

LABORATOR DE CERCETARE  
DOMENIUL INGINERIE MECANICĂ  
SPECIALIZAREA MAȘINI ȘI ECHIPAMENTE TERMICE

Colectiv de cercetare:

Coordonator: Prof.univ.dr.ing. Ioan MIHAI

Echipa de cercetare:

1. Ș.l.dr. Cornel Suci
2. Ș.l. drd.ing. Milan Crasi
3. Drd.ing. Florin Andronic
4. Drd.ing. Ioan-Cozmin Manolache-Rusu
5. Drd.ing. Liliana Pătuleanu
6. Drd.ing. Silviu Sprânceană
7. Ing. Dorel Pintilie

Teme de cercetare propuse în perioada 2012-2016:

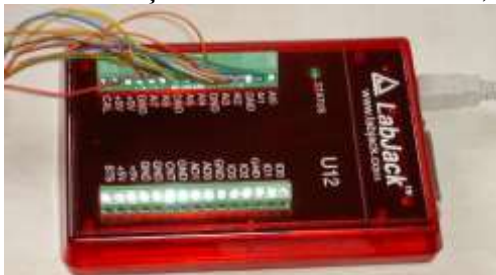
1. Studiul emisiilor la un Poket Biken care folosește bio-combustibili – proiect TOM
2. Analiza comportării motoarelor diesel la folosirea frânei Jack
3. Cercetări privind curgerea freonului R134 prin micro și nanocanalele sistemelor de răcire a CPU
4. Controlul sistemelor de suspensie semiactive care folosesc amortizoare magneto-reologice
5. Cercetări privind atomizarea la sistemele de injecție multipunct
6. Studiul transferului de căldură prin micro-tuburi termice

Dotarea laboratorului de cercetare:

