturers is completed by invited experts in the field from **France**: Prof. Dr Guy Pluvinaage; **Germany**: Prof. Dr Bilal Dogan, Prof. Dr Blagoj Petrovski, Prof. Dr Bernd Michel, Dr Hans Walter; **Romania**: Dr Liviu Marşavina, Prof. Dr D. Constantinescu; **Ukraine**: Dr. I. Orynyak; **Macedonia**: G. Adžiev; **USA**: Prof. Michael Wnuk

IFMASS9 Schedule

	Monday	Tuesday	Wednesday	Thursday	Friday
	19.9.	20.9.	21.9.	22.9.	23.9.
8.30-10.10	Registration	2 lectures	2 lectures	2 lectures	2 lectures
10.30-12.12	Opening	Coffee	Coffee	Coffee	Coffee
12.15-13.15	2 lectures	2 lectures	2 lectures	2 lectures	2 lectures
13.30-14.30	Coffee		Lunch		Lunch
14.45-15.45	1 lecture		1 lecture		2 lectures
16.00-17.00	Lunch	Lunch	Bulgarian-side initiative for participants	Lunch	
17.15-18.15	2 lectures	Workshop		Workshop	Closing
18.30-19.30		Coffee		Coffee	
		Workshop		Workshop	
			Joint dinner		

IFMASS 9 will be held in Zlatni Pjasâci (Golden Sands) on the Black Sea coast, 20 km from Varna. Varna, the third largest city in Bulgaria, is 470 km east of Sofia and 530 km from the Serbian border. Good communication by air (international airport), railroad (daily trains Belgrade – Varna) and road (daily bus line Belgrade – Varna). Participants also can use very convenient arrangements offered by ARGUS TOURS, Belgrade, Balkanska 51, tel. +381 11 361 76 60

Information

Accommodation

IFMASS 9 lectures will be held in Golden Sands. For participants from Serbia the arrangement from 16th to 27th September is available with ARGUS TOURS. The arrangement includes two meals (breakfast and dinner), 9 overnights in a double bedroom, from 17th to 25th September, at prices from 120 to 200 EUR and bus transfer Belgrade – Hotel in Golden Sand and back, for 3.999,00 CSD (dinars), about 50 EUR. Other participants can also use the accommodation and meals at the same price with ARGUS TOURS or with its Bulgarian partner AQUAMARINE HOLDING-BULGARIAN VIP TOURS.

Registration

Registration fee is 80 EUR
for DIVK members 60 EUR and
for young researchers 40 EUR
Participants should apply before **JUNE 30th**

Contacts

More information is available at DIVK website

<http://divk.org.yu>

E-mail addresses:

ifmass9@divk.org.yu

donka@uctm.edu

acibulj@tmf.bg.ac.yu

dona_ang@techno-link.com

Registration Form

Name:.....

Affiliation and address:.....

E-mail:.....

Tel:.....

Fax:.....

Date

Signature