

4th INTERNATIONAL CONFERENCE
FRACTURE MECHANICS OF MATERIALS
AND STRUCTURAL INTEGRITY



PROGRAMME

23 -27 June 2009

Lviv, Ukraine

GENERAL SCHEME OF CONFERENCE

Monday, June 22		Tuesday, June 23			Wednesday, June 24			Thursday, June 25			Friday, June 26			
9 ⁰⁰ - 20 ⁰⁰	Registration of participants	8 ⁰⁰ - 10 ⁰⁰	Registration of participants											
		10 ⁰⁰ - 10 ³⁰	Opening ceremony		10 ⁰⁰ - 11 ⁴⁰	Section 4	Section 5	Poster session	10 ⁰⁰ - 11 ⁴⁰	Morning plenary session	Poster session	10 ⁰⁰ - 11 ⁴⁰	Morning plenary session	
		10 ³⁰ - 11 ⁴⁵	Morning plenary session											
		11 ⁴⁵ - 12 ¹⁵	Coffee Break		11 ⁴⁰ - 12 ¹⁰	Coffee Break		11 ⁴⁰ - 12 ¹⁵	Coffee Break		11 ⁴⁰ - 12 ¹⁵	Coffee Break		
		12 ¹⁵ - 13 ⁵⁵	Morning plenary session		12 ¹⁰ - 13 ⁵⁰	Section 4	Section 5	Poster session	12 ¹⁵ - 13 ⁵⁵	Morning plenary session	Poster session	12 ¹⁵ - 13 ³⁰	Morning plenary session	
		14 ⁰⁰ - 15 ⁰⁰	Lunch			14 ⁰⁰ - 15 ⁰⁰	Lunch		14 ⁰⁰ - 15 ⁰⁰	Lunch		13 ³⁰	Closing ceremony	
		15 ⁰⁰ - 16 ²⁰	Section 1	Section 2,3		15 ⁰⁰ - 16 ¹⁵	Afternoon plenary session		15 ⁰⁰ - 16 ⁴⁰	Section 6	Section 7	Poster session		
		16 ²⁰ - 16 ⁴⁰	Coffee Break		16 ¹⁵ - 16 ³⁵		Coffee Break							
		16 ⁴⁰ - 18 ⁰⁰	Section 1	Section 2,3		16 ³⁵ - 18 ¹⁵	Afternoon plenary session		16 ⁴⁵ - 18 ⁰⁰	Special Session				
	19 ⁰⁰ - 21 ⁰⁰	Get-together party						19 ⁰⁰ - 21 ⁰⁰	Banquet					

Note. Plenary sessions, parallel sessions and round table will be held in the Main Building of Lviv Polytechnic National University, S. Bandery St., 12

Plenary session will be held in Assembly Hall (1 st Floor)	Parallel sessions will be held in rooms		Round Table meeting will be held in room 204 (1 st floor)
	114 (ground floor)	124 (ground floor)	

23rd June, Tuesday

8 ⁰⁰ - 10 ⁰⁰	Registration of participants	
10 ⁰⁰ - 10 ³⁰	OPENING CEREMONY (Assembly Hall, 1 st Floor) Welcome address of the Organizing Committee Chairman, Academician of NASU, Professor V. Panasyuk <i>Participant Greetings:</i> Rector's Office of t Lviv Polytechnic National University. Professor Yu. Bobalo President of the National Academy of Sciences of Ukraine B. Paton President of the European Structural Integrity Society (ESIS) Professor E. Gdoutos	
10 ³⁰ - 10 ⁵⁵	PLENARY SESSION (Assembly Hall, 1 st Floor) <i>Panasyuk V. Some actual problems of materials strength and durability of structures</i> (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)	Poster reports
10 ⁵⁵ - 11 ²⁰	<i>Bobalo Yu. Lviv Polytechnic National University: development of science and education</i> (Lviv Polytechnic National University, Lviv, UKRAINE)	
11 ²⁰ - 11 ⁴⁵	<i>Gdoutos E. Failure of sandwich structures</i> (ESIS President, Democritus University of Thrace, Xanthi, GREECE)	
11 ⁴⁵ - 12 ¹⁵	Coffee break	
12 ¹⁵ - 12 ⁴⁰	<i>Kurzydowski K., Nykyforchyn H. Environmentally assisted degradation of structure and properties of long term exploited materials</i> (Warsaw Technical University, Warsaw, POLAND; Karpenko Physico-Mechanical Institute of NASU; Lviv, UKRAINE)	
12 ⁴⁰ - 13 ⁰⁵	<i>Gorynin I., Timofeev B., Zotova A. Degradation of mechanical properties of structural materials under long-term influence of service temperatures</i> (CRISM „Prometey”, St. Petersburg, RUSSIA)	
13 ⁰⁵ - 13 ³⁰	<i>Bychkov S. Some problems of strength of aircraft structures</i> (Antonov Aeronautical Scientific-Technical Complex, Kyiv, UKRAINE)	
13 ³⁰ - 13 ⁵⁵	<i>Novikov M., Kusch V., Maistrenko A. Structural-statistical approach based theory of scattered damage in composite materials</i> (V. Bakul Institute for Superhard Materials of NASU, Kyiv, UKRAINE)	
14 ⁰⁰ - 15 ⁰⁰	Lunch	

