



**Program of the Multi-Conference on  
Systems, Signals & Devices**

**SSD 2008**

**July 20-23, 2008**

**Philadelphia University, Amman, Jordan**





# **Fifth International Multi-Conference on Systems, Signals and Devices SSD'08**

**July 20-23, 2008  
Amman Jordan**

## **Organized by:**

Philadelphia University (Jordan)

University of Sfax, Ecole Nationale d'Ingénieurs de Sfax (ENIS), (Tunisia)

University of Chemnitz, (Germany)

## **Supported by:**

IEEE Region 8

IET Jordan Branch

Philadelphia University (Jordan)

Jordan Engineering Association (Jordan)

Tunisian Scientific Society (TSS) (Tunisia)

Amanat Amman (Jordan)

## General Chairs:

Ibrahim Badran (Jordan), Hans-Rolf Tränkler (Germany)

## Co-Chairs:

Kasim Al-Aubidy (Jordan), Nabil Derbel (Tunisia)

## Organizing Chairs:

Ashraf I. Saleem (Jordan), Mohammad S. Sharawi (Jordan)

## Conference Chairs:

- Conference SAC: Munther N. Baker (Jordan), Mohamed Chtourou (Tunisia)
- Conference PES: Mahmoud Zaidan (Jordan), Ahmed Masmoudi (Tunisia)
- Conference CSP: Abdel-Rahman Qawasmi (Jordan), Faouzi Derbel (Germany)
- Conference SCI: Tarek Tutunji (Jordan), Olfa Kanoun (Germany)

## Organization Committee:

**Publications Team:** Ashraf I. Saleem (Jordan), Mohammad Al-Gawanem, Moez Feki (Tunisia), Ahmad Abu Alhaija (Jordan), Feryal (Jordan),

**Web Team:** Mai Al-Noursi (Jordan), Waleed Jayyousi (Jordan)

**Social and Publicity Team:** Mohammad Ajour (Jordan), Tarek Tutunji (Jordan),

**Financial Team:** Moahmod Zeidan (Jordan)

**Members:** Amin Kallel (Tunisia), Chokri Rekik (Tunisia), Lassaad Koubaa (Tunisia), Yasmine Bouteraa (Tunisia), Nouha Chaabène (Tunisia), Aida Drira (Tunisia), Sura Barakat (Jordan),

# Preface

Following the success of SSD'01 held in Hammamet-Tunisia, SSD'03 and SSD'05 held in Sousse-Tunisia, SSD'07 held in Hammamet-Tunisia, the fourth International Multi-Conference on Systems, Signals and Devices - SSD'08 is held from the 20<sup>th</sup> to the 24<sup>th</sup> of July 2008 in Philadelphia University, Amman, Jordan. The conference program consists of 2 plenary sessions, 5 Keynote lecture sessions and 25 oral sessions. SSD'08 multi-conference is organized including 4 conferences covering different fundamental and applied aspects:

1. "Systems Analysis and Automatic Control" (SAC)
2. "Power Electrical Systems" (PES)
3. "Communication and Signal Processing" (CSP)
4. "Sensors, Circuits and Instrumentation Systems" (SCI)

SSD'08 secretariat has received 215 submissions from 25 countries: Algeria, Bahrain, Brasil, Canada, China, Egypt, France, Germany, India, Indonesia, Iran, Iraq, Japan, Jordan, Lebanon, Malaysia, Morocco, Oman, Pakistan, Roumania, Spain, Thailand, Tunisia, U.A.E., U.K., U.S.A.

Each paper has been reviewed by at least two reviewers of the program committee which consisted of more than 100 scientists from more than 30 countries. Only 135 papers have been accepted.

We would like to express our deep gratitude to all chairs and members of the program committee for their substantial reviews. Special thanks are addressed to the members of the organizing committees for their determination to make this event a great success.

Finally, we would like to extend our feeling of gratitude to all those who have contributed to the financial support of SSD'08.

Amman, July, 2008

Ibrahim Badran

Hans-Rolf Tränkler

# General Informations

## Date and Location

The SSD Multi-Conference will be held in Amman, Jordan on 20-23 of July 2008 to give an opportunity to contributors to visit other attractive corners of Jordan.

## Location and Access:

The Conference will be held at Philadelphia University  
<http://www.philadelphia.edu.jo/>

## Conference Hotels

Philadelphia University recommends the following hotels.

These hotels are all located in the historical area which is a vibrant area full of restaurants and activities that tourists enjoy.

For reservations, participants should use the links above.

University shuttle buses will be available for transportation between the hotels and university.

### InterContinental Hotel

InterContinental Jordan enjoys a prime location at the heart of the diplomatic area of Amman, on the summit of one of the seven hills, and has a long-established relationship with the local community.

Located within walking distance of the old city centre, InterContinental Jordan is only a 30-minute drive from Queen Alia International Airport.

[www.ichotels.com](http://www.ichotels.com)

### Belle Vue Hotel

Discover the charming panoramic view of Amman from all suites of the Belle Vue Hotel, a deluxe hotel conveniently located to cater to your needs and to ensure a memorable stay... Whether your visit is for business or pleasure, the Belle Vue Hotel combines comfort with unparalleled service standards and facilities that go beyond your expectations.

[www.bellevue.com.jo](http://www.bellevue.com.jo)

### Rio Jordan Hotel

Rio Jordan Hotel is a three star hotel headquartered in Amman Jordan. It is 25 min. away from Queen Alia International Airport and just 10 min. away from the center of the city. Tours with local guides can be organized directly from the hotel to all the nice places of Jordan such as Petra, Wadi Rum, Dana, Dead Sea, Madaba, Mount Nebo, Jerash, Um Qeis, Pella and so on.

Room Prices:(including Breakfast) Single 20JD Double 30JD

[www.riojordan-hotel.com](http://www.riojordan-hotel.com)

## **Granada Hotel**

This hotel was established on 1967. It was renovated on 2007. Nowadays, Jebal Amman is thriving with restaurants and cafés due to its magnificent location, ambiance and relaxing atmosphere in addition of-course to the view. Old houses are being renovated and turned into either a 5 star restaurant or a chilled out café. It remains to be one of Jordan's favorite destinations for many locals, residents and foreigners.

[www.granadajordan.com](http://www.granadajordan.com)

# The Host Country Jordan

## Official Language

The official language in Jordan is Arabic. The second language is English and is spoken by almost all people.

## Jordan: Overview

Bible stories, lost cities, Lawrence of Arabia - Jordan has romantic associations up to its eyeballs. It's a country that ought to be awash with tourists, but the Middle East's bad reputation has kept them away in droves. Don't be fooled: Jordan is, on the whole, peaceful.

More than that, it's one of the most welcoming, hospitable countries in the world. Where else could you leave your belongings on the street for hours at a time, and find them there when you get back? Where else do total strangers with nothing to sell invite you into their homes?

## Visit to Jordan

Please visit the website <http://www.visitjordan.com/>, and choose the preferred language.

You can see the weather in Jordan by visiting the website:

<http://www.weatheronline.co.uk/Jordan/Amman.htm>

## Currency Exchange:

International currencies can be changed in every bank or post-office in Jordan to Jordan Dinars (JOD). The exchange rates to and from €, US\$ and Tunisian Dinar (TND) are approximately:

|                          |                          |
|--------------------------|--------------------------|
| 1 JOD $\simeq$ 0.9 €     | 1 € $\simeq$ 1.11 JD     |
| 1 JOD $\simeq$ 1.41 US\$ | 1 US\$ $\simeq$ 0.708 JD |
| 1 JOD $\simeq$ 1.65 TND  | 1 TND $\simeq$ 0.606 JD  |

For more exact rates, see the website: [www.xe.com](http://www.xe.com)

## Conference Web-Site

- ▶ <http://www.philadelphia.edu.jo/SSD08/>
- ▶ <http://www.ssd-conf.org>

## Conference Registration Desk

The Conference registration desk will be indicated in the University of Philadelphia, and will be open on Sunday, July 20, from 8:00 to 9:00.



# Payment Method and Registration Fees

The registration fee includes admission to all conference events, a copy of the proceedings CD, local transportation, conference dinner, all coffee breaks and refreshments.

At least one author per paper must register and pay the full registration fee (at the non-student rate) according to the following schedule:

| Registration fee Schedule | Before July 1st 2008 | Late Registration |
|---------------------------|----------------------|-------------------|
| Full Fare for one paper   | 250 Euro             | 300 Euro          |
| Student                   | 75 Euro              | 100 Euro          |
| Additional paper          | 75 Euro              | 100 Euro          |

Students must show a valid proof of their student status.

