

CONFERENCE PROGRAMME



1st International Conference on
Data Management and Security:
Applications in Medicine, Sciences
and Engineering



DATA 2013

NOTES TO CHAIRMEN AND PRESENTERS

- *Chairmen must be in their respective rooms 10 minutes before the start of their session to meet with the presenting authors.*
- *Authors must meet with the Chairman of their session 10 minutes before the start of the session.*
- *Authors must keep strictly to the time allocated for their presentation to ensure the smooth running of the programme.*
- *This programme is subject to last-minute alterations, please refer to the conference noticeboard for the most up-to-date information.*

7 - 9 May 2013
Elche, Alicante, Spain

Organised by:
University Miguel Hernandez, Elche, Spain
Wessex Institute of Technology, UK

Sponsored by:
WIT Transactions on Biomedicine and Health
WIT Transactions on Information and Communication Technologies

Supported by:
International Journal of Safety and Security Engineering

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Tuesday, 7 May 2013

Page number
in proceedings

09.20 **Opening addresses**

Session 1: Coding theory and cryptography. Applications. Special session organised by V. Herranz (I)

09.40 Review of simulations tools for channel coding
V. Galiano, R. Gandia, V. Herranz & C. Perea 3

10.05 Key agreement protocols for distributed secure multicast
over the ring
J.-J. Climent, J. A. López-Ramos, P. R. Navarro & L. Tortosa 13

REFRESHMENT BREAK

Session 2: Coding theory and cryptography. Applications. Special session organised by V. Herranz (II)

11.00 The degree of a Boolean function and some algebraic properties
of its support
J.-J. Climent, F. J. García & V. Requena 25

11.25 Improving image compression through the use of
evolutionary computing algorithms
O. López-Granado, V. Galiano, A. Martí, H. Migallón,
M. Martínez-Rach, P. Piñol & M. P. Malumbres 37

11.50 **Invited:**
A construction of MDS array codes
S. D. Cardell, J.-J. Climent & V. Requena 47

LUNCH



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Tuesday, 7 May 2013

Session 3: Statistical processing and Data Mining to solve real problems. Special Session organised by A. Rabasa

- | | | |
|-------|--|-----|
| 15.00 | Monte Carlo simulation study under regression models to estimate credit banking risk in home equity loans
D. Morales, A. Pérez-Martín & M. Vaca. | 141 |
| 15.25 | A methodology for evacuation route planning inside buildings using geospatial technology
A. Ramón, A. B. Rodríguez-Hidalgo, J. T. Navarro-Carrión & B. Zaragozaí. | 155 |
| 15.50 | Data management in drip irrigation monitoring for vineyards in pot by weighing lysimeter
A. Ruiz Canales, A. Jaén Ruiz, L. Ruiz Peñalver, H. Puerto Molina, D. Intrigliolo Molina & J. M. Molina Martínez | 167 |

REFRESHMENT BREAK

Session 4
Chairman: C. Brebbia

- | | | |
|-------|---|------|
| 16.45 | Design of two blocks of a speech coding system to be implemented on an FPGA based card
T. Benmakhlouf, S. Mekaoui & K. Ghoumid | 73 |
| 17.10 | A method for building desktop software automated update systems
D. Sitnikov, A. Sitnikov & O. Ryabov | 105 |
| 17.35 | Invited:
Apoor man's air control system for ultralight aviation based on GPS data and G3 mobile communications
J. J. Reig & A. Bia | Oral |

END OF DAY 1



Wednesday, 8 May 2013

Session 5: Applications in medicine (I)

Chairman: A. Rabasa

Invited:

09.20 Blood flow simulations in patient-specific coronary bypass grafts
E. S. Bernad, M. Craina & S. I. Bernad 187

09.55 Flow in re-stenosed artery after angioplasty
S. I. Bernad, A. Totorean, E. S. Bernad & R. Susan-Resiga 209

Additional Presentation:

Invited:

10.30 Traffic matrix estimation using the Levenberg-Marquardt
neural network of a large IP system
S. Mekaoui, C. Benhamed & K. Ghoumid 85

REFRESHMENT BREAK

Session 6: Applications in medicine (II)

Chairman: S. Mekaoui

11.35 A medical knowledge management system based on expert tagging
(MKMST)
A. Baigorri, J. Villadangos, J. J. Astrain & A. Córdoba 221

12.00 The importance of adequate data pre-processing in early diagnosis:
classification of arrhythmias, a case study
A. Rabasa, A. F. Compañ, J. J. Rodríguez-Sala & L. Noguera 233

12.25 Child cancer follow-up ontology and information system
J. A. El-Subaihi, F. Anton, D. Mioc, S. V. Andersen & B. Lausen 127

13.30 Lunch and Technical Visit:

We are organising a guided visit to the Data Processing Centre of Alicante Airport, where members of the technical staff responsible for running the Centre will explain specific aspects of the operation of the communications network and security methods implemented on their databases. This will describe the main data structures and the organization of the different clusters as well as other topics of interest to the participants.

END OF DAY 2
Conference Dinner TBA



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Thursday, 9 May 2013

Session 7

Chairman: K. Shimano

- Invited:**
- 09.20 Data management for an anaesthesiology department optimization
A. Rabasa, A. F. Compañ, A. J. Agulló, J. J. Rodríguez-Sala,
L. Santamaría & L. Noguera 175
- Invited:**
- 09.55 Heat transfer analysis in the human abdomen with a focus upon
correlation between the amount of visceral fat and skin temperature
K. Shimano & Y. Shimano 197
- 10.20 Optimization methods for system track data securing using digital
signatures
G. Icriverzi Oral

REFRESHMENT BREAK

Session 8: Data management

Chairman: C. Brebbia

- 11.15 A novel remote access technical database for the
offshore diving industry
D. Johnston, T. Henaughen, B. G. Stewart, A. Nesbitt
& A. Ahmadinia 97
- 11.40 Fuzzy logic modelling of a performance evaluation system
for academic programmes in Nigeria higher education
E. M. Igbape & E. A. Onibere 113
- 12.05 Processing of large amounts of data on credit scoring example using
neural network technology
K. K. Nurlybayeva & G T Balakayeva Oral

END OF THE CONFERENCE

We hope you have enjoyed the conference and look forward to seeing you at
the next meeting in the series, have a safe and pleasant journey home