PARALLEL SESSION		Poster reports
Section 1 FUNDAMENTAL PROBLEMS OF MATERIALS BRITTLE AND DUCTILE FRACTURE MECHANICS (Room 114, GROUND FLOOR)	Section 2 PHYSICAL CONCEPTS AND CALCULATION MODELS OF CRACKS INITIATION AND PROPAGATION IN DEFORMED BODIES WITH ACCOUNT OF SMALL AND DEVELOPED PLASTIC ZONES NEAR THE CRACK FRONT Section 3 SOLUTION METHODS FOR PROBLEMS OF MECHANICS OF DEFORMED BODIES WITH STRESS CONCENTRATORS-CRACKS UNDER THE INFLUENCE OF GIVEN LOADINGS AND TEMPERATURE FIELDS (Room 124, GROUND FLOOR)	
15 ⁰⁰ – 15 ²⁰ <i>Savruk M., Kazberuk A. Stress concentration problems for elastic domains with V-shaped notches</i> (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE; Bialystok University of Technology, Bialystok, POLAND)	<i>Wnuk M. Discrete cohesive model of fractal fracture</i> (University of Wisconsin Milwaukee, Milwaukee, USA)	
15 ²⁰ – 15 ⁴⁰ <i>Dashevsky I. On kinetic equations of „diffusion” cracks and delaminations in adhesive joints</i> (Ishlinsky Institute for Problems in Mechanics RAS, Moscow, RUSSIA)	<i>Szata M., Lesiuk G. Lifetime evaluation of element with fatigue crack using equivalent surface method</i> (Wrocław University of Technology, Wrocław, POLAND)	
15 ⁴⁰ – 16 ⁰⁰ <i>Volosevych P. Mechanics of plastic deformation and failure processes in terms of contemporary physical concepts</i> (Kurdyumov Institute for Metal Physics of NASU, Kyiv, UKRAINE)	<i>Gonzalez-Sanchez J., Medina D., Acuña N., Martínez E.A. Initiation and crack arrest toughness of carbon and stainless steels</i> (Universidad Autónoma de Campeche, Campeche, MÉXICO; Centro de Investigación Científica de Yucatán, Yucatán, MÉXICO; Universidad Anáhuac-Mayab. Mérida, MÉXICO; Universidad Veracruzana, Veracruz, MÉXICO)	
16 ⁰⁰ – 16 ²⁰ <i>Sylovanyuk V., Marukha V., Onyshchak N. Strength resource of the damaged elements of structures of long-term operation renewed by injection technologies</i> (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE; Engineering centre “Techno-Resurs” of NASU, Lviv, UKRAINE)	<i>Popov V. Stress concentration in the finite cylinder with the circle-shaped crack under torsion oscillation</i> (Odesa National Naval Academy, Odesa, UKRAINE)	

16 ²⁰ – 16 ⁴⁰	Coffee break	
16 ⁴⁰ – 17 ⁰⁰	<i>Kushnir R., Nykolyshyn M., Rostun M. Stressed state and limit equilibrium of thickness-inhomogeneous shells with surface cracks</i> (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)	<i>Smiyan O. Generalised mechanism of cracks initiation and growth in metals</i> (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
17 ⁰⁰ – 17 ²⁰	<i>Voloshko O., Loboda V. Contact zone model for an interface crack taking into account nonlinear behavior of material</i> (Dniupropetrovs'k National University, Dniupropetrovs'k, UKRAINE)	<i>Kipnis L., Khazin G., Polischuk T. Calculation of a plastic prefracture zone at the corner point of the interface of media</i> (Tychyna State Pedagogical University of Uman', Uman', UKRAINE)
17 ²⁰ – 17 ⁴⁰	<i>Bozydarnik V., Maksymovych O. Analysis of the process of edge and buried cracks length change near holes of complicated configuration in plates</i> (Lutsk National Technical University, Lutsk, UKRAINE)	<i>Horyk O., Kyrychenko V. Preconditions of the damages of the restrained support regions of the beam constructions</i> (Poltava State Agrarian Academy, Poltava, UKRAINE; Kondratiuk Poltava National University of Technology, Poltava, UKRAINE)
17 ⁴⁰ – 18 ⁰⁰	<i>Dovbnya K., Hordienko M. The stress state of the elastic-plastic orthotropic shell of arbitrary curvature with trough and part-trough cracks</i> (Donetsk National University, Donetsk, UKRAINE)	<i>Hasanov R., Hulzazli A., Orudzev Yu. On energy theory of structural material endurance</i> (Azerbaijan State Oil Academy, Baku, AZERBAIJAN)
19 ⁰⁰ - 21 ⁰⁰	WELCOME PARTY	

POSTER REPORTS (Sections 1, 2, 3)

