

# ICMT'07

## INTERNATIONAL CONFERENCE ON MILITARY TECHNOLOGIES 2007

In frame of attendant scientific program of  
CATE 2007 (Community – Army – Technology – Environment)  
International Exhibition IDET 2007,

Brno, Czech Republic

2. - 4. May 2007



Ing. Jan Čížmár, CSc. a doc. Ing. Rudolf Jalovecký, CSc. na veletrhu IDET 2007 v expozici Univerzity obrany po tři dny opatrovali svatostánek katedry, až z toho někteří ztratili hlas a vážně onemocněli...



Oba „chairmani“ v akci, komunikativní znalost běžné i odborné angličtiny nezbytně nutná!

**IV. Electronic, Avionics**

**4.5.2007, 09:00 – 11:00**

**Room: C4**

**Garant: assoc. prof. Ing. Rudolf Jalovecký, CSc., Ing. Jan Čížmár, CSc.**

**Chairman: Ing. Jan Čížmár, CSc., Ing. Michal Dub, Ph.D.**

Nr.	Time	Author/s	Paper Title	Page
1	09:00–09:15	LUNGU, Romulus LUNGU, Mihai TUDOSIE, Alexandru	Discrete command law of the longitudinal movement of the aircrafts	324
2	09:15–09:30	LUNGU, Romulus LUNGU, Mihai CORCAU, Jenica	Aircrafts movement models identification using neuronal networks	330
3	09:30–09:45	STOENESCU, Eleonor	Contributions for the numerical analysis of the electrical circuits at switching-over regimes	336
4	09:45–10:00	TUDOSIE, Alexandru	Supersonic air inlet's control system based on the inner normal shock wave's position stabilisation	342
5	10:00–10:15	PAŘÍZEK, Jiří JALOVECKÝ, Rudolf ČIŽMÁR, Jan	Development of a digital fuel quantity indicating system for aircraft	316
6	10:15–10:30	DUB, Michal JALOVECKÝ, Rudolf	Aircraft trajectory estimation using recursive identification	305
7	10:30–10:45	ČIŽMÁR, Jan ANDRLE, Miloš	Influence of sensor quality on inertial reference unit accuracy	299
8	10:45–11:00	-----	Progressive combined joint-military test environment (PMTE) and Progressive combined joint-military automatic test systems (PMATS) – important pillar and catalyzer for effective military capabilities domination dynamic	350



Jeden ze členů rumunské delegace, Assoc. Prof. Eng. Alexandru Tudosie, Ph.D., University of Craiova, Avionics Department. Po ukončení jednání sekce jsme díky přejícímu počasí naše hosty povozili po slavkovském bojišti a upevnili tak nově navázaná přátelství.



Ukazovátko? Nepotřebujeme, na to máme Honzu aneb technicky vzdělaný odborník si umí poradit!

Naše příspěvky na konferenci ICMT 2007:

ANDRLE, M.; ČIŽMÁR, J.: Influence of Sensor Quality on Inertial Reference Unit Accuracy. In *Proceeding of the International Conference on Military Technologies „ICMT 2007“*. Brno, University of Defence, 2007, s. 299-304. ISBN: 978-80-7231-238-2.

The paper deals with simulation of the inertial reference unit operation and with analysis of its accuracy in dependence on the duality of accelerometers, gyroscopes and flux gate sensors.

ČIŽMÁR, J.; JALOVECKÝ, R.; PAŘÍZEK, J.: Development of a Digital Fuel Quantity Indicating System for Aircraft. In *Proceeding of the International Conference on Military Technologies „ICMT 2007“*. Brno, University of Defence, 2007, s. 316-323. ISBN: 978-80-7231-238-2.

The paper deals with the development of a digital capacitive fuel quantity indicator for the aircraft L-159. During its development, the questions relating to temperature dilatation, temperature dependence on the dielectric constant of fuel, and nonlinear volume fuel tank characteristic must be treated.

DUB, M.; JALOVECKÝ, R.: Aircraft Trajectory Estimation Using Recursive Identification. In *Proceeding of the International Conference on Military Technologies „ICMT 2007“*. Brno, University of Defence, 2007, s. 305-309. ISBN: 978-80-7231-238-2.

This paper deals with current parameter identification principles used for a description of aircraft motion. Fundamental principles for an experimental online identification of difference state equation matrix coefficients are introduced. The creation of a mathematical model using the classic least squares method and usability of the sequential least squares method for updating model parameters are described. The whole concept is tested with real measured data of PRS flight data recorder of the L-39 aircraft using the software support of the MATLAB program.