## Additional Proceedings

An additional copy of the conference summary book costs 20 JD

An additional copy of the conference CD-ROM costs 20 JD

## Author Informations

### Official Language of the Conference

The official language of the conference is English and will be used for all presentations and printed material.

### Oral Presentations

A 20 min time slot (incl. discussion) is allocated for each contributed oral presentation. A standard slide projector and eventual a video projector. In all cases you should have necessarily slides at the same time.

| <b>SSD'08 - Multi-Conference Program</b> |                                |                                       |                   |              |                                |                                |                   |                                |                                |         |         |         |                                |         |                   |                                |         |         |         |
|--|--------------------------------|---------------------------------------|-------------------|--------------|--------------------------------|--------------------------------|-------------------|--------------------------------|--------------------------------|---------|---------|---------|--------------------------------|---------|-------------------|--------------------------------|---------|---------|---------|
|  | 8 h 00                         | 8 h 30                                | 9 h 00            | 9 h 20       | 9 h 30                         | 9 h 30                         | 10 h 00           | 10 h 20                        | 10 h 30                        | 10 h 40 | 11 h 20 | 11 h 40 | 12 h 00                        | 13 h 30 | 14 h 00           | 15 h 00                        | 15 h 30 | 17 h 30 | 19 h 30 |
|  | 8 h 30                         | 9 h 00                                | 9 h 20            | 9 h 30       | 10 h 00                        | 10 h 20                        | 10 h 30           | 10 h 40                        | 11 h 20                        | 11 h 40 | 12 h 00 | 13 h 30 | 14 h 00                        | 15 h 00 | 15 h 30           | 17 h 30                        | 19 h 30 |         |         |
|  | 8 h 30                         | 9 h 00                                | 9 h 20            | 9 h 30       | 10 h 00                        | 10 h 20                        | 10 h 30           | 10 h 40                        | 11 h 20                        | 11 h 40 | 12 h 00 | 13 h 30 | 14 h 00                        | 15 h 00 | 15 h 30           | 17 h 30                        | 19 h 30 |         |         |
| <b>Sunday<br/>July, 20</b>               | Registration                   | Official Opening                      |                   |              |                                | Coffee Break                   | Plenary Session 1 | Oral Sessions CSP1, SAC1, PES1 |                                |         |         | Lunch   |                                |         |                   | Oral Sessions CSP2, SAC2, SCI1 |         |         |         |
| <b>Monday<br/>July, 21</b>               | Plenary Session 2              | Keynote Lectures CSP-L, SAC-L, SCH-L1 |                   | Coffee Break | Oral Sessions CSP3, PES2, SCI2 |                                | Coffee Break      | Coffee Break                   | Oral Sessions CSP4, SAC3, PES3 |         | Lunch   |         | Oral Sessions CSP5, SAC4, SCI3 |         | Conference Dinner |                                |         |         |         |
| <b>Tuesday<br/>July, 22</b>              | Keynote Lectures PES-L, SCH-L2 |                                       | Oral Session CSP6 |              | Coffee Break                   | Oral Sessions CSP7, SAC5, PES4 |                   | Coffee Break                   | Oral Sessions CSP8, SAC6, SCI4 |         | Lunch   |         | Oral Sessions CSP9, PES5, SCI5 |         | Closure           |                                |         |         |         |
| <b>Wednesday<br/>July, 23</b>            | <b>Post Conference Program</b> |                                       |                   |              |                                |                                |                   |                                |                                |         |         |         |                                |         |                   |                                |         |         |         |

# Conference on Systems Analysis & Automatic Control

## Conference chair:

Munther N. Baker (Jordan) and Mohamed Chtourou (Tunisia)

## Scientific Program committee:

---

|                         |                        |                         |
|-------------------------|------------------------|-------------------------|
| Mohamed M'Saad (FR)     | Faiçal Mnif (OM)       | M. N. Abdelkrim (TN)    |
| R. Ben Abdenmour (TN)   | Ouassima Akhrif (CND)  | Saif Al-Hiddabi (OM)    |
| Abdulwahid AlSaif (KSA) | Fouad Al-Sunni (KSA)   | Dumitru Baleanu (TUR)   |
| Mohamed Benrejeb (TN)   | Jacques Bernussou (FR) | Maurice Bétemps (FR)    |
| Mammar Bettayeb (UAE)   | Eric Bideaux (FR)      | Pascal Bigras (CND)     |
| Fares Boudjemaa (ALG)   | El-Kebir Boukas (CND)  | Bernard Brogliato (FR)  |
| Xavier Brun (FR)        | Jean Louis Calvet (FR) | Riccardo Caponetto (IT) |
| Mohamed Chaabane (TN)   | Yang Quang Chen (USA)  | Slim Choura (TN)        |
| Carlos Cotta (ES)       | Boutaïeb Dahhou (FR)   | Tarak Damak (TN)        |
| Jean Duplaix (FR)       | Sami El-Ferik (KSA)    | Gilles Enéa (FR)        |
| Jelal Ezzine (TN)       | Mondher Farza (FR)     | Ghorbel Fathi (USA)     |
| Gérard Favier (FR)      | Florin G. Filip (RO)   | Germain Garcia (FR)     |
| Moncef Gasmı (TN)       | N. Benhadj Braïek (TN) | Dorin Isoc (RO)         |
| Anas Kamoun (TN)        | Mohamed Kamoun (TN)    | Jean Pierre Kenné (CND) |
| Christophe Kolski (FR)  | J. A. T. Machado (PT)  | J. Aguilar Martin (FR)  |
| Pierre Melchior (FR)    | Khaled Metwally (EGY)  | Faouzi M'Sahli (TN)     |
| Abderrazak Ouali (TN)   | Ahmet B. Özgüler (TUR) | Minh-Tu Pham (FR)       |
| A. Poznyac (MEX)        | Joseba Quevedo (ES)    | Maarouf Saad (CND)      |
| Manabu Sano (JP)        | Mansour Souissi (TN)   | Marc Thomas (CND)       |
| Daniel Thomasset (FR)   | Ahmed Toumi (TN)       | Blas M. Vinagre (ES)    |
| Herbert Werner (GER)    | Tony Wong (CND)        | Ronald Yager (USA)      |
| Lotfi Zadeh (USA)       |                        |                         |

---

# Topics

- Advances in Linear Control Theory and Applications,
- Large scale systems,
- Infinite dimension systems,
- Robust Control,
- Adaptive and Predictive Control,
- Distributed Control,
- Geometric Control,
- Optimal and Stochastic Control,
- Game theory and state estimation,
- Nonlinear Control techniques,
- Artificial intelligence and expert systems,
- Intelligent Control Systems,
- Hierarchical and man-machine systems,
- Robotics and Robot Control,
- System reliability,
- Process Control,
- Space, marine and ground vehicles,
- Economical Models and Control,
- Biological Models and Control.

| <b>SSD'08 - SAC Conference Program</b> |                                |                  |                   |                       |        |        |              |                    |                   |              |                   |                   |         |         |         |                   |         |         |                   |         |         |         |         |  |                   |  |  |
|--|--------------------------------|------------------|-------------------|-----------------------|--------|--------|--------------|--------------------|-------------------|--------------|-------------------|-------------------|---------|---------|---------|-------------------|---------|---------|-------------------|---------|---------|---------|---------|--|-------------------|--|--|
|  | 8 h 00                         | 8 h 30           | 9 h 00            | 9 h 10                | 9 h 30 | 9 h 30 | 10 h 00      | 10 h 20            | 10 h 30           | 10 h 30      | 11 h 20           | 11 h 40           | 11 h 40 | 12 h 00 | 12 h 00 | 13 h 30           | 14 h 00 | 14 h 00 | 15 h 00           | 15 h 30 | 17 h 30 | 17 h 30 | 19 h 30 |  |                   |  |  |
| <b>Sunday<br/>July, 20</b>             |                                | 8 h 30           | 9 h 00            | 9 h 10                | 9 h 30 | 9 h 30 | 10 h 00      | 10 h 20            | 10 h 30           | 10 h 30      | 11 h 20           | 11 h 40           | 12 h 00 | 12 h 00 | 13 h 30 | 14 h 00           | 14 h 00 | 15 h 00 | 15 h 30           | 17 h 30 | 17 h 30 |         |         |  |                   |  |  |
|  |                                | 8 h 30           | 9 h 00            | 9 h 10                | 9 h 30 | 9 h 30 | 10 h 00      | 10 h 20            | 10 h 30           | 10 h 30      | 11 h 20           | 11 h 40           | 12 h 00 | 12 h 00 | 13 h 30 | 14 h 00           | 14 h 00 | 15 h 00 | 15 h 30           | 17 h 30 | 17 h 30 |         |         |  |                   |  |  |
|  | Registration                   | Official Opening |                   |                       |        |        | Coffee Break | Plenary Session 1  | Oral Session SAC1 |              |                   |                   |         | Lunch   |         |                   |         |         | Oral Session SAC2 |         |         |         |         |  |                   |  |  |
| <b>Monday<br/>July, 21</b>             |                                |                  | Plenary Session 2 | Keynote Lecture SAC-L |        |        | Coffee Break |                    | Coffee Break      |              | Coffee Break      | Oral Session SAC3 | Lunch   |         |         | Oral Session SAC4 |         |         |                   |         |         |         |         |  | Conference Dinner |  |  |
| <b>Tuesday<br/>July, 22</b>            |                                |                  |                   |                       |        |        | Coffee Break | Oral Sessions SAC5 |                   | Coffee Break | Oral Session SAC6 | Lunch             |         |         |         |                   |         |         |                   |         |         |         |         |  | Closure           |  |  |
| <b>Wednesday<br/>July, 23</b>          | <b>Post Conference Program</b> |                  |                   |                       |        |        |              |                    |                   |              |                   |                   |         |         |         |                   |         |         |                   |         |         |         |         |  |                   |  |  |