1. *Beleznai R., Szavai S.* **Analysis of warm pre-stressing effect for RPV assessment** (Institute for Logistics and Production Systems, Miskolc-Tapolca, HUNGARY)
2. *Tokovy Y., Chen Y.-T., Ma C.-C.* **On thermo elastic analysis of FGM solids** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE; National Taiwan University, TAIWAN)
3. *Banakhevykh Yu., Andrejkiv O., Kit M.* **The residual resource of the oil pipeline pipes with cracks and optimization of its operating parameters** (Ukrtransgas, Kyiv, UKRAINE; I. Franko Lviv National University, Lviv, UKRAINE)
4. *Bezenov S.* **Investigation of the relation between the morphology of structural steels and the fatigue resistance characteristics** (Zaporizhzhya National University of Technology, Zaporizhzhya, UKRAINE)
5. *Bespalov S., Volosevych P., Zahadarchuk V.* **Cracks nucleation specificity in and around the weld seam of 10Г2ФБ steel** (Kurdyumov Institute for Metal Physics of NASU, Kyiv, UKRAINE; Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
6. *Vasilyev O., Brichevskiy M., Shtajnberrh-Vilkens R., Malcbender Yu.* **Mechanical behaviour of zirconium electrolyte of ceramic fuel cells at static loading** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE; I. Franko Lviv National University, Lviv, UKRAINE)
7. *Voronyak T., Kmet' A., Muravsky L.* **Research of a microrelief of a solid surface and its displacements by the method of phase-shifting interferometry** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
8. *Halazyuk O.* **Mathematical model of cylinder torsion by the dynamic loading with determined initial conditions** (I. Franko Lviv National University, Lviv, UKRAINE)
9. *Halatenko H.* **Dugdale type crack model under mixed loading I+II** (Tymoshenko Institute of Mechanics of NASU, Kyiv, UKRAINE)
10. *Harmatiy H., Popovych V.* **Influence of material thermosensitivity on thermo elastic state of infinite body with cylindrical cavity** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)
11. *Dorosh M., Stashchuk M.* **To the assessment of elastic equilibrium of shells with variable rigidities** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
12. *Dudyk M., Dikhtyarenko Yu.* **About the model of prefracture zone at the corner point of media-separating interface, from which an interfacial crack goes out** (Tychyna State Pedagogical University of Uman', Uman', UKRAINE)
13. *Ivantyshyn N.* **Deformation features of elastic body near of the elastic-plastic inclusion** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
14. *Koval A., Firstov S.* **Influence of structural features on fracture toughness of molybdenum alloys** (Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE)
15. *Kravets V.* **On combination of methods of singular integral-differential equations and time finite differences for a plane dynamic problems of crack theory** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
16. *Kryvoy A.* **Inter-phase cracks in the non-homogeneous transversal isotropic medium** (Odesa National Naval Academy, Odesa, UKRAINE)
17. *Kunets Ya., Matus V., Rabosh R.* **Dynamic stress concentration in the vicinity of sharp edged piezoelectric inclusions under antiplane shear of composite** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)
18. *Levytska N., Lesiv R.* **The estimation of residual resource of the thin-walled elements of constructions under high temperatures and cyclic loading** (I. Franko Lviv National University, Lviv, UKRAINE)
19. *Marchenko H.* **On the stress state in railway rails with allowance for residual stresses** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
20. *Opanasovych V., Yatsyk I.* **Determination of the critical loading at the Reissner's plate bending with through-the-thickness cracks taking into account the contact of their faces** (I. Franko Lviv National University, Lviv, UKRAINE)
21. *Osiv Ya.* **The dynamic stress intensity factor in the body with a crack in antiplane strain under effect of concentrated forces** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
22. *Pustovyy V., Sakara A.* **Determination of residual resource of bearing elements of gantry-cranes under bloc loading** („Dialab” Company, Odesa, UKRAINE)
23. *Revenko V.* **Investigation of the three-dimensional stressed state of an elastic plate with a circular hole** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)
24. *Savruk M., Osyechko A.* **Elastoplastic interaction of a V-shaped notch with hole under antiplane deformation of body** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)

25. *Semenov P.* **Extraction of the regular composition from vibratory signal by least-squares method** („Dialab” Firm, Odesa, UKRAINE)
26. *Sylovanyuk V., Revenko A.* **Concentration of stresses in a body with visco-elastic thin inclusions** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
27. *Solyar T.* **Application of inversion formula of Laplace transform adapted to dynamic problems to study antiplane strain of cracked bodies** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)
28. *Sulym G., Makhorkin M.* **Longitudinal shear of a composite with thin radial located defects** (I. Franko Lviv National University, Lviv, UKRAINE; Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)
29. *Shvabyuk V., Rotko S.* **Contact problem for round plate particularly supported by rigid basis** (Lutsk National Technical University, Lutsk, UKRAINE)
30. *Shvets R., Yatchkiv O., Bobyk B.* **Influence of thin surface layers on stress state of cylindrical bodies under thermo diffusion processes** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)
31. *Yukhym R.* **Strength of elastic-plastic body with surface crack filled by elastic material** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)