1. Notebook Intel Core2Duo - 9 buc;
2. Osciloscop analogic-digital cu memorie HM1507-2 și software SP107;



3. Interfață LabJack U12 – 1 buc;



4. Senzori presiune MPX-12 – 8 buc;



## 12. Echipament diagnoză BOSCH KTS 540



## 13. Software ESI[tronic] 2012 – 2014

### Publicații

- C.1. **MIHAI I.: Heat Transfer / Theoretical Analysis, Experimental Investigations and Industrial Systems**, chapter: Heat transfer in Minichannels and Microchannels CPU cooling systems, published by INTECH, ISBN 978-953-307-226-5, pp. 51-76, Viena, January 2011, <http://www.intechweb.org/books/show/title/heat-transfer-theoretical-analysis-experimental-investigations-and-industrial-systems>, 654 pp.
- RII-1. **I. Mihai, I.C. Manolache-Rusu**, Proposed method to acquire an extended diagram for a gasoline engine, *MECHANIKA. Print ISSN 1392 - 1207. april 2013 Volume 19(2): 215-222 articol revistă ISI*, 100 th Anniversary Issue of the scientific journal “Mechanika” Received October 26, 2011, Accepted March 04, 2013, **ISI**
- RII-2. **MIHAI Ioan, PATULEANU Liliana, SUCIU Cornel, R12 Freon Condensation in Micro and Nanochannels of a Mini Heat Exchanger** Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies VI, edited by Paul Schiopu, Razvan Tamas, Proc. of SPIE, Section **MICROPHOTONICS AND MICRONANOTECHNOLOGIES**, Vol. 8411, 841120 © 2012 SPIE · CCC code: 0277-786/12/\$18 · doi: 10.1117/12.965301 Proc. of SPIE Vol. 8411, pag. 841120-1 ÷ 841120-8,
- RII-3. **MIHAI Ioan, SUCIU Cornel, PATULEANU Liliana, Modeling of Heat Transfer in Microchannels of a CPU - Heat Sink Cooling System**, Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies VI, edited by Paul Schiopu, Razvan Tamas, Proc. of SPIE, Section **MODELLING, DESIGN, AND SIMULATION**, Vol. 8411, 84112E, © 2012 SPIE · CCC code: 0277-786/12/\$18 · doi: 10.1117/12.965302, Proc. of SPIE Vol. 8411, pag. 84112E-1÷84112E-6
- RII-4. **I. Mihai, M. Ionescu, D. Amarandei, Determination of indicial response for an Adaptive Hydraulic System by means of the trapeze method**, *ISSN 1392 - 1207. MECHANIKA.2010. Nr.4(84) pp. 49-52– ISI*;
- RII-5. **MIHAI Ioan<sup>1)</sup>, SUCIU Cornel<sup>2)</sup>, Thin Layer CPU Thermal Grease Behavior at High Temperatures**, Book Editor(s): Schiopu, P; Caruntu, G Conference: Conference on Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies V Location: Constanta, ROMANIA Date: AUG 26-29, 2010 Sponsor(s): Politehnica Univ Bucharest, Optoelectron Res Ctr; Constanta Maritime Univ; SPIE Source: ADVANCED TOPICS IN OPTOELECTRONICS, MICROELECTRONICS, AND NANOTECHNOLOGIES V Book Series: Proceedings of SPIE-The International Society for Optical Engineering Volume: 7821 Article Number: 78211C DOI: 10.1117/12.881689, ISBN: 9780819483300, Published:7 December 2010, INDEXED SCOPUS and the Smithsonian/NASA Astrophysics Data Systems Abstract Service (ADS) ([http://spie.org/x648.html?product\\_id=881689](http://spie.org/x648.html?product_id=881689)), Pag. 78211C 1-6.
- RII-6. **MIHAI Ioan<sup>1)</sup>, SUCIU Cornel<sup>2)</sup>, Specific Features of Heat Transfer Via Micro And Nanochannels In Micro-Heat Exchangers**, Book Editor(s): Schiopu, P;

Caruntu, G Conference: **Conference on Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies V** Location: **Constanta, ROMANIA** Date: **AUG 26-29, 2010** Sponsor(s): **Politehnica Univ Bucharest, Optoelectron Res Ctr; Constanta Maritime Univ; SPIE** Source: **ADVANCED TOPICS IN OPTOELECTRONICS, MICROELECTRONICS, AND NANOTECHNOLOGIES V** Book Series: **Proceedings of SPIE-The International Society for Optical Engineering** Volume: **7821** Article Number: **78212F** DOI: **10.1117/12.881682**, ISBN: **9780819483300** Published: **7 December 2010**, **INDEXED SCOPUS**, and the Smithsonian/NASA Astrophysics Data Systems Abstract Service (ADS) ([http://spie.org/x648.html?product\\_id=881682](http://spie.org/x648.html?product_id=881682)), Pag. 78212F 1-6

- R11-7. **Ioan Mihai**, Cristian Pîrghie, Vlad Zegrean, “[Research Regarding Heat Exchange Through Nanometric Polysynthetic Thermal Compound to Cooler–CPU Interface](#)”, Heat Transfer Engineering, **ISSN: 1521-0537** (electronic) 0145-7632 (paper), **DOI: 10.1080/01457630902976000**, Volume 31, Issue 1, ianuarie 2010, Pages 90 – 97, **ARTICOL PREMIAT CNCSIS** ([http://cncsis.ro/userfiles/file/PREMIERE\\_ARTICOLE/%202010/ARTICOLE%202010\\_15%20DECEMBRIE\\_3IAN.pdf](http://cncsis.ro/userfiles/file/PREMIERE_ARTICOLE/%202010/ARTICOLE%202010_15%20DECEMBRIE_3IAN.pdf)) **ARTICOLE LISTA 5\_REZULTATE\_PREMIERE\_ARTICOLE\_COMPETITIA\_2010\_(15 DECEMBRIE) PAG. 54, articol ISI.**

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