# Sunday, 20 of July, 2008

|                     |                          |
|---------------------|--------------------------|
| <b>Registration</b> | <u>Sunday, 8h00-9h00</u> |
|---------------------|--------------------------|

|                         |                           |
|-------------------------|---------------------------|
| <b>Official Opening</b> | <u>Sunday, 9h00-10h00</u> |
|-------------------------|---------------------------|

|        |   |         |
|--------|---|---------|
| Coffee |  | 10 h 00 |
| Break  |   | 10 h 30 |

|   |                            |
|---|----------------------------|
| <b>Plenary Session 1 :</b><br><b>Chairs :</b> N. Derbel (Tunisia)<br>M. Feki (Tunisia)<br><br>Building tomorrow's electrical engineers .....<br>I. Zabalawi .....(Jordan) | <u>Sunday, 10h30-11h20</u> |
|---|----------------------------|

|  |                            |
|--|----------------------------|
| <b>Session SAC 1 : Modeling and Identification</b><br><b>Chairs :</b> M. Farza (France)<br>J. Ezzine (Tunisia)<br><br>1569111431 Fuzzy identification of dynamic systems with adaptive structure .....<br><i>S. Alimi and M. Chtourou</i> ..... (Tunisia)<br>1569114451 Identification of diffusion processes using fractional non commensurate order models .....<br><i>T. Djamah, S. Djennoune and M. Bettayeb</i> ..... (Algeria-U.A.E.)<br>1569120820 Marine propeller dynamics modeling using a frequency domain approach .....<br><i>M. Vonnet, N. Ait-Ahmed and L. Loron</i> ..... (France)<br>1569120885 A stochastic failure compensation controller of induction motor based state estimation technique .....<br><i>A. Maouche, M. R. Mekideche and B. Bensaker</i> ..... (Algeria)<br>1569120896 State observer of bilinear systems subjected to unknown inputs .....<br><i>C. Mechmeche, H. Hamdi and H. Yahoui</i> ..... (Tunisia-France)<br>1569121808 A method for on-line identification and control based on hardware-in-the-loop concept .....<br><i>A. I. Saleem and T. A. Tutunji</i> ..... (Jordan) | <u>Sunday, 11h20-13h30</u> |
|--|----------------------------|

|              |   |                    |
|--------------|---|--------------------|
| <b>Lunch</b> |  | 13 h 30<br>15 h 30 |
|--------------|---|--------------------|

Sunday, 15h30-17h30

**Session SAC 2 : Neural Networks**

**Chairs :** A. Ouali (Tunisia)  
E. K. Boukas (Canada)

- 1569107074 Designing an expert system of liver disorders by using neural networks and comparing it with parametric and nonparametric system .....  
*M. Neshat, M. Yaghobi and M. Naghibi* ..... (Iran)
- 1569113939 Optimization by GRBFNN of the performance of a novel linguistic fuzzy model of induction motor .....  
*L. Barazane, A. Khwaldeh, M. M. Krishan and M. A. Jumah* . (Algeria-Jordan-Bahrain)
- 1569116808 Synthesis of a robust neural input-state feedback controller for nonlinear systems  
  
*S. Jerbi, N. Derbel and H. Jerbi* ..... (Tunisia)
- 1569118518 Neural network control of an induction machine operating with variable parameters .....  
*C. Rekik, M. Djemel and N. Derbel* ..... (Tunisia)
- 1569120851 Neural networks based control of chaotic phase locked loop .....  
*M. Mchiri, S. Belghith and Z. Ben Jemaa* ..... (Tunisia)

**Monday, 21 of July, 2008**

Monday, 8h30-9h20

**Plenary Session 2 :**

**Chairs :** M. Elleuch (Tunisia)  
A. Masmoudi (Tunisia)

Control and safety verification based on a paraconsistent logic program EVALPSN  
K. Nakamatsu ..... (Japan)

Monday, 9h20-10h00

**Keynote lecture SAC-L :**

**Chairs :** M. M'Saad (France)  
F. Mnif (Oman)

Control .....  
T. A. Tutunji ..... (Jordan)

Coffee  
Break



10 h 00  
10 h 20

Monday, 10h20-11h40

**Assistance at other Conferences**

Coffee  
Break



11 h 40  
12 h 00

Monday, 12h00-14h00

### Session SAC 3 : Fuzzy Systems

Chairs : R. Ben Abdennour (Tunisia)  
M. M'Saad (France)

- 1569107058 Multi-objective optimization of TSK fuzzy models .....  
*O. Guenounou, A. Belmehdi and B. Dahhou* ..... (Algeria-France)
- 1569117342 A discussion on sugeno fuzzy logic approximations of nonlinear systems .....  
*N. Derbel* ..... (Tunisia)
- 1569120848 Some clustering techniques for modeling uncertain nonlinear systems .....  
*A. Zribi, M. Djemel and M. Chtourou* ..... (Tunisia)
- 1569120854 Multi-objective optimal fuzzy logic controller for nonlinear building-MR damper  
systems .....  
*M. Askari and A. H. Davaie-Markazi* ..... (Iran)
- 1569120856 Fuzzy logic parameter estimation of an electrical system .....  
*M. Jabri, H. Chouiref, H. Jerbi and N. Benhadj Braïek* ..... (Tunisia)

Lunch



14 h 00  
15 h 30

Monday, 15h30-17h30

### Session SAC 4 : Control Systems

Chairs : N. Abdelkrim (Tunisia)  
M.M'Saad (France)

- 1569114804 Real-time intelligent process order control based on a paraconsistent annotated  
logic program EVALPSN .....  
*K. Nakamatsu, S. Akama and J. Abe* ..... (Japan-Brazil)
- 1569117336 Tracking and regulation in linear multivariable systems: a frequency domain  
approach .....  
*P. Leesha, J. Jeevamma and M. T. Abraham* ..... (India)
- 1569117964 Time delay feedback control and chaotification of continuous dynamical systems  
*A. Ikhlef and A. Ikhlef* ..... (Algeria)
- 1569118674 Stable and highly efficient operation of open-loop controlled PM synchronous  
motor drive .....  
*M. Al-Taee, M. Al-Taee and M. Al-Taee* ..... (Jordan)
- 1569120729 A 2-sliding control for pneumatic artificial muscles .....  
*M. Chettouh, R. Toumi and M. Hamerlain* ..... (Algeria)



# Tuesday, 22 of July, 2008

Tuesday, 8h30-10h00

## Assistance at other Conferences

|        |   |         |
|--------|---|---------|
| Coffee |  | 10 h 00 |
| Break  |   | 10 h 20 |

Tuesday, 10h20-11h40

### Session SAC 5 : Robotic systems

Chairs : M. M'Saad (France)  
D. Mehdi (France)