24th June, Wednesday

PARALLEL SESSION

Section 4

ASSESSMENT OF FRACTURE AND STRENGTH OF HETEROGENEOUS AND COMPOSITE BODIES WITH DEFECTS

(Room 114, GROUND FLOOR)

Section 5

INFLUENCE OF HYDROGEN ON FRACTURE PROCESSES AND STRENGTH OF MATERIALS AND STRUCTURAL ELEMENTS

(Room 124, GROUND FLOOR)

10⁰⁰ – 10²⁰

Vasilyev O., Brichevskiy M., Shtajnerh-Vilkens R., Malcbender Yu. **Mechanical behaviour of zirconia electrolyte of ceramic fuel cells at static loading** (Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE; Scientific Center of Julich, Julich, Germany)

Fedorov V., Bulyk I., Panasyuk V. **Hydrogen as technological environment for preparation of rare earth permanent magnets** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)

10²⁰ – 10⁴⁰

Brodnikovskyy Ye., Vasylyv B., Ostash O., Vasilyev O. **Mechanical behavior of Ni–ZrO₂ anodes of ceramic fuel cells** (Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE; Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)

Stepanyuk S., Matsuoka S., Yamaoka T. **Fatigue properties of STPG370 steel pipeline welded joint with high content of nondiffusible hydrogen in the weld metal** (Kyushu University, Fukuoka, JAPAN)

10⁴⁰ – 11⁰⁰

Szavai S., Beleznai R. **Numerical determination of J-integral value in case Sub-Clad Flaw** (Bay Zoltan Institute for Logistics and Production Systems, Miskolc, HUNGARY)

Smiyan O., Hryhorenko H. **Charged state of hydrogen and fracture of metal** (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)

11⁰⁰ – 11²⁰

Kotrechko S., Meshkov Yu. **Metal brittleness and plasticity in a structure** (Kurdyumov Institute for Metal Physics of NASU, Kyiv, UKRAINE)

Ostash O., Vasilyev O., Vasylyv B., Ivasyshyn A., Brodnikovskyy Ye., Podhurska V. **Influence of hydrogen environment on physico-mechanical properties of fuel cell materials** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE; Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE)

11²⁰ – 11⁴⁰

Markasova L., Hryhorenko H., Kushnaryeva O., Polovetckiy Ye. **Strength and plasticity of complex-alloyed aluminium-lithium alloys: structural-phase state** (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)

Hladkyi Ya., Burlakov A., Bys S., Milko V., Makovkin O. **Hydrogen-mechanical treatment of materials** (Khmelnitskiy National University, Khmelnitskiy, UKRAINE)

11⁴⁰ – 12¹⁰

Coffee break

12¹⁰ – 12³⁰

Azhazha Zh., Azhazha R., Bulatov O., Sayenko S. **Model-calculated estimation of microstructure stresses, induced by anisotropy of single-crystal α -hafnium properties in polycrystalline material** (Institute of Solid-State Physics, Materials Science and Technologies, NSC KIPT, Kharkiv, UKRAINE)

Milović L., Sedmak S., Zrilić M., Vuherer T., Momčilović D., Trišović N., Putić S. **Toughness of region IV of the heat affected zone of 9% chromium steel for elevated temperature application** (Faculty of Technology and Metallurgy, Beograd, SERBIA; Society for Structural Integrity and Life, Beograd, SERBIA; Faculty of Mechanical Engineering, Maribor, SLOVENIA; Institute for Testing of Materials, Beograd, SERBIA; Faculty of Mechanical Engineering, Beograd, SERBIA)

