22nd European Conference on Fracture - ECF22

LOADING AND ENVIRONMENT EFFECTS ON STRUCTURAL INTEGRITY

26 – 31 August 2018.

and

SUMMER SCHOOL, 25–26 August 2018.

Belgrade, Serbia

www.ecf22.rs

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Word from the ECF22 Chairman and DIVK president

Over 600 abstracts have been accepted for ECF22, promising another successful ESIS event. All important topics Fracture Mechanics and Structural Integrity topics are covered, including number of mini-symposia, with many inspiring titles. Uploading of papers is now open, with an extended deadline, until 30th June. Proceedings will be published electronically, in a special edition of Procedia Structural Integrity and high quality papers, in their extended form, will be considered for publishing in special issues of ESIS associated journals (WoS), Engineering Fracture Mechanics, Engineering Failure Analysis, International Journal of Fatigue and Theoretical and Applied Fracture Mechanics, as well as DIVK Journal i.e. Structural Integrity and Life, indexed by SCOPUS and ESCI Thomson list.

Plenary lecturers are carefully chosen to cover the most attractive topics nowadays. The introductory lecture by Prof. James Rice will focus on a topic which affects us all, so its importance can not be overestimated. Anyhow, Belgrade is not in a critical earthquakes region, so we can promise only theoretical considerations!

Summer school is also ready to start, offering attractive topics and very attractive lecturers. We are proud to announce that Prof. James Rice will talk about J integral, on the occasion of the 50th anniversary of probably the most important paper in Fracture Mechanics history.

We are working hard, together with ESIS officials, to get as many young researchers as possible. Therefore, two special actions (ESIS support for researchers and ESIS/Elsevier young scientist award) are well taken care of. There will be 35 supported researchers, as promised, and strong competition for the best paper presented by young scientists, which will end with the special plenary session on Wednesday afternoon. Also, for the first time the best paper in Weldment Fracture Mechanics will be awarded by Dr. Galip Buyukyildirim, on the behalf of Turkish welding community, in memory of Prof. Stojan Sedmak, who was heart and soul of all Fracture Mechanics and Structural Integrity activities in exYugoslavia and later in Serbia ever since his Magister thesis in 1968 until his death in 2014. So, there is another 50th anniversary, his pioneering work in photoelasticity applied to solve Bowie's problem, to be honoured.

We will do our best to present Belgrade and Serbia in a way that you will not forget the last week in August 2018 and hopefully that you will wish to come back. Toward this aim many attractive events will be organized, starting with welcome reception on Sunday and Culture dinner on Monday, followed with sightseeing tours by boat on Tuesday and by bus on Wednesday, to end by the Conference dinner on Thursday. Well, not exactly an ending since out-of-town excursions will be organized every day during the conference, as well as one- or two-days tours afterwards.

Looking forward to seeing you in Belgrade!

Prof. dr. Aleksandar Sedmak

Main topics

Loading types
- static and quasi-static loading
- cyclic loading of variable amplitudes (high cycle-loading well below yield stress; low cycle loading after initial yielding)
- vibrations
- impact and earthquake loading
- combined loading

Environment
- corrosion
- high operating temperatures
- temperatures in the range of nil ductility transition (NDT) and below it
- combined environmental effects
- hydrogen embrittlement

Structures
- power plants
- process equipment in petrochemical industry
- welded structures
- civil engineering objects
- transportation

Materials
- metallic materials
- plastics
- ceramics
- composite materials
- nanomaterials

Proceedings and Publication

Abstracts will be published in the form of ECF22 e-book and available during the registration. Full papers will be published in Procedia Structural Integrity journal by Elsevier in the form of ECF22 Proceedings. Authors of selected papers will be invited to submit extended versions of papers for a special issue of “Engineering Fracture Mechanics”, “Engineering Failure Analysis”, “International Journal of Fatigue” or “Theoretical and Applied Fracture Mechanics”, as well as Structural Integrity and Life (DIVK Journal) journals.