- 1569115938 Compensation of forces exerted over a short period applied to the robian biped robot trunk: simulations and experiments .....  
*C. Zaoui, O. Bruneau, F. B. Oueddou and A. Maalej* ..... (Tunisia-France)
- 1569117288 Cyclic control of redundant robot under constraint with the self-motion method  
*M. Benzaoui and H. Chekireb* ..... (Algeria)
- 1569117412 Dynamic redundancy resolution for mobile manipulators with joints velocity limits avoidance .....  
*M. Jallouli, M. Boukattaya and T. Damak* ..... (Tunisia)
- 1569118682 Real time localization of a mobile robot using webcam data .....  
*L. Amouri-Jmaiel, M. Jallouli and N. Derbel* ..... (Tunisia)
- 1569120733 Variable structure control for set-point stabilization of 2-DOF underactuated manipulators .....  
*S. Mahjoub, F. Mnif and N. Derbel* ..... (Tunisia-Oman)

|        |   |         |
|--------|---|---------|
| Coffee |  | 11 h 40 |
| Break  |   | 12 h 00 |

Tuesday, 12h00-14h00

### Session SAC 6 : Robust Control

Chairs : E. K. Boukas (Canada)  
A. S. Nouri (Tunisia)

- 1569115011 Polynomial approximations and convergence rate of Mamdani fuzzy controllers  
*J.-Y. Dieulot, N. Aoun, M. Benrejeb and P. Borne* ..... (France-Tunisia)
- 1569115943 A multi-agent predictive control approach based on fuzzy supervisory loop for fast dynamic systems .....  
*H. Ben Nasr and F. M'Sahli* ..... (Tunisia)
- 1569119055 Comparison of linear and nonlinear  $H_\infty$  control for a permanent magnet synchronous motor .....  
*S. Yousfi, S. Djennoune and M. Bettayeb* ..... (Algeria-U.A.E.)

Tuesday, 12h00-14h00

- 1569119680 An improved LMI approach for robust static output feedback stabilization of nonlinear systems .....  
*N. Bedioui, S. Salhi and M. Ksouri* ..... (Tunisia)
- 1569120728 Adaptive type-2 fuzzy control for induction motor .....  
*K. Chafaa, Y. Laamari, S. Barkati and S. Chaouch* ..... (Algeria)

Lunch



14 h 00

15 h 30

**Assistance at other Conferences**

Tuesday, 15h30-17h30

**Closure**

Tuesday, 17h30-18h30



# Conference on Power Electrical Systems

## Conference chair:

Mahmoud Zaidan (Jordan), Ahmed Masmoudi (Tunisia)

## Scientific Program committee:

---

|                          |                          |                          |
|--------------------------|--------------------------|--------------------------|
| Sylvain Allano (FR)      | Francesco Profumo (I)    | Abdulrahman Alolah (KSA) |
| Ilhem Belkodja (TN)      | Ronnie Belmans (BE)      | Hamid Ben Ahmed (FR)     |
| Hocine Ben Alla (ALG)    | Frédéric Bouillault (FR) | Mohamed Boussak (FR)     |
| Pascal Brochet (FR)      | Mouloud A. Denai (ALG)   | Rachid Dhifaoui (TN)     |
| Manual P.-Donsión (ES)   | Ahmed Elantably (USA)    | Mohamed Elleuch (TN)     |
| Mohamed Gabsi (FR)       | Gerard Henneberger (D)   | Mohamed El-Kady (KSA)    |
| Med B.A. Kamoun (TN)     | Jim L. Kirtley (USA)     | Yassine Koubaa (TN)      |
| Jean Paul Louis (FR)     | Gaston Magetto (BE)      | Claude Marchand (FR)     |
| Mohamed Mekidèche (ALG)  | Med F. Mimouni (TN)      | Bernard Multon (FR)      |
| Francesco Parasility (I) | Michel Poloujadoff (FR)  | Alfred Rufer (CH)        |
| Eric Schmidt (AT)        | Juliette Soulard (SW)    | Jan K. Sykulski (UK)     |
| Junji Tamura (J)         | Philippe Viarouge (CND)  |                          |

---

## Topics

- Electric machines modelling and control,
- Electric machine design,
- Special machines,
- Power electronic converters,
- Variable speed drives,
- Automotive electrical systems,
- Monitoring and diagnostics,
- Power systems,
- Renewable energy generation,
- Transformers.

## SSD'08 - PES Conference Program

|                               | 8 h 00                         | 8 h 30            | 9 h 00                | 9 h 10 | 9 h 30  | 9 h 30       | 10 h 00           | 10 h 20           | 10 h 30           | 10 h 30      | 11 h 20           | 11 h 40           | 12 h 00 | 12 h 30 | 13 h 30           | 14 h 00 | 15 h 00 | 15 h 30 | 17 h 30 | 19 h 30 |                   |  |  |
|-------------------------------|--------------------------------|-------------------|-----------------------|--------|---------|--------------|-------------------|-------------------|-------------------|--------------|-------------------|-------------------|---------|---------|-------------------|---------|---------|---------|---------|---------|-------------------|--|--|
|                               | 8 h 30                         | 9 h 00            | 9 h 10                | 9 h 30 | 10 h 00 | 10 h 30      | 10 h 30           | 11 h 20           | 11 h 40           | 12 h 00      | 12 h 30           | 13 h 30           | 14 h 00 | 15 h 00 | 15 h 30           | 17 h 30 | 18 h 30 |         |         |         |                   |  |  |
| <b>Sunday<br/>July, 20</b>    | Registration                   | Official Opening  |                       |        |         | Coffee Break | Plenary Session 1 | Oral Session PES1 |                   |              |                   |                   | Lunch   |         |                   |         |         |         |         |         |                   |  |  |
| <b>Monday<br/>July, 21</b>    |                                | Plenary Session 2 |                       |        |         | Coffee Break | Oral Session PES2 | Coffee Break      | Oral Session PES3 | Coffee Break | Oral Session PES4 | Oral Session PES5 | Lunch   |         |                   |         |         |         |         |         | Conference Dinner |  |  |
| <b>Tuesday<br/>July, 22</b>   |                                |                   | Keynote Lecture PES-L |        |         | Coffee Break | Oral Session PES4 | Coffee Break      |                   | Coffee Break |                   |                   | Lunch   |         | Oral Session PES5 | Closure |         |         |         |         |                   |  |  |
| <b>Wednesday<br/>July, 23</b> | <b>Post Conference Program</b> |                   |                       |        |         |              |                   |                   |                   |              |                   |                   |         |         |                   |         |         |         |         |         |                   |  |  |

# Sunday, 20 of July, 2008

|                     |                          |
|---------------------|--------------------------|
| <b>Registration</b> | <u>Sunday, 8h00-9h00</u> |
|---------------------|--------------------------|

|                         |                           |
|-------------------------|---------------------------|
| <b>Official Opening</b> | <u>Sunday, 9h00-10h00</u> |
|-------------------------|---------------------------|

|        |   |         |
|--------|---|---------|
| Coffee |  | 10 h 00 |
| Break  |   | 10 h 30 |

|  |                            |
|--|----------------------------|
| <p><b>Plenary Session 1 :</b><br/> <b>Chairs :</b> N. Derbel (Tunisia)<br/> M. Feki (Tunisia)</p> <p style="text-align: center;">Building tomorrow's electrical engineers .....</p> <p>I. Zabalawi .....(Jordan)</p> | <u>Sunday, 10h30-11h20</u> |
|--|----------------------------|

|  |                            |
|--|----------------------------|
| <p><b>Session PES 1 : Power Systems</b></p> <p><b>Chairs :</b> M. Elleuch (Tunisia)<br/> R. Dhifaoui (Tunisia)</p> <p>1569113780 Factors affecting transient response of grounding grid systems .....<br/> <i>Ossama E. Gouda, Ghada M. Amer and Tamer M. EL-Saied</i> .....(Egypt)</p> <p>1569114014 electricity market equilibrium using competitive coevolutionary algorithms with<br/> transmission constraints .....<br/> <i>A. A. Ladjici and M. Boudour</i> ..... (Algeria)</p> <p>1569114801 A general solution for ring-bus distribution systems reliability .....<br/> <i>I. Badran, M. Lazim and I. Badran</i> ..... (Jordan)</p> <p>1569117017 Trees growth-current and losses modelling in solid electrical insulations .....<br/> <i>N. Rouha</i> ..... (Algeria)</p> <p>1569117356 Damping the oscillation in an HVDC/HVAC system with fuzzy controller .....<br/> <i>M. Bayati Poudeh and S. Eshtehardiha</i> .....(Iran)</p> <p>1569119447 FACTS allocation for power systems voltage stability enhancement using MOPSO<br/> <br/> <i>A. Laifa and M. Boudour</i> ..... (Algeria)</p> <p>1569120898 Apparent power evaluation of series active power filter with recent definitions .<br/> <i>A. Kouzou, B. S . Khaldi, M. O. Mahmoudi and M. S. Boucherit</i> .... (Algeria)</p> | <u>Sunday, 11h20-13h30</u> |
|--|----------------------------|