Poster reports

12 ³⁰ – 12 ⁵⁰	<i>Stasyuk B., Kindratsky B.</i> Interaction in an infinite solids of plane cracks and thin elastic inclusions (Lviv Polytechnic National University, Lviv, UKRAINE)	<i>Zagórski A., Student O.</i> Sensitiveness of the mechanical properties of the heat resistance steels and its weld joints to high temperature hydrogen degradation (Warsaw Technical University, Warsaw, POLAND; Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)		
12 ⁵⁰ – 13 ¹⁰	<i>Sulym G., Pasternak Ya.</i> Determination of a limit state of axisymmetric solids with thin inclusions (I. Franko Lviv National University, UKRAINE; Lutsk National Technical University, Lutsk, UKRAINE)	<i>Mityayev O., Belikov S., Ostrovska A.</i> Influence of intermetallic phases on fracture resistance of silumins (Zaporizhzhya National Technical University, Zaporizhzhya, UKRAINE)		
13 ¹⁰ – 13 ³⁰	<i>Fedirko V., Pohrelyuk I., Yaskiv O., Tkachuk O.</i> Mechanical properties of titanium with multicomponent diffusion coatings (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)	<i>Ivanytskyy Ya., Shtayura S., Molkov Yu., Lenkovskyy T.</i> The crack resistance of a plate with the inclined crack in hydrogen (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)		
13 ³⁰ – 13 ⁵⁰	<i>Muravsky L., Hembara O., Hvozdiuk M., Polovynko T., Boleychuk V.</i> Modelling and experimental verification of prediction of the crack propagation direction in layered composites (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)	<i>Balitskii O., Vytvitski V., Ivaskevich L., Mochylsky V., Hrebenyuk S.</i> Complex evaluation of high temperature hydrogen degradation of corrosion resistant steels (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)		
14 ⁰⁰ - 15 ⁰⁰	Lunch			
	PLENARY SESSION (Assembly Hall, 1 st Floor)			
15 ⁰⁰ – 15 ²⁵	<i>Ivasyshyn O., Kotrechko S., Meshkov Yu.</i> Prediction of a limit state of structural elements on the basis of local approach to fracture (Kurdyumov Institute for Metal Physics of NASU, Kyiv, UKRAINE)		Poster reports	
15 ²⁵ – 15 ⁵⁰	<i>Tóth L., Trampus P., Rátkai S.</i> The problems of life-extension of the Paks NPP (Bay Zoltán Institute for Logistics and Production Systems, Miskolc, HUNGARY)			
15 ⁵⁰ – 16 ¹⁵	<i>Goldstein R., Osipenko N.</i> Brittle fracture of porous bodies at multi-axial compression (Ishlinsky Institute for Problems in Mechanics of RAS, Moscow, RUSSIA)			
16 ¹⁵ – 16 ³⁵	Coffee break			
16 ³⁵ – 17 ⁰⁰	<i>Firstov S.</i> Nanostructures. Limiting strengthening (Kurdyumov Institute for Metal Physics of NASU, Kyiv, UKRAINE)			
17 ⁰⁰ – 17 ²⁵	<i>Markashova L., Hryhorenko H., Berdnikova Ye., Alekseyenko T.</i> Structural criterion of assessment of strength, plasticity, crack growth resistance of metals, alloys, composite materials and their welded joints (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)			
17 ²⁵ – 17 ⁵⁰	<i>Ostash O., Chepil R., Vira V.</i> Fatigue crack initiation regularities taking into account specimens shape and loading cycle ratio (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)			

POSTER REPORTS (Sections 4, 5)

1. *Brodnikovskyy D., Okun I., Tkachenko S., Kuzmenko M., Firstov S.* **Influence of structure and deformation conditions on fracture of Ti–Al–Zr alloys** (Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE)
2. *Vytvitski V.* **Phase-mechanical approach to assessment and improvement of hydrogen resistance of corrosion-resistant steels** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
3. *Hrechikhin L., Ivaschenko S., Shumskiy I.* **Nanomaterials and their physico-mechanical properties** (Minsk State Higher Avionic College, Minsk, BELARUS)
4. *Zarazovskyy M.* **The strength prediction of carbon fibre reinforced plastics under a plane-stress state** (Pysarenko Institute for Problems of Strength of NASU, Kyiv, UKRAINE)
5. *Ivanytskyy Ya., Kun P.* **Fatigue fracture modelling of structural materials under operating conditions** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
6. *Ivaskevych L., Mochylsky V., Holiyan O.* **Comparative estimation of hydrogen embrittlement of corrosion resistant steels by different test methods** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE; National University of Forestry and Wood Technology, Lviv, UKRAINE)
7. *Ihnatenko O.* **Hydrogen-induced localization of plasticity in FCC iron** (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
8. *Kaplun V., Mashovec N., Yakovlev V.* **Strengthening of titanium alloy surface with low-temperature nitration in glow discharge** (Khmelnitskiy National University, Khmelnytskyi, UKRAINE; Volochysk Engineering Works, DchP OJSC „Motor Sich”, Volochysk, UKRAINE)
9. *Martynyak R., Malanchuk N., Voloshyn M., Slobodyan B.* **Contact strength of coupling solids under local slip at the zone of surface defect** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE; Lviv Polytechnic National University, Lviv, UKRAINE)
10. *Marchuk M., Khomyak M., Pakosh V.* **New mixed scheme of finite element method for strength estimation of layered composites with damage** (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE; I. Franko Lviv National University, Lviv, UKRAINE)
11. *Onyshchak N.* **Estimations of body strengthening with two cracks, healed on injection technologies** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
12. *Paustovskyy O., Berezhnycka M., Kyrylenko S.* **Residual stresses in electric spark coatings and their stability** (Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE; Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
13. *Prunko I., Bohatchuk Yu., Markov A.* **Renovation of the pins worn-out surfaces of oil-field pumps by electric-spark build-up and hardening** (Ivano-Frankivs'k Oil and Gas University of Technology, Ivano-Frankivs'k, UKRAINE, Bohorodchany Production Management of Underground Gas Storage, Bohorodchany, UKRAINE, Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
14. *Synyuk V., Stepanyuk S.* **Interaction of hydrogen with the dislocation structure of welded joints of structural steels** (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
15. *Skalskyi V., Rudavskyy D., Matviiv Yu.* **Stress distribution in composite reinforced by straight-line fibres** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE; Lutsk National Technical University, Lutsk, UKRAINE)
16. *Stashchuk M., Dorosh M.* **Evaluation of the body stress-strain state caused by hydrogen concentration** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)
17. *Tkachenko S., Kostornov A., Firstov S., Kotko A., Varchenko V.* **Investigation of tribotechnical properties of Ti-Si-alloys after end quenching** (Frantsevych Institute of Materials Science of NASU, Kyiv, UKRAINE)
18. *Ushkalov L., Vasilyev O., Samelyuk A., Brichevskiy M., Pryscheva Ye.* **Correlation between strength and conductivity of ZrO₂ and CeO₂ electrolytes of fuel cells** (Frantsevych Institute for Problems of Materials Science of NASU, Kyiv, UKRAINE)
19. *Khokhlova Yu., Khokhlov M.* **Investigation of the scale effect in integration of nanostructural copper condensates** (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
20. *Shtayura S., Kostiv R.* **Hydrogen influence on crack growth resistance of steel 20 under transversal shear** (Karpenko Physico-Mechanical Institute of NASU, Lviv, UKRAINE)