ESIS Support for researchers
http://www.structuralintegrity.eu/site/pdf/ecf22/ESIS%20Support%20for%20Researchers%20Announcement.pdf

ESIS awards
http://www.structuralintegrity.eu/site/pdf/ecf22/ESIS%20AWARDS%20-%20CALL%20FOR%20PROPOSALS.pdf

ESIS Elsevier young scientist award
http://www.structuralintegrity.eu/site/pdf/ecf22/ESISELSEVIER%20YOUNG%20SCIENTIST%20AWARD.pdf

Best paper in weldment fracture mechanics
http://www.structuralintegrity.eu/site/pdf/ecf22/AWARD%20%20for%20the%20best%20paper%20on%20WFM%20Galip.pdf

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- William Curtin
- Youshi Hong
- Yuri Lapusta
- Željko Božić
- Zhiliang Zhang

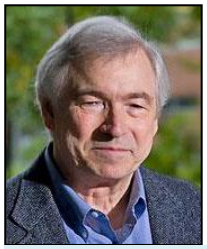
Plenary lecturers

- → **James Rice**, USA, Perspectives on dynamic fracture arising from study of earthquake ruptures
- → **Jovo Jarić**, Serbia, Conservation laws of J integral type
- → **Youshi Hong**, China, The State of the Art in Very-High-Cycle Fatigue Research
- → **Uwe Zerbst**, Germany, Application of fracture mechanics to S-N curve prediction. Requirements and perspectives
- → **Dražan Kozak**, Croatia & **Nenad Gubeljak**, Slovenia, Fracture behavior of wrought and additive manufactured implant's alloy
- → **William Curtin**, Switzerland, Mechanisms of Hydrogen Embrittlement: Insights from Atomistic Studies
- → **Meinhard Kuna**, Germany, Micromechanical Modeling of Fracture in Metallic Materials
- → **Yonggang Huang**, USA, Soft Network Composite Materials with Deterministic and Bio-Inspired Designs
- → **Robert Ritchie**, USA, Damage Tolerance in Biological and Metallic Material
- → **Takayuki Kitamura**, Japan, Challenge toward Nanometer Scale Fracture Mechanics

Minisymposia

- → **Siegfried Schmauder** & **Željko Božić**, Multiscale Damage Analysis of Fatigue and Fracture of Metals
- → **Vadim Silberschmidt** , Damage and Fracture of Biological and Biomedical Materials
- → **Filippo Berto** & **Luca Susmel**, Structural integrity of Additive Manufactured materials
- → **Petro Yasniy** & **Liviu Marsavina**, Teaching of Structural Integrity
- → **Jacques Besson**, Numerical Methods in Fracture Mechanics
- → **Uwe Zerbst**, **Stefano Beretta** & **Andrea Carpinteri**, Defects and fatigue
- → **Yuri Petrov** & **Vadim Silberschmid**, Fracture and Structural Transformations under High Rate and Impact Loading
- → **Peter Trampus**, Non-destructive methods in Fracture Mechanics
- → **Jose Antonio Correia** & **Vladimir Moskvichev**, Risk Analysis and Safety of Technical Systems
- → **Milos Đukic**, **William Curtin** & **Zhiliang Zhang**, Recent Advances on Hydrogen Embrittlement Understanding and Future Research Framework
- → **Giacomo Risitano**, Energy Methods for Fatigue Assessment
- → **Rostand Moutou Pitti** & **Octavian Pop**, Damage and fracture mechanics in wood material

Plenary lecturers



James R. Rice, USA
"Perspectives on dynamic fracture arising from study of earthquake ruptures"

James R. Rice is a Mallinckrodt Professor of Engineering Sciences and Geophysics at the Harvard John A. Paulson School of Engineering and Applied Sciences. Professor Rice is known as mechanician, who has made fundamental contributions to various aspects of solid mechanics. Two of his early contributions are the concept of the J-integral and an explanation of how plastic deformations localize in a narrow band. In recent years, Rice has focused on the mechanical processes involved in earthquakes. Professor Rice addresses problems in the theoretical mechanics of solids and fluids - that is, problems of stressing, deformation, fracture and flow. The J-integral represents a way to calculate the strain energy release rate, or work (energy) per unit fracture surface area, in a material. The theoretical concept of J-integral was developed in 1967 by Cherepanov and in 1968 by James R. Rice. Professor Rice has published over 250 technical papers that have received over 44,000 citations.