Lunch



13 h 30  
15 h 30

Assistance at other Conferences

Sunday, 15h30-17h30

## Monday, 21 of July, 2008

### Plenary Session 2 :

Chairs : M. Elleuch (Tunisia)  
A. Masmoudi (Tunisia)

Control and safety verification based on a paraconsistent logic program EVALPSN  
*K. Nakamatsu* ..... (Japan)

Monday, 8h30-9h20

Assistance at other Conferences

Monday, 9h20-10h00

Coffee  
Break



10 h 00  
10 h 20

### Session PES 2 : Electromagnetic Systems

Chairs : P. Brochet (France)  
M. B. A. Kamoun (Tunisia)

- 1569117415 Magnetic field calculation under EHV transmission lines for more realistic cases  
*A. Mohammed* ..... (Egypt)
- 1569119104 Simulation of aluminum sheet electromagnetic forming with several dies .....  
*I. Boutana and M. R. Mekideche* ..... (Algeria)
- 1569119316 Thermal modeling and simulation of distribution transformers .....  
*A. Elmoudi* ..... (Oman)
- 1569119638 Calculation of magnetic fields and iron losses in a smpm by using vector preisach  
model and transient finite element analysis .....  
*A. Mansouri, H. Trabelsi and M. H. Gmiden* ..... (Tunisia)

Monday, 10h20-11h40

Coffee  
Break



11 h 40  
12 h 00

Monday, 12h00-14h00

**Session PES 3 : Machine Control**

**Chairs :** M. S. Nait Said (Algeria)  
O. Hasnaoui (Tunisia)

- 1569106373 Cascade Sliding Mode Control of a field oriented induction motors with Varying Parameters .....  
*F. Mehazzem, A. Reama, Y. Hamam and H. Benalla* ..... (France-Algeria)
- 1569113111 Robust sensorless speed control purpose for induction motors .....  
*S. Chaouch, A. Makouf, M. S. Nait-Said, M. Hilairret, E. Berthlot, S. Drid and N. Nait-Said* ..... (Algeria-France)
- 1569115954 Backstepping control analysis of two different speed sensorless approaches for induction motor .....  
*S. Chaouch, L. Chrifi, A. Makouf and M. S. Nait Said* .....(Algeria-France)
- 1569116068 RFOC of delta-inverter fed induction motor drives with rotor time constant adaptation .....  
*A. Ben Rhouma and A. Masmoudi* .....(Tunisia)
- 1569117510 Luenberger observer for induction motor operating with parameter variations ..  
*N. Chaabène, A. Drira, M. L. Koubaa and N. Derbel* ..... (Tunisia)

Lunch



14 h 00

15 h 30

**Assistance at other Conferences**

Monday, 15h30-17h30

**Tuesday, 22 of July, 2008**

Tuesday, 9h00-10h00

**Keynote Lecture PES-L**

**Chairs :** H.-R. Tränkler (Germany)  
O. Kanoun (Germany)

Reduced Structure Inverter Fed Electric Motor Drives: an Attempt to Improve the Cost-effectiveness, the Compactness and the Reliability of Hybrid Propulsion Systems .....  
*A. Masmoudi* .....(Tunisia)

Coffee  
Break



10 h 00

10 h 20



Tuesday, 10h20-11h40

### Session PES 4 : Renewable Energies

Chairs : P. Brochet (France)  
F. Benammar (Tunisia)

- 1569112862 Comparison between optislip and fixed speed wind energy conversion systems .  
*M. Khadhraoui and M. Elleuch* ..... (Tunisia)
- 1569117384 Investigation of the underground temperature using neural network .....  
*H. Ben Jmaa Derbel, I. Kessentini and O. Kanoun* ..... (Tunisia-Germany)
- 1569117440 Parallel Connected Inverter for Fuel Cell System .....  
*M. A. A. Younis, N. A. Rahim and S. Mekhilef* ..... (Malaysia)
- 1569117470 An overview for the interconnection of renewable energy sources and energy stor-  
age systems to the utility grid .....  
*A. Said* ..... (Egypt)
- 1569117798 Promotion of wind energy in Jordan .....  
*O. Badran and E. Abdulhadi* ..... (Jordan)

Coffee  
Break



11 h 40  
12 h 00

Tuesday, 12h00-14h00

### Assistance at other Conferences

Lunch



14 h 00  
15 h 30

Tuesday, 15h30-17h30

### Session PES 5 : Static Converters

Chairs : M. B. A. Kamoun (Tunisia)  
M. R. Mekidèche (Tunisia)

- 1569103879 A novel method for harmonics and low switching frequency eliminations for a  
three-phase pwm inverter .....  
*O. Bouchhida, A. Tlemceni, D. Boudana, K. Benmansour, A. Cherifi and M. S.  
Boucherit* ..... (France-Algeria)
- 1569115740 Zero current and zero voltage static error control of a multi-cell DC/DC converter  
  
*M. Feki, R. Hamza, B. G. Michel Robert and A. El Aroudi* ... (Tunisia-France-  
Spain)
- 1569117326 Self balancing of DC link capacitor voltages using redundant vectors for SVPWM  
controlled five-level inverter .....  
*D. Lalili, E. M. Berkouk, F. Boudjema and N. Lourci* ..... (Algeria)

Tuesday, 15h30-17h30

- 1569117354 Particle swarm optimization and genetic algorithm to optimizing the pole placement controller on cuk converter .....  
*M. Bayati Poudeh and M. Bayati Poudeh* ..... (Iran)
- 1569120718 Some considerations about MathCAD modeling of the SEPIC converter .....  
*M. Miron and E. L. Miron* ..... (Roumania)

**Closure**

Tuesday, 17h30-18h30

# Conference on Communication & Signal Processing

## Conference chair:

Abdel-Rahman Qawasmi (Jordan), Fauzi Derbel (Germany)

## Scientific Program committee:

---

|                        |                          |                         |
|------------------------|--------------------------|-------------------------|
| Kasim Al-Aubidy (JO)   | Adel Alimi (TN)          | Lassaad Ammari (TN)     |
| Abdelwaheb Belaid (FR) | Chokri Ben Amar (TN)     | Amel Ben Slimane (TN)   |
| Mohamed Benrejeb (TN)  | Kamel Besbes (TN)        | Ammar Bouallegue (TN)   |
| Ridha Bouallegue (TN)  | Faouzi Bouzlama (CND)    | Nabil Derbel (TN)       |
| Khalifa Djemal (FR)    | Khalil Drira (FR)        | Noureddine Ellouze (TN) |
| Hichem Frigui (USA)    | Ali Gharsallah (TN)      | Kamel Hamrouni (TN)     |
| Lotfi Kamoun (TN)      | Fakhreddine Karray (CND) | Berthold Lankl (D)      |
| Driss Mammass (MOR)    | Nouri Masmoudi (TN)      | Faouzi Mimouni (TN)     |
| Lotfi Mtibaa (TN)      | Mokhtar Sellami (ALG)    | Halim Sghaier (TN)      |
| Basel Solaiman (FR)    | Chokri Souani (TN)       | Joachim Speidel (D)     |
| Rached Tourki (TN)     | Philippe Vanheeghe (FR)  |                         |

---

## Topics

Signal Processing for e-Learning Communications, Digital signal processing, Image and video compression algorithms, Speech recognition, Person Authentication, Biometry and medical imaging, Data fusion, Pattern recognition, Modulation and signal design, Communication theory and techniques, Communication Protocols and Standards, Telecommunication systems, Coding compression, Information theory, Communication networks, Wireless communication, Optical communication, Wireless Sensor Networks, MIMO Communications, Artificial intelligence, Information retrieval, Adaptive antennas, Smart antennas.