25th June, Thursday

		Poster reports
	PLENARY SESSION (Assembly Hall, 1 st Floor)	
10 ⁰⁰ – 10 ²⁵	<i>Jallouf S., Schmitt C., Pluvinage G. and Hadj-Taïeb E.</i> The policy of maintenance of water networks adduction based on an overpressure provoking by water hammer (Laboratoire de Fiabilité Mécanique (LFM), Ecole Nationale d'Ingénieurs de Metz, Metz FRANCE; Applied Fluid Mechanics and Modeling Unit, Ecole Nationale d'Ingénieurs de Sfax, Sfax, TUNISIA)	
10 ²⁵ - 10 ⁵⁰	<i>Matvienko Yu.</i> Models and criteria of deformation and fracture of bodies with notches (Mechanical Engineering Research Institute of RAS, Moscow, RUSSIA)	
10 ⁵⁰ – 11 ¹⁵	<i>Tkachenko S., Kostornov A., Firstov S., Kotko A., Varchenko V.</i> Investigation of tribotechnical properties of Ti-Si-alloys after end quenching (Frantsevich Institute for Problems of Materials Science of NASU, Kyiv, UKRAINE).	
11 ¹⁵ – 11 ⁴⁰	<i>Kit H., Sushko O.</i> Methods of solution of the problems for bodies with elliptic (circular) cracks under force and stationary temperature factors (Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Lviv, UKRAINE)	
11 ⁴⁰ - 12 ¹⁵	Coffee break	
12 ¹⁵ – 12 ⁴⁰	<i>Datsyshyn O.</i> Modelling of development of typical contact fatigue damages in rolling bodies (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)	
12 ⁴⁰ - 13 ⁰⁵	<i>Kaplun V., Kaplun P., Parshenko K.</i> Improvement of durability of the hard loaded couples of rolling under the cyclic contact loading (Khmelnitskiy National University, Khmelnitskiy, UKRAINE)	
13 ⁰⁵ – 13 ³⁰	<i>Zavaliy I., Denys R., Berezovets V.</i> Mechano-chemical synthesis of new magnesium-based composites for hydrogen storage (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)	
13 ³⁰ – 13 ⁵⁵	<i>Lobanov L., Poznyakov V.</i> Continuation of resource of the constructions from high strength steels on the basis of repair-welding technologies (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)	
14 ⁰⁰ - 15 ⁰⁰	Lunch	

PARALLEL SESSION			
	Section 6 STRESS CORROSION CRACKING AND CORROSION FATIGUE OF MATERIALS (Room 114, GROUND FLOOR)	Section 7 METHODS FOR TECHNICAL STATE ASSESSMENT AND LIFETIME EXTENSION OF DAMAGED CRITICAL STRUCTURES OF LONG-TERM EXPLOITATION (Room. 124, GROUND FLOOR)	Poster reports
15 ⁰⁰ – 15 ²⁰	<i>Kyryan V., Shonin V. Fatigue strength of welded joints of the thin sheet aluminium alloys</i> (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)	<i>Shulzenko N., Hontarovkyj P., Matyukhin Yu. Calculation techniques for definition of damage and life of high-temperature assembly of steam turbines</i> (Podgorny Institute for Mechanical Engineering Problems of NASU, Kharkiv, UKRAINE)	
15 ²⁰ – 15 ⁴⁰	<i>Dmytrakh I., Bilyy O., Barna R. Diagrams for structural integrity assessment of heat-and-power-engineering pipelines with corrosion fatigue defects</i> (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)	<i>Andreikiv O., Sas N. Fracture mesomechanics of metallic materials and constructions under high temperatures and long duration static loadings</i> (I. Franko Lviv National University, Lviv, UKRAINE)	
15 ⁴⁰ – 16 ⁰⁰	<i>Pokhmurkyj V., Khoma M., Krucan H., Chuchman M. The influence of loading conditions on resistance of structural steels to corrosive-mechanical fracture in hydrogen sulfide containing environments</i> (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)	<i>Osadchuk V., Haschuk P., Porokhovskyy Yu. Diagnostics of stressed state and strength assessment of main pipeline segments with cracks in the zone of various-thickness ring welded joints</i> (Lviv Polytechnic National University, Lviv, UKRAINE)	
16 ⁰⁰ – 16 ²⁰	<i>Chmiel J. Fracture mechanics approach to cavitations erosion of steels for shipbuilding</i> (Maritime University of Szczecin, Szczecin, POLAND)	<i>Tsyurulnyk O., Nikiforov K., Hredil M., Lunarska E., Nykyforchyn H. In service properties degradation of transit gas pipeline steels</i> (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE, Institute of Physical Chemistry of PAS, Warsaw, POLAND)	
16 ²⁰ – 16 ⁴⁰	<i>Smiyan O. Formation of fracture nuclei in metal during long-time operation</i> (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)	<i>Volchok I., Akimov I., Savchenko V. High-temperature fracture of the graphitized steel</i> (Zaporizhzhya National University of Technology, Zaporizhzhya, UKRAINE)	
16 ⁴⁰ – 16 ⁴⁵	Coffee break		
16 ⁴⁵ – 18 ⁰⁰	SPECIAL SESSION (Room 204, 1 ST FLOOR) Round table on actual problems of investigation of hydrogen effects on fracture and strength of structural materials		
19 ⁰⁰ - 21 ⁰⁰	CONFERENCE DINNER		