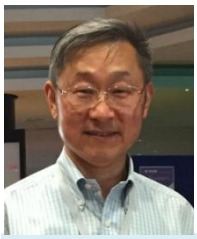
Links – More about Professor James R. Rice:
https://www.seas.harvard.edu/directory/rice
http://esag.harvard.edu/rice/

William Curtin, Switzerland
"Mechanisms of Hydrogen Embrittlement: Insights from Atomistic Studies"

Professor William Curtin earned a 4 yr. ScB/ScM degree in Physics from Brown University in 1981 and a PhD in theoretical physics from Cornell University in 1986. After gaining a BS and an MS in Physics then a PhD in theoretical physics, he left the academic world for industry, working in the Applied Physics Group of BP (British Petroleum). After seven years at BP, he came back to the academic world. He settled down at Virginia Tech and for five years held a position as professor attached to two engineering departments: materials science and engineering mechanics. He joined the solid mechanics group at Brown in 1998. "Brown had an international reputation in solid mechanics. He joined École polytechnique fédérale de Lausanne - EPFL as the Director of the Institute of Mechanical Engineering in 2011 and as Full Professor in 2012. Professor Curtin was a Guggenheim Fellow in 2005, has published over 200 technical papers that have received over 5600 citations, and has been the Principal Investigator on over $33M of funded research.

Links – More about Professor William Curtin:
https://people.epfl.ch/william.curtin?lang=en
http://sti.epfl.ch/page-70562-en.html

Plenary lecturers



Youshi Hong, China
"The State of the Art in Very-High-Cycle Fatigue Research"

Youshi Hong is a Professor of the Institute of Mechanics (IMECH), Chinese Academy of Sciences (CAS). He was the Director of IMECH-CAS between 1998 and 2006. He is Editor-in-Chief for “Fatigue & Fracture of Engineering Materials & Structures (FFEMS)”; and Associate Editor-in-Chief for “Science China – Physics, Mechanics & Astronomy”. His research fields are mechanical behavior of materials, fracture mechanics and structure mechanics. His main research achievements are related to: high-cycle and very-high-cycle fatigue behavior of metallic materials; effects of second phase particles on deformation, fracture and stress corrosion cracking of steels; analyses of stress intensity factors and plastic zone sizes for notch-cracks and fatigue crack growth; and mechanism and modeling of collective damage evolution process of initiation and propagation for short fatigue cracks. He has published more than 300 papers in academic journals and conference proceedings, and obtained 13 Chinese patents. He received a First Grade Award of Natural Science of CAS and received a National Second Grade Award of Natural Science.

Links – More about Professor Youshi Hong:
http://dspace.imech.ac.cn/EN/hongys@imech.ac.cn
https://www.youtube.com/watch?v=F7xOkBsGVwA

Takayuki Kitamura, Japan
"Challenge toward Nanometer Scale Fracture Mechanics"

Takayuki Kitamura is a Professor of Kyoto University, Japan, and a Member of Science Council, Japan. He was a vice president of Kyoto University in 2007 –2008 and an associate member of Science Council, Japan, in 2006- 2008. He has authored or co-authored more than 250 original research papers, and recently published a book, "Fracture Nanomechanics". He received the Society Award 5 time from the Japan Society of Mechanical Engineers (JSME) and 4 times from the Society of Materials Science Japan (JSMS). He has presented more than 30 invited talks in international conferences since 2004. He was an executive board director in the JSME in 2007, 2008, 2011 and 2012, and in the JSMS in 1994, 1995, 1999, 2000, 2009, 2010 and 2013. Professor Takayuki Kitamura has published over 600 papers in academic journals and conference proceedings that have received over 2900 citations.

Links – More about Professor Takayuki Kitamura:
http://kitamura-lab3.p2.weblife.me/index-english.html
http://kitamura-lab3.p2.weblife.me/pg297.html

Plenary lecturers

Uwe Zerbst, Germany
"Application of fracture mechanics to S-N curve prediction. Requirements and perspectives"

Professor Uwe Zerbst earned a diploma degree in material-technology at the University of Magdeburg where he also prepared his PhD thesis on fracture mechanics material parameters under impact loading in 1986. Ever since he has been working at various positions in the field of fracture mechanics with the focus on the assessment of components. His stations were the Institute of Mechanics of the East German Academy of Science in Chemnitz, the former GKSS Research Centre at Geesthacht where he joined the group of Karl-Heinz Schwalbe and, finally, the Federal Institute for Materials Research and Testing (BAM) in Berlin. He is experienced in the field of material parameter determination as well as analytical assessment of components under monotonic and cyclic loading. His focus during the last years was on the utilization of fracture mechanics to the determination of the fatigue strength and total life prediction of cyclically loaded components. Uwe Zerbst has published about 100 technical papers that have received over 1450 citations.

Meinhard Kuna, Germany
"Micromechanical Modeling of Fracture in Metallic Materials"

Meinhard Kuna, current Chair i.R. of “Applied Mechanics – Solid Mechanics” at TU Freiberg, Germany, received his diploma in Study of Physics at the TU Magdeburg in 1972. He completed his PhD in 1975, at the Institute of Solid State Physics, Academy of Sciences of GDR. From 1975 to 1991 he worked as a research assistant and head of the research group “Numerical Methods in Fracture Mechanics”.He became a full professor in Applied Mechanics and Solid Mechanics in 1997, and was the Vice-dean of the Faculty of Mechanical, Process and Energy Engineering. From 2012 to 2106 he served as the Director of the Institute of Mechanics and Fluid Dynamics, and became Professor Emeritus in 2016.
His research topics of interest include: fracture mechanics, continuum mechanics, computational methods in solid and fracture mechanics, modeling of smart materials, etc.
He is a member of GAMM (German Society of Applied Mathematics and Mechanics since 1994, of DVM (German Society of Materials Research and Testing) since 1990. He was a council member of ESIS from 2003 to 2009, and the voting representative for Germany in the International Congress on Fracture, 2003-2009.
He is the author of several monographies on Finite elements and Fracture Mechanics, and the author of numerous papers, with about 430 citations.

http://tu-freiberg.de/en/fakult4/imfd/fkm/prof-drrernathabil-meinhard-kuna

Plenary lecturers

Yonggang Huang, China
"Soft Network Composite Materials with Deterministic and Bio-Inspired Designs"

Yonggang Huang received his BS degree in mechanics from Beijing University in 1984. He moved to the United States to study engineering science in 1986, and earned his ScM and PhD degrees in engineering science from Harvard University in 1987 and 1990, respectively. He stayed at Harvard and joined the University of Arizona as an assistant professor in 1991. He moved to Michigan Technological University as an associate professor in 1995, and to University of Illinois at Urbana-Champaign (UIUC) in 1998. He was promoted to full professor in 2001, Grayce Wicall Gauthier Professor in 2003, and Shao Lee Soo Professor in 2004, at UIUC. He joined Northwestern University as the Joseph Cummings Professor in 2007, and has been the Walter P. Murphy Professor since 2015. Professor Huang has been working on mechanics of materials and structures across multiple scales, such as the mechanism-based strain gradient plasticity theory, and atomistic-based continuum theory for carbon nanotubes. Professor Huang is the author of over 500 publications in international journals and conference proceedings that have received over 44,000 citations.

Links – More about Professor Yonggang Huang:
www.mccormick.northwestern.edu/research-faculty/directory/profiles/huang-yonggang.html

Robert Ritchie, USA
"Damage Tolerance in Biological and Metallic Material"

Robert O. Ritchie is the H.T. and Jessie Chua Distinguished Professor of Engineering at the University of California, Berkeley and Senior Faculty Scientist at the Lawrence Berkeley National Laboratory. Professor Ritchie is known for his research into the mechanics and micromechanisms of fracture and fatigue of a broad range of biological and structural materials, where he has provided a microstructural basis for their damage tolerance and fatigue limits. Professor Ritchie has won numerous awards including the David Turnbull Lectureship from the Materials Research Society in 2013, the Acta Materialia Gold Medal in 2014, and the Morris Cohen Award from The Minerals, Metals & Materials Society (TMS) in 2017. He is a Fellow of the Royal Academy of Engineering, the National Academy of Engineering of US, the Russian Academy of Sciences and the Royal Swedish Academy of Engineering Sciences. Professor Ritchie is the author of over 700 publications in academic journals and conference proceedings that have received over 44,000 citations.

Links – More about Professor Robert Ritchie:
http://www2.lbl.gov/ritchie/
http://www2.lbl.gov/ritchie/group_members.html

Plenary lecturers

Jovo Jarić, Serbia
"Conservation laws of J integral type"

Jovo Jarić was born in Donji Tiškovac, Bosnia and Herzegovina, in 1938. He graduated at the Faculty of Mathematics in Belgrade in 1962. From 1963 to 1966 he worked as the assistant at the SASA Mathematical Institute, from 1966-1974 as the assistant at the Department of Mechanics at the Faculty of Mathematics, and became a professor in 1979. He defended his doctoral thesis at the same Faculty, in 1973. He received additional scientific and expert education at numerous faculties and institutes across the world, including, among others, the Institute of Seismology, Tokyo, Ecole Polytechnique and University Pierre and Marie Curie and CISM (International Center of Mechanical Sciences). He published over 50 scientific papers in national and international scientific journals, related to mechanics and applied mathematics, such as the Journal of Elasticity, International Journal of Enigneering Science, Theoretical and applied mechanics, etc. He attended a number of scientific conferences and held plenary lectures. He is also the author of two books: Mechanics and Continuum Mechanics. He was a lecturer both in his home country and abroad, and his lectures covered a number of topics including the elasticity theory, continuum mechanics, fluid mechanics, differential geometry and many others. In addition, he served as the Dean of the Faculty of Mathematics from 1985 to 1987 and the General Secretary of the Yugoslavian Mechanics Society from 1984 tp 1986.

Links – More about Dr Jovo Jarić:
http://www.matf.bg.ac.rs/files/Jaric.pdf

Nenad Gubeljak, Slovenia & **Dražan Kozak**, Croatia
"Fracture behavior of wrought and additive manufactured implant's alloy"

Nenad Gubeljak, born in Našička Brežica in 1963, is the head of the Laboratory for machine elements and structures and the professor of Technical drawing, Structural elements, Fracture mechanics and other subjects. He graduated at the Technical Faculty of University of Maribor, department of mechanical engineering. In 1998, he received a PhD in technical. Since 1988, he is employed at the Department of mechanical engineering at the Technical Faculty in Maribor. He was also a guest at a number of foreign scientific institutions, including the Erich-Schmid Institute in Austria and the GKSS research center Geesthacht (Hamburg, Germany), as a DAAD scholarship holder during 1996 and 1999, and also as the post-doctorate student from 2000-2001. He has participated in numerous international conferences, and has published over 300 scientific papers. He was also the head of the scientific projects "The influence of limited material yielding on the fracture behavior of a welded joint" (1999-2001) and the Slovenian-Croatian bilateral project.

Links – More about professor Nenad Gubeljak:
http://www.csm.hr/archive/biografija_gubeljak_HR_crt.pdf

Dražan Kozak was born July 31, 1967. He graduated at the Mechanical Engineering Faculty in Slav. Brod, University of Osijek in 1991. He achieved M.Sc. in 1995. and D.Sc. in 2001, both at the Universitz of Zagreb. He became Full Professor in 2009. in Engineering Mechanics, Strength of Materials and Numerical methods, at the Mechanical Engineering in Slavonski Brod. He was the head researcher on the bilateral Slovenian-Croatian, Hungarian-Croatian and Serbian-Croatian projects At the moment he is the leader of the project "Analysis and fracture assessment of structures of anisotropic materials". He published over 100 scientific papers at the conferences and more than 70 articles in Journals mainly devoted to structural integrity assessment. He published 87 articles in impacted Journals referred in the Web of Science databases, which were cited 300 times. His h-index is 9.
He is a member of ESIS and ASME, and the member of the editorial board in numerous international scientific journals (Technical Gazette, GeoScience Engineering, Transactions of FAMENA, etc).

Links – More about Dr Dražan Kozak:
http://www.sfsb.unios.hr/fakultet/ustroj/zsk/dkozak/dkozak_en

Lecturers at Summer School

John Landes, USA
"Basics of experimental fracture mechanics, linear elastic and elastic-plastic crack growth"

John Landes received his degrees at Lehigh University in Bethlehem where he studied with some of the pioneers in the field of fracture mechanics like George Irwin, Paul Paris and Bob Wei. He then joined Westinghouse Research Center in Pittsburgh, PA in a group working on fracture and fatigue topics for the power generation industry. There with colleague Jim Begley, he developed some of the basic ideas for nonlinear fracture mechanics such as using the J integral of Jim Rice as a fracture criterion. During that time he also worked on creep cracking parameters and statistical approaches to transition fracture. He also contributed to the writing of fracture test standards through ASTM and ISO. After 15 years at Westinghouse he became a professor at the University of Tennessee. There he continued his work on fracture mechanics often collaborating with Juan Donoso of UTFSM in Santiago Chile. Some of the new developments were related to fracture toughness test methods, including the use of normalization for crack growth measurement and common formats for redefining fracture parameters. After nearly 30 years at University of Tennessee he retired in 2014 but continues teaching at local community colleges.

Links – More about Professor John Landes:
http://icsid.fsb.hr/landes_bio.php

Francesco Iacoviello, Italy
"Basics of experimental fracture mechanics, fatigue crack growth"

Francesco Iacoviello is a Professor of metallurgy at the Universita di Cassino e del Lazio Meridionale, in Italy, since 2000. He is also the president of Italian Group of Fracture (IGF), the vice-president of ESIS (European Society of Structural Integrity) and the vice-president of the International Congress on Fracture. He earned a PhD in Metallurgy and Corrosion at the Ecole Centrale, Paris in 1997, after previously obtaining the degree in nuclear engineering at the University of Rome “La Sapienza”. Francesco Iacoviello’s work is mainly focused on material science, including mechanical properties of materials and their characterisation, as well as fatigue crack propagation and the investigation of mechanism related to hydrogen embrittlement and localized corrosion in stainless steels. He is the author of over 240 publications, including numerous journal articles, conference papers and the book titled “Materiali Metallici”. He has also participated in the organising of many national and international events (such as the ECF 21 in Sicily), and is a member of editorial boards for a number of scientific journals, including “Fatigue & Fracture of Engineering Materials & Structures, “Structural Integrity and Life” and “Procedia Structural Integrity”. In 2017, he was awarded the “Constantine Tipper” silver medal of the International Congress on Fracture.

Links – More about Professor Francesco Iacoviello:
https://orcid.org/0000-0002-9382-6092

Lecturers at Summer School

Bamber Blackman, UK
"Deformation and fracture of polymers and composites"

Bamber Blackman is a Reader in the Mechanics of Materials in the Department of Mechanical Engineering at Imperial College London. His research interests include the fracture mechanics of structural adhesive joints and polymeric fibre-reinforced composite materials, including effects of mode-mix, test rate, service environment and structure-property relationships. He chaired the Structural Technology and Materials Group (STMG) of the IMechE (2008-2010) and is secretary to the European Structural Integrity Society (ESIS) Technical Committee TC4 on Polymers, Adhesives and Composites where he also leads the structural adhesives activities. From 2006-8 he chaired the Structural Adhesives Division of the Adhesion Society. He was awarded the Rolls-Royce prize in December 2001 and has published over 50 refereed research papers and book contributions and has presented his research widely at international conferences. He has served as Guest Editor to the International journal, Engineering Fracture Mechanics on three occasions. He is also the author of over 100 publications, including conference papers and journal articles.

Links – More about Dr Bamber Blackman:
http://www.imperial.ac.uk/people/b.blackman

Leslie Banks-Sills, Israel
"Interface fracture mechanics"

Professor Leslie Banks-Sills holds the Diane and Arthur Belfer Chair of Mechanics and Biomechanics at Tel Aviv University since November 2006. She serves on the editorial boards of Engineering Fracture Mechanics, International Journal of Fracture, International Journal of Structural Integrity and Strain. She has consulted for various organizations in Israel, as well as for NASA, regarding problems of fracture in structures. Professor Banks-Sills completed a B.A. degree in mathematics at Queens College of the City University of New York in 1965, an M.Sc. degree in engineering mechanics from the University of Michigan in 1973 and a Ph.D. degree in engineering from Harvard University in 1977. She is Director of the Dreszer Fracture Mechanics Laboratory at Tel Aviv University. She was a visiting scientist/professor at a number of institutions, including, among others, the Wright Patterson Air Force Base in the U.S., the Research Center in Karlsruhe, Germany and the prestigious Mary Shepard B. Upson Visiting Professorship at Cornell University. She received numerous rewards for her work: the Teaching Excellence Award in Mechanical Engineering and the Teaching Excellence Award, Faculty of Engineering, (Tel Aviv University, the Honorary Fellow of the International Congress of Fracture in 2005, the Hanin Prize from the Technion in Haif, etc. She is the recipient of the 2006 Honorary Membership to ESIS (European Society of Structural Integrity) for her outstanding original technical contributions to fracture mechanics and good service to the international fracture mechanics community. Her research interests include the use of analytical, numerical and experimental methods to treat various fracture problems which include homogeneous materials, bonds, interfaces and composites. She has participated in over 60 international conferences, and has published over 90 papers in international journals and edited the book Advances in Mathematical Modeling and Experimental Methods for Materials and Structures, The Jacob Aboudi Volume, Springer, The Netherlands (2010) with Dr. Rivka Gilat.
Links – More about professor Leslie Banks-Sills:
http://www.structuralintegrity.eu/pdf/esis/aboutus/leslie-bio.html

Registration fees

Registration Fee	Before 20th August, 2018	On-site
Regular	580 €	630 €
ESIS Member	500 €	550 €
Students*	150 €	200 €
Accompanying persons	150 €	200 €
Participation without publication/Regular	550 €	600 €
Participation without publication/ESIS member	470 €	520 €

* Students should send copy of their ID or any document proving their status, and bring original document to the conference.

The registration fee includes conference material, welcome reception, conference banquet, refreshments and lunch during conference days.

Payment will be possible by bank transfer, credit cards, Pay-Pal and on-site in cash (see www.ecf22.rs).

Important dates

Submission of Abstracts: 31. March, 2018.

Notification of Acceptance: 15 days after submission

Deadline for early Registration: 28. February, 2018.

Submission of Papers: 30. June, 2018.

Deadline for Registration: 20. August, 2018.

On-site Registration: from 25. August, 2018.

Preliminary Timetable

Time	Monday, 27.8	Tuesday, 28.8	Wednesday, 29.8	Thursday, 30.8	Friday, 31.8
08:00	Registration	Registration			
08.30		Plenary session Youshi Hong Uwe Zerbst	Plenary session Robert Ritchie Yonggang Huang	Plenary session Takayuki Kitamura William Curtin	Parallel sessions
09:00	OPENING CEREMONY				
10:15	Honorary lecture James Rice				
10:30		Coffee Break	Coffee Break	Coffee Break	
11:00	Parallel sessions	Parallel sessions	Parallel sessions	Parallel sessions	Coffee Break
11:30					Plenary session Two medals
12:00					
13:00					
13:30	Lunch Break	Lunch Break	Lunch Break	Lunch Break	CLOSING CEREMONY
14:00					
14:30	Plenary session Jovo Jaric	Plenary session Kozak & Gubeljak Meinhard Kuna	Special session - Young scientists best paper Sightseeing Technical visits ESIS council	Parallel sessions	
15:00					
15:45	Coffee Break			Coffee break	
16:00	Parallel sessions ExCo meeting	Parallel sessions Technical Committees		Parallel sessions	
17:00					
18:00					
18:30					
19:00	Cultural Programme	Belgrade visit by boat		Conference dinner	
19:30					
20:00					
21:00					
22:00					

Summer School

Two-day event is offered to young researchers,
with world's leading experts in the field.
5th Fracture mechanics Summer School
Belgrade, Serbia, 25-26th August 2018

25.8.2018, Saturday		
9:00-10:45 FME, room 211	Basics of experimental fracture mechanics, linear elastic and elastic-plastic crack growth	John Landes, USA
10:45-11:00 FME, 210	Coffee break	
11:00-12:45 FME, room 211	Basics of experimental fracture mechanics, fatigue crack growth	Francesco Iacoviello, Italy
12:45-14:00, FME, restaurant	Lunch, transfer to the Laboratory	
14:00-17:00 MTI, Zarkovo	Experimental work at the Laboratory	John Landes, Francesco Iacoviello, Blagoj Petrovski, Zijah Burzić
26.8.2018, Sunday		
9:00-11:00 FME, room 211	Deformation and fracture of polymers and composites	Bamber Blackman, UK
11:00-11.30FME, 210	Coffee break	
11:30-12:45 FME, room 211	Interface fracture mechanics	Leslie Banks-Sills, Israel
12:45-13:45, FME, restaurant	Lunch	
13:45-15:00 FME, room 211	Interface fracture mechanics	Leslie Banks-Sills, Israel
15:00-15:30 FME, 210	Coffee break	
15:30-17:00 FME, amphitheater A	J integral - on the occasion of the 50th anniversary Open for all participants	James Rice, USA

FME – Faculty of Mechanical Engineering; Kraljice Marije 16, Belgrade
MTI - Military-Technical Institute, Ratka Ristanovica 1, Zarkovo, Belgrade

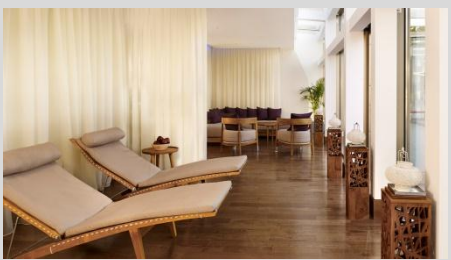
Fee (**125 € before 20.6.2018, 150 € afterwards**) includes lectures, refreshments and buffet lunch.

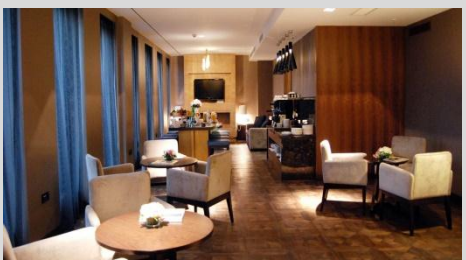
Location and Transportation

Belgrade is the capital of Serbia, with cca 1.8 million inhabitants. It is located in the south-east Europe, in the Balkan Peninsula, at the confluence of the Sava and Danube rivers. The official monetary unit is dinar (RSD). International airport “Nikola Tesla” offers services not only by domestic airlines (Air Serbia), but also by many other companies, including low cost companies. Transfer from the airport to the city center is easy using mini-bus or using taxi (20 euros). The highway network enables frequent bus connection between major European cities, and comfortable travel by car to Belgrade. Train connections are also possible

Venue

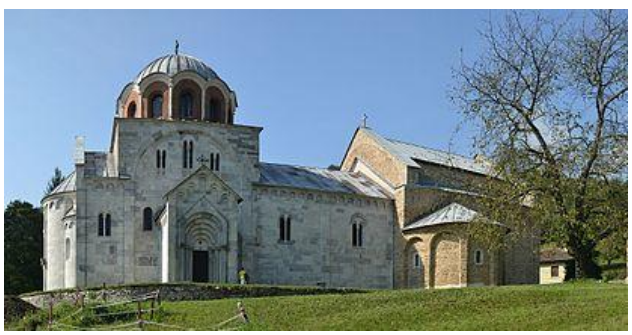
Metropol Palace, a Luxury Collection Hotel, Bulevar Kralja Aleksandra 69, Belgrade, Serbia.
More details on accommodation on www.ecf22.rs.





Social Programme

Welcome Reception will be held on Sunday, August 26th evening from 19:00 to 22:00, Faculty of Mechanical Engineering, Kraljice Marije 16, Belgrade
Cultural programme will be organized on Monday evening, August 27th, from 19:00 to 22:00.
Belgrade visit by boat will be organized on Tuesday evening, August 28th, from 19:00 to 22:00.
Conference Dinner, including cultural programme, will be served on Thursday evening.
There will be different one-days excursions every day from Monday till Friday, covering the most important historical and cultural sites in Serbia (Vinča archeological site (5500 BC), Viminacium, once the capital of the Roman province Mesia Superior, Lepenski Vir, archeological site (7500 BC), Fruska Gora monasteries and wineries, Novi Sad, Petrovaradin and Sremski Karlovci, monasteries in central Serbia (Manasija, Resava, Studenica, Zica)
Post conference tours (one or two day) will also be offered.



Monastery Studenica

Figurine Vinča

„Foremother" Lepenski Vir

Sremski Karlovci

Petrovaradin fortress

For more details visit www.ecf22.rs or send an email to ecf22conference@gmail.com

Recommended hotels and privileged prices for conference participants – all details at http://www.ecf22.rs/accommodation.html

	Hotel	Single room	Double room	Website
1.	Metropol Palace	95 €	110 €	www.metropolpalace.com
2.	Hotel Zira	85 €	95 €	www.zirahotels.com
3.	Hotel Constantine the Great	80 €	85 €	www.constantinethegreatbelgrade.com
4.	Hotel Argo	65 €	75 €	www.argohotelbelgrade.com
5.	Holiday Inn Express Belgrade	59 €	64 €	www.holidayinnexpress.com/belgrade
6.	Boutique Hotel Tash	30 €	40 €	www.hoteltash.com