| <b>SSD'08 - CSP Conference Program</b> |                                |                      |                          |                 |                   |                    |                         |                      |                      |         |                      |                      |         |                      |         |         |
|--|--------------------------------|----------------------|--------------------------|-----------------|-------------------|--------------------|-------------------------|----------------------|----------------------|---------|----------------------|----------------------|---------|----------------------|---------|---------|
|  | 8 h 00                         | 8 h 30               | 9 h 00                   | 9 h 20          | 9 h 30            | 10 h 00            | 10 h 20                 | 10 h 30              | 11 h 20              | 11 h 40 | 12 h 00              | 13 h 30              | 14 h 00 | 15 h 00              | 17 h 30 | 19 h 30 |
|  | 8 h 30                         | 9 h 00               | 9 h 20                   | 9 h 30          | 10 h 00           | 10 h 20            | 10 h 30                 | 11 h 20              | 11 h 40              | 12 h 00 | 13 h 30              | 14 h 00              | 15 h 00 | 17 h 30              | 18 h 30 |         |
| <b>Sunday<br/>July, 20</b>             | Registration                   |                      | Official Opening         |                 | Coffee Break      |                    | Plenary<br>Session<br>1 | Oral Session<br>CSP1 |                      |         |                      | Lunch                |         | Oral Session<br>CSP2 |         |         |
| <b>Monday<br/>July, 21</b>             |                                | Plenary<br>Session 2 | Keynote<br>Lecture CSP-L |                 | Coffee<br>Break   | Oral Sessions CSP3 |                         | Coffee<br>Break      | Oral Session<br>CSP4 | Lunch   |                      | Oral Session<br>CSP5 |         | Conference<br>Dinner |         |         |
| <b>Tuesday<br/>July, 22</b>            |                                | Oral Session CSP6    |                          | Coffee<br>Break | Oral Session CSP7 |                    | Coffee<br>Break         | Oral Session<br>CSP8 | Lunch                |         | Oral Session<br>CSP9 | Closure              |         |                      |         |         |
| <b>Wednesday<br/>July, 23</b>          | <b>Post Conference Program</b> |                      |                          |                 |                   |                    |                         |                      |                      |         |                      |                      |         |                      |         |         |

# Sunday, 20 of July, 2008

|                     |                          |
|---------------------|--------------------------|
| <b>Registration</b> | <u>Sunday, 8h00-9h00</u> |
|---------------------|--------------------------|

|                         |                           |
|-------------------------|---------------------------|
| <b>Official Opening</b> | <u>Sunday, 9h00-10h00</u> |
|-------------------------|---------------------------|

|        |   |         |
|--------|---|---------|
| Coffee |  | 10 h 00 |
| Break  |   | 10 h 30 |

|  |                            |
|--|----------------------------|
| <p><b>Plenary Session 1 :</b><br/> <b>Chairs :</b> N. Derbel (Tunisia)<br/> M. Feki (Tunisia)</p> <p style="text-align: center;">Building tomorrow's electrical engineers .....</p> <p>I. Zabalawi .....(Jordan)</p> | <u>Sunday, 10h30-11h20</u> |
|--|----------------------------|

|  |                            |
|--|----------------------------|
| <p><b>Session CSP 1 : Communication I (OFDM, CDMA, Network)</b></p> <p><b>Chairs :</b> N. Ellouze (Tunisia)<br/> M. Sellami (Algeria)</p> <p>1569104280 Use of LDPC to improve the MIMO-OFDM systems performance .....<br/> <i>O. Daoud</i> ..... (Jordan)</p> <p>1569117494 PAPR Reduction in WPDM and OFDM Systems using an Adaptive Threshold<br/> Companding scheme .....<br/> <i>M. Rostamzadeh, V. TabaTaba Vakili and M. Moshfegh</i> .....(Iran)</p> <p>1569117647 An efficient simulation methodology of networked industrial devices .....<br/> <i>Q. Ibrahim dotfill</i> (Iraq)</p> <p>1569118564 Planning and design of a WCDMA network compatible with existing GSM system<br/> in Mosul city .....<br/> <i>F. Mahmoud and S. Mawjoud</i> .....(Iraq)</p> <p>1569119319 The agile all-photonic network: architectures, algorithms, and protocols .....<br/> <i>I. Khazali and R. Vickers</i> ..... (Canada)</p> <p>1569120853 A simple and effective technique for peak to average power ratio reduction in<br/> OFDM systems .....<br/> <i>E. Alsusa and L. Yang</i> ..... (U.K.)</p> <p>1569120932 Repetition-based packet lost concealment method for CELP-based coders in<br/> packet networks .....<br/> <i>F. Merazka</i> ..... (Algeria)</p> | <u>Sunday, 11h20-13h30</u> |
|--|----------------------------|

Lunch



13 h 30  
15 h 30

Sunday, 15h30-17h30

**Session CSP 2 : Computational intelligence**

**Chairs :** R. Tourki (Tunisia)  
B. Lankl (Germany)

- 1569107132 Weighted network reliability and modeling .....  
*A. Majeed and A. Majeed* ..... (Iraq)
- 1569109640 SAF-PS: Starvation Avoidance for Priority Scheduling .....  
*R. Jabbour and I. Elhajj* ..... (Lebanon)
- 1569115531 Support vector machines for automated knowledge extraction from historical solar  
data: a practical study on CME predictions .....  
*M. Al-Omari, R. Qahwaji, T. Colak and S. Ipson* ..... (U. K.)
- 1569117270 Efficient computation of universal weights for maximally flat (at  $\pi/2$ ) linear -  
phase integrators of various degrees .....  
*B. K. Smieeee and T. S. Arora* ..... (India)
- 1569117713 Improvement of the performance of distributed OS-CFAR system by ES optimi-  
sation .....  
*L. Abdou and F. Soltani* ..... (Algeria)
- 1569125284 A distributed workflow management system utilizing computational intelligence  
for decision support .....  
*Z. Muhsin, A. H. El-Mousa and M. A. Al-Tae* ..... (Jordan)

**Monday, 21 of July, 2008**

Monday, 8h30-9h20

**Plenary Session 2 :**

**Chairs :** M. Elleuch (Tunisia)  
A. Masmoudi (Tunisia)

Control and safety verification based on a paraconsistent logic program EVALPSN  
*K. Nakamatsu* ..... (Japan)

Monday, 9h20-10h00

**Keynote lecture CSP-L1 :**

**Chairs :** K. Djemal (France)  
K. Al-Aubidy (Jordan)

Smart metering based on automated meter reading .....  
*F. Derbel* ..... (Germany)

Coffee  10 h 00  
Break 10 h 20

Monday, 10h20-11h40

**Session CSP 3 : Pattern recognition I**

**Chairs :** A. Ben Slimane (Tunisia)  
K. Besbes (Tunisia)

- 1569118818 SVM synthesis by hierarchical structures of learning automata : Application for handwritten digits recognition .....  
*S. Ghorbel, M. Ben Jmeaa and M. Chtourou* ..... (Tunisia)
- 1569120617 Word-based handwritten arabic scripts recognition using DCT features and neural network classifier .....  
*J. AlKhateeb, J. Ren, J. AlKhateeb, J. Jiang, S. S. Ipson and H. El Abed* (U.K.-Germany)
- 1569120771 Landmine detection with IR sensors using karhunen loeve transformation and watershed segmentation .....  
*A. Ajlouni and A. Sheta* ..... (Jordan)
- 1569120782 Comparison of combination methods of arabic handwritten word recognizers ..  
*H. El Abed and V. Märgner* ..... (Germany)

Coffee  11 h 40  
Break 12 h 00

Monday, 12h00-14h00

**Session CSP 4 : Communication 2 (RFID, RSSI)**

**Chairs :** R. Tourki (Tunisia)  
B. Lankl (Germany)

- 1569105612 Active RFID Tag in Real Time Location System .....  
*S. Behera and C. Maity* ..... (India)
- 1569112623 Adaptive algorithm for increasing the efficiency of DSR algorithm in Ad Hoc network .....  
*K. Al Shqeerat* ..... (Jordan)

Monday, 12h00-14h00

- 1569118420 A LINC amplifier utilizing digital signal processing applied to a DAMPS system  
*M. Alkuran* ..... (U.S.A.)
- 1569118608 Fractal dipoles as meander line antennas for passive UHF RFID tags .....  
*A. Salama and K. Quboa* ..... (Iraq)
- 1569120056 Adaptive allocation of variable length codes for video transmission over OFDM  
system .....  
*O. H. Salim* ..... (Iraq)
- 1569120924 Radio Frequency IDentification (RFID) working, design considerations and mod-  
elling of antenna .....  
*N. Nejah, N. Kachouri, M. Samet and L. Andrieux* ..... (Tunisia-France)