POSTER REPORTS (Sections 6, 7)

1. *Jurasz Z., Adamaszek K.* **Influence of chemical composition on activation energy in high chromium valve steels at high-temperatures** (BOSMAL Automotive Research and Development Center, Bielsko-Biala, POLAND)
2. *Jurasz Z., Adamaszek K., Grzesik Z., Mrowec S.* **The role of thermal stresses in corrosion of valve steels utilized in Diesel engines** (BOSMAL Automotive Research and Development Center, Bielsko-Biala, POLAND; AGH University of Science and Technology, Krakow, POLAND)
3. *Stachowiak A., Zwierzycki W.* **The conception of modelling of corrosive and mechanical wear including material fatigue and micro-crack propagation** (Poznan University of Technology, Poznan, POLAND)
4. *Andrejko I., Holovatyuk Yu., Prokopec V.* **Aluminium alloys degradation after long exploitation** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
5. *Andrejko I., Kulyk V., Babachenko O.* **Optimization resource characteristics of railway wheel steel** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
6. *Balitskii O., Ripey I.* **The parameters of technical diagnosis of HPP steam pipelines: sensitiveness to degradation** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; JSC "Zachidenergo", Lviv, UKRAINE)
7. *Hrabovskyy R., Bolonnyy V., Luzhetskyy V.* **Rapid assessment working capacity of trunk oil pipelines with operational defects** (I. Franko State Pedagogical University, Drohobych, UKRAINE; Ivano-Frankivsk Oil and Gas University of Technology, Ivano-Frankivsk, UKRAINE)
8. *Datsyshyn O., Levus A.* **Some formation features of squat defect in rail steels under rolling contact** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
9. *Dzioba I., Tsyrylnyk O.* **Low temperature effect at the welded pipe integrity of the gas-main pipeline by the FITNET procedure** (University of Technology, Kielce, POLAND; Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
10. *Dzyubuk A., Nazar I., Palash R., Heryak I.* **Ways of providing of resource of the welded joints of main pipelines** (Lviv Polytechnic National University, Lviv, UKRAINE)
11. *Kalakhan O., Okhota H.* **Fretting-fatigue durability of the PT-3B titanium alloy with vacuum-arc multi-layer titanium nitride coating** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
12. *Klochkov I.* **Influence of welding method on strength and fatigue performance of Al-Mg alloys welded joints** (Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
13. *Kosarevych R., Kobasyar M., Rusyn B.* **Weight functions determination for graph min-cut construction approach in structural materials image segmentation** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
14. *Koshovyy V., Romanyshyn I., Romanyshyn R., Sharamaha R.* **Tomographic methods of metal degradation factor estimation** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
15. *Krechkovska H., Student O.* **Estimation of service effect of a heat power plant in manoeuvring mode of operation on the steam pipeline metal workability** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
16. *Krucan H., Shevcov V., Radkevych O., Puzrin L., Chuchman M., Polyeschuk M.* **Choice of a steel for basic parts of well-control equipment, operating in hydrogen-sulphide environments** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; Paton Electric Welding Institute of NASU, Kyiv, UKRAINE)
17. *Marukha V., Voloshyn M., Hnyp I.* **The method and device for non-destructive testing of concrete strength in building construction of long-term operation** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; Engineering centre "Techno-Resurs" of NASU, Lviv, UKRAINE)
18. *Nesterov Ye., Tsyrylnyk O.* **Degradation of mechanical properties of the steel of exploited bridge cranes** (Remtekhmorport LTD, Odesa, UKRAINE; Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
19. *Pokhmurkyj V., Marukha V., Zin I., Voloshyn M., Hnyp I., Bilyy L., Serednytskyi Ya.* **Inhibitor influence on corrosion and strength of reinforced concrete** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; Engineering centre "Techno-Resurs" of NASU, Lviv, UKRAINE)

20. *Radkevych O., Chumalo H., Yurkevych R., Chuchman M.* **Estimation of structural materials serviceability under action of static and cyclic loading in hydrogen sulphide environment** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
21. *Svirska L., Markov A.* **Mechanical properties of exploited steel from different zones of the elbow bend on steam main power plant** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
22. *Syrotyuk A., Frankevych L., Kuts O., Hushchak Zh.* **Spatial-temporal speckle correlation technique applied to monitoring crack initiation near pit** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; I. Franko State Pedagogical University, Drohobych, UKRAINE)
23. *Skalskyi V., Nazarchuk Z., Mykhalchuk V., Rudavskiy D., Dolishnij P.* **A method for ferromagnetic materials diagnostics employing magnetoelastic acoustic emission** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
24. *Student O., Tkachuk Yu.* **Peculiarities of fracture of operated metal from steam turbine blades and disk** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; Lutsk National Technical University, Lutsk, UKRAINE)
25. *Fedirko V., Pichuhin A., Lukyanenko O., Trush V.* **Fatigue and static strength of the α -titanium alloys welded connections under incomplete annealing in different mediums** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
26. *Khoma M., Lychkovskyy E.* **The influence of cathode coatings on endurance of carbon steels in environments of different corrosiveness** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE; Lviv National Medical University, Lviv, UKRAINE)
27. *Shackyi I., Struk A.* **Estimation of stressed state of underground pipeline by kinematics parameters of cracks in ground** (Ivano-Frankivs'k Department of Pidstryhach Institute for Applied Problems of Mechanics and Mathematics of NASU, Ivano-Frankivs'k, UKRAINE; Management pipelines „Prykarpatttransgaz”, Ivano-Frankivs'k, UKRAINE)
28. *Shyrovkov V., Hrybovska V.* **Increasing resource of functionality of the wares from spring steels by the technological methods** (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
29. *Yakym R., Petryna Yu., Pavlovskiy Yu.* **The prevention of cemented rock bits brittle fracture** (Ivano-Frankivs'k Oil and Gas University of Technology, Ivano-Frankivs'k, UKRAINE, Institute for Nuclear Research of NASU, Kyiv, UKRAINE, I. Franko State Pedagogical University, Drohobych, UKRAINE)
30. *Yasniy O., Pyndus Yu., Sorochak A.* **Probabilistic assessment of lifetime of railway wheel pair axle** (Ternopil State Ivan Pul'uj Technical University, Ternopil, UKRAINE)

26th June, Friday

	PLENARY SESSION (Assembly Hall, 1 st Floor)
10 ⁰⁰ – 10 ²⁵	<i>Srinivasan B., Blawert C., Dietzel W.</i> Coating influence on SCC behaviour of Mg alloys (Institute of Materials Research, Geesthacht, GERMANY)
10 ²⁵ - 10 ⁵⁰	<i>Angelova D., Yordanova R.</i> Bending fatigue in a low-carbon steel (University of Chemical Technology and Metallurgy, Sofia, BULGARIA)
10 ⁵⁰ – 11 ¹⁵	<i>Yasniy P., Maruschak P., Konovalenko I., Bischak R.</i> Diagnostics of microstructural degradation and multiple cracking of continuous casting machine rolls (Ternopil State Ivan Pul'uj Technical University, Ternopil, UKRAINE)
11 ¹⁵ – 11 ⁴⁰	<i>Gubeljak N., Močilnik V., Predan J.</i> Fatigue failure of pre-stressed torsion bar (University of Maribor, Maribor, SLOVENIA; High School of Mech. Eng., Ravne na Koroskem, SLOVENIA)
11 ⁴⁰ - 12 ¹⁵	Coffee break
12 ¹⁵ – 12 ⁴⁰	<i>Hrechikhin L., Podloznyi Ye.</i> Analysis of the continuous reinforcement of pre-stressed reinforced structures on a nanolevel (Minsk State Higher Avionic College, Minsk, BELARUS)
12 ⁴⁰ - 13 ⁰⁵	<i>Nazarchuk Z., Voitko M., Kurylyak D.</i> SH-wave sounding of the interphase crack (Karpenko Physical-Mechanical Institute of NASU, Lviv, UKRAINE)
13 ⁰⁵ – 13 ³⁰	<i>Orynyak I., Lokhman I., Krasovski A.</i> The limit load modelling of pipe bend with surface defect (Pysarenko Institute for Problems of Strength of NASU, Kyiv, UKRAINE, Ukrtransgas, Kyiv, UKRAINE)
13 ³⁰ – 13 ⁵⁵	<i>Timofeev B., Saji G.</i> Main damage events of NPP components during operation in WWER and RBMK (CRISM „Prometey”, St. Petersburg, RUSSIA; Ex-Secretariat of Safety Commission, Yokohama, JAPAN)
14 ⁰⁰	CLOSING CEREMONY (Assembly Hall, 1 st Floor)