Lunch



14 h 00  
15 h 30

Monday, 15h30-17h30

**Session CSP 5 : Image processing I**

**Chairs :** F. Derbel (Germany)  
A. Kachouri (Tunisia)

- 1569107198 A new selective encryption technique of JPEG2000 codestream for medical images  
transmission .....  
*Z. Brahimi, H. Bessalah, A. Tarabet and M. K. Kholadi* ..... (Algeria)
- 1569117329 An integrated fuzzy additive and impulse noise reduction method for color images  
  
*D. Divya Jothi, P. Geetha and S. A. Durai* ..... (India)
- 1569117418 A fast technique for gray level image thresholding and quantization based on the  
entropy maximization .....  
*R. Benzid, D. Arar and M. Bentoumi* ..... (Algeria)
- 1569117742 Image magnification and reduction using high order filtering on the cell broadband  
engine .....  
*H. Kidwai, F. Sibai and T. Rabie* ..... (U.A.E.)
- 1569120871 Wavelet Shrinkage and Compression for SAR Images .....  
*Siriporn Dachasilaruk* ..... (Thailand)
- 1569120899 Completely unsupervised image segmentation using wavelet analysis and  
gustafson-kessel clustering .....  
*Alaa Elsayad* ..... (Egypt)



# Tuesday, 22 of July, 2008

Tuesday, 8h30-10h00

## Session CSP 6 : Pattern recognition II

**Chairs :** A. Gharsallah (Tunisia)  
A. Bouallegue (Tunisia)

- 1569120822 Face recognition based on 2DPCA, DIAPCA and DIA2DPCA in Dct domain .  
*M. Bengherabi, L. Mezai, F. Harizi, M. Cheriet, A. Guessoum and M. Bengherabi*  
(Algeria-canada)
- 1569120904 A comparative study of svm kernel applied to emotion recognition from physio-  
logical signals .....  
*C. Maaoui and A. Pruski* .....(France)
- 1569120908 Minutiae extraction for fingerprint recognition .....  
*Yusra Darwish and Alaa Sheta* ..... (Jordan)
- 1569125342 A genetic algorithm approach for voice quality prediction .....  
*M. AL-Akhras* .....(Jordan)

Coffee  10 h 00  
Break 10 h 20

Tuesday, 10h20-11h40

## Session CSP 7 : Signal processing (wavelet)

**Chairs :** K. Djemal (France)  
C. Ben Amar (Tunisia)

- 1569108825 QRS complex detection based on symmlets wavelet function .....  
*K. Daqrouq, I. Abu-Isbeih and A.-R. Al-Qawasmi* ..... (Jordan)
- 1569116532 Data Acquisition for Myocardial Infarction Classification Based on Wavelets and  
Neural Networks .....  
*F. Al-Naima, A. H. Ali and S. Mahdi* .....(Pakistan-Iraq)
- 1569117344 Wavelet based multi carrier code division multiple access .....  
*W. A. Mahmmod, A. A. Ali and S. N. Abdul Majed* ..... (Jordan-Iraq)
- 1569117512 Papr reduction in wavelet packet modulation .....  
*M. Rostamzadeh and V. Tabataba Vakili* ..... (Iran)
- 1569126688 Speaker identification wavelet transform based method .....  
*K. Daqrouq, W. Al-Sawalmeh, A.-R. Qawasmi and I. Abu-Isbeih* ..... (Jordan)

Coffee  11 h 40  
Break 12 h 00

Tuesday, 12h00-14h00

**Session CSP 8 : Communication III (Transmission)**

**Chairs :** K. Djemal (France)  
C. Ben Amar (Tunisia)

- 1569112462 Error-driven adaptation for GOP video transport in Wireless channel .....  
*G. AL-Suhail* ..... (Iraq)
- 1569114910 A rapid joint semi-blind estimation algorithm for carrier phase and timing pa-  
rameter .....  
*J. Yang, W. Yuan and C. Liang* ..... (China)
- 1569115483 Discrete wavelets transform based space time block code multicarrier direct se-  
quence cdma .....  
*A. A. Ali and Laith Abdul-Rahaim* ..... (Jordan-Iraq)
- 1569119871 Enhancement of throughput time using ms-tcp transport layer protocol for 4G  
mobiles .....  
*H. Ghazaleh and M. Muhanna* ..... (Jordan-U.S.A.)
- 1569120893 Bluetooth performance improvement over different channels through channel cod-  
ing .....  
*M. A. M. Mohamed El-Bendary, A. E. Abu El-Azm, N. A. El-Fishawy, M. A.  
R. El-Tokhy, F. Shawky and F. E. Abd El-Samie* ..... (Egypt)
- 1569125340 Analysis of the performance of subcarrier multiplexed transmission system em-  
ploying optical single sideband (OSSB) modulation .....  
*M. Al-Qdah and M. S. Sharawi* ..... (Jordan)

Lunch



14 h 00  
15 h 30

Tuesday, 15h30-17h30

**Session CSP 9 : Image processing 2 (classification, recognition)**

**Chairs :** M. Deriche (KSA)  
M. Abid (Tunisia)

- 1569107798 A new and improved skin detection method using RGB vector space .....  
*M. M. Aznaveh, H. Mirzaei, E. Roshan and M. H. Saraee* ..... (Iran)
- 1569112256 Independent component analysis (ICA) for texture classification .....  
*D. Abu Al-Nadi and A. Mansour* ..... (Jordan)
- 1569115470 Multi technique face recognition using PCA/ICA with wavelet and optical flow  
*W. Al-Jawhar, A. M. Mansour and Z. M. Kuraz* ..... (Jordan)

**Tuesday, 15h30-17h30**

- 1569117345 Face detection based neural networks using robust skin color segmentation . . . .  
*A. Mohamed, Y. Weng, J. Jiang and S. Ipson* . . . . . (U. K.)
- 1569120814 Content based image recognition based on QUIP-tree model . . . . .  
*R. Kachouri, K. Djemal, D. Sellami Masmoudi and N. Derbel* (Tunisia-France)
- 1569124250 Comparisons of feature selection methods using discrete wavelet transforms and  
support vector machines for mammogram images . . . . .  
*H. Osta, R. Qahwaji and S. Ipson* . . . . . (U.K.)

**Closure**

**Tuesday, 17h30-18h30**



# Conference on Sensors, Circuits & Instrumentation Systems

## Conference chair:

Tariq Tutunji (Jordan), Olfa Kanoun (Germany)

## Scientific Program committee:

---

|                          |                       |                             |
|--------------------------|-----------------------|-----------------------------|
| Mohamed Abid (TN)        | Nadine Azemard (FR)   | Jean Baptiste Begueret (FR) |
| Kamel Besbes (TN)        | Ammar Bouallègue (TN) | Ali Boukabache (FR)         |
| Georg Brasseur (AUS)     | Maher Charfi (TN)     | Serge Demidenko (MY)        |
| Christian Dufaza (FR)    | Alain Fabre (FR)      | Gerhard Fischerauer (D)     |
| Patrick Garda (FR)       | Manel Gasulla (SP)    | Hamadi Ghariani (TN)        |
| Pedro Silva Girão (PT)   | Voicu Groza (CND)     | Vinod Kumar Gupta (IN)      |
| Volker Hans (D)          | Mohamed Ismail (USA)  | Lotfi Kamoun(TN)            |
| Carmine Landi (I)        | Noelle Lewis (FR)     | Mourad Loulou (TN)          |
| Patrick Loumeau (FR)     | Mohamed Masmoudi (TN) | Nouri Masmoudi (TN)         |
| Subhas Mukhopadhyay (NZ) | Maurits Ortmanns (D)  | Jacques Pistré (FR)         |
| Fernando Puente Leon (D) | Leonard Reindl (D)    | Sylvie Renaud (FR)          |
| Pavel Ripka (CZ)         | Mounir Samet (TN)     | Gordon Silverman (USA)      |
| Jean Tomas (FR)          | Rached Tourki (TN)    | Bernhard Zagar (AUS)        |

---

## Topics

Fundamentals and physics, Self test, Fault tolerance, System diagnosis, Simulation and design, Calibration and quality insurance, Sensors and actuators, Transducer design, Optical sensors and applications, Biomedical instrumentation systems, Circuits and systems, Full custom and semi-custom integrated circuits (Design concepts, architectures and high-performance and low-power circuits), Analog and digital signal processing, Neural networks implementation, Pulse mode neural networks, Genetic algorithm implementation, Sigma delta converters, Design for testability, Low-voltage design, Low-power VLSI design, RF circuit design, Smart home, Life sciences, Environmental applications, Opto-electronics, Micro-machines.

| <b>SSD'08 - SCI Conference Program</b> |                                |                   |                        |        |         |              |                   |         |              |         |         |         |         |                   |         |         |                   |         |         |         |         |         |         |                   |
|--|--------------------------------|-------------------|------------------------|--------|---------|--------------|-------------------|---------|--------------|---------|---------|---------|---------|-------------------|---------|---------|-------------------|---------|---------|---------|---------|---------|---------|-------------------|
|  | 8 h 00                         | 8 h 30            | 9 h 00                 | 9 h 10 | 9 h 30  | 10 h 00      | 10 h 20           | 10 h 30 | 10 h 40      | 11 h 00 | 11 h 20 | 11 h 30 | 11 h 40 | 12 h 00           | 12 h 30 | 13 h 00 | 13 h 30           | 14 h 00 | 14 h 30 | 15 h 00 | 15 h 30 | 17 h 30 | 19 h 30 |                   |
|  | 8 h 30                         | 9 h 00            | 9 h 10                 | 9 h 30 | 10 h 00 | 10 h 20      | 10 h 30           | 11 h 20 | 11 h 40      | 12 h 00 | 12 h 30 | 13 h 00 | 13 h 30 | 14 h 00           | 14 h 30 | 15 h 00 | 15 h 30           | 17 h 30 | 18 h 30 |         |         |         |         |                   |
| <b>Sunday<br/>July, 20</b>             | Registration                   | Official Opening  |                        |        |         | Coffee Break | Plenary Session 1 |         |              |         |         |         |         |                   |         | Lunch   | Oral Session SCI1 |         |         |         |         |         |         |                   |
| <b>Monday<br/>July, 21</b>             |                                | Plenary Session 2 | Keynote Lecture SCI-L1 |        |         | Coffee Break | Oral Session SCI2 |         | Coffee Break |         |         |         |         |                   |         | Lunch   | Oral Session SCI3 |         |         |         |         |         |         | Conference Dinner |
| <b>Tuesday<br/>July, 22</b>            |                                |                   | Keynote Lecture SCI-L2 |        |         | Coffee Break |                   |         | Coffee Break |         |         |         |         | Oral Session SCI4 |         | Lunch   | Oral Session SCI5 |         |         |         |         |         | Closure |                   |
| <b>Wednesday<br/>July, 23</b>          | <b>Post Conference Program</b> |                   |                        |        |         |              |                   |         |              |         |         |         |         |                   |         |         |                   |         |         |         |         |         |         |                   |

# Sunday, 20 of July, 2008

Sunday, 8h00-9h00

**Registration**

Sunday, 9h00-10h00

**Official Opening**

|        |   |         |
|--------|---|---------|
| Coffee |  | 10 h 00 |
| Break  |   | 10 h 30 |

Sunday, 10h30-11h20

**Plenary Session 1 :**  
**Chairs :** N. Derbel (Tunisia)  
M. Feki (Tunisia)

Building tomorrow's electrical engineers .....  
I. Zabalawi .....(Jordan)

Sunday, 11h20-13h30

**Assistance at other Conferences**

|              |   |                    |
|--------------|---|--------------------|
| <b>Lunch</b> |  | 13 h 30<br>15 h 30 |
|--------------|---|--------------------|

Sunday, 15h30-17h30

**Session SCI 1 : Applications**  
**Chairs :** O. Kanoun (Germany)  
H.-R. Tränkler (Germany)

1569114508 Optimal algorithm for the numerical inversion laplace transforms method in a multiconductor transmission line .....  
*S. Ghnimi, S. Ghnimi and S. Ghnimi* .....(Tunisia)

1569118376 Improvement of array radiation pattern by element position perturbation .....  
*K. Sayidmarie and A. Aboud* .....(Iraq)

1569118996 Behavioral description of quantum  $V$  and  $V^+$  gates to design quantum logic circuits .....  
*M. Mohammadi and M. Eshghi* ..... (Iran)

Sunday, 15h30-17h30

- 1569120692 Improvement in the efficiency of class-E power amplifier for RF .....  
*M. Dhawyani, Q. Mahrooqi, F. Rahbi, A. Kalbani, F. Touati and Z. Nadir*  
(Oman)
- 1569120874 A new filter design for uniform linear array .....  
*L. Gudino, S. N. Jagadeesha and J. Rodrigues* ..... (India)
- 1569120894 A new miniaturized fractal bandpass filter based on dual-mode microstrip square  
ring resonator .....  
*Jawad Ali* .....(Iraq)
- 1569120919 A new method for processing solar images to calculate the magnetic energies  
associated with active regions .....  
*O. Ahmed, R. Qahwaji, T. Colak, T. Dudok de Wit and O. Ahmed* (U.K.-France)

## Monday, 21 of July, 2008

Monday, 8h30-9h20

### Plenary Session 2 :

Chairs : M. Elleuch (Tunisia)  
A. Masmoudi (Tunisia)

Control and safety verification based on a paraconsistent logic program EVALPSN  
*K. Nakamatsu* ..... (Japan)

Monday, 9h20-10h00

### Keynote lecture SCI-L1 :

Chairs : H.-R. Tränkler (Germany)

Potential of carbon nanotubes for sensor applications .....  
*O. Kanoun and Z. Fahem* .....(Germany)

Coffee  
Break



10 h 00  
10 h 20



Monday, 10h20-11h40

**Session SCI 2 : Technology**

**Chairs :** G. Fischerauer (Germany)  
L. Reindl (Germany)

- 1569112105 A new registration algorithm of sensor in ECEF coordinate system .....  
*J. H. Pan, H. Jia-Zhou and L. Yan-Li* ..... (China)
- 1569114786 Electrical and morphological characteristics of amorphous lpcvd nitrogen doped  
silicon thin films after heat treatment .....  
*H. Bouridah, F. Mansour, R. Mahamdi and P.-T. Boyer* ..... (Algeria-France)
- 1569118649 Modeling and computing the electrical parameters of a multichip module inter-  
connections .....  
*H. Belahrach and M. Satar* ..... (Morocco)
- 1569120834 Test and characterization of 1 Bit  $\Sigma - \Delta$  modulator .....  
*K. Abbes, A. Hentati and M. Masmoudi* ..... (Tunisia)

Coffee  
Break



11 h 40  
12 h 00

Monday, 12h00-14h00

**Assistance at other Conferences**

Lunch



14 h 00  
15 h 30

Monday, 15h30-17h30

**Session SCI 3 : Signal processing**

**Chairs :** M. Vieira (Portugal)  
H. Ghariani (Tunisia)

- 1569106690 A reconfigurable system for digital signal processing .....  
*H. Letian and L. Guangjun* ..... (China)
- 1569118930 A parallel architectural implementation of the fast three step search algorithm  
for block motion estimation .....  
*B. Srinivasa Rao and I. Chakrabarti* ..... (India)
- 1569119652 An efficient configurable hardware implementation of fundamental multirate filter  
banks .....  
*A. Al-Haj* ..... (Jordan)
- 1569119682 Wavelets pre-processing of artificial neural networks classifiers .....  
*A. Al-Haj* ..... (Jordan)
- 1569120840 Enhancement of the segmentation process of multi-component images using fusion  
with genetic algorithm .....  
*M. Awad, K. Chehdi and A. Nasri* ..... (Lebanon)

# Tuesday, 22 of July, 2008

Tuesday, 9h00-10h00

## Keynote Lecture SCI-L2

Chairs : H.-R. Tränkler (Germany)  
O. Kanoun (Germany)

Wireless sensor concepts .....  
*M. Loschonsky, D. Eisele, A. Wörz, K. Samm, M. Wieneke, J. Bläsing, A. Dadgar,*  
*A. Dadgar, S. Ballandras and L. Reindl* ..... (Germany-France)

|        |   |         |
|--------|---|---------|
| Coffee |  | 10 h 00 |
| Break  |   | 10 h 20 |

Tuesday, 10h20-11h40

## Assistance at other Conferences

|        |   |         |
|--------|---|---------|
| Coffee |  | 11 h 40 |
| Break  |   | 12 h 00 |

Tuesday, 12h00-14h00

## Session SCI 4 : Circuits and Systems

Chairs : S. Renaud (France)  
D. Sellami-Masmoudi (Tunisia)

- 1569108537 Design and implementation of RFID system .....  
*Z. Al-Amir, F. Al-Saidi and H. AbdelKader* ..... (Iraq-Jordan)
- 1569113060 The design and simulation of a 400/533 Mbps DDR-II SDRAM memory interconnect bus .....  
*M. S. Sharawi and M. Al-Qdah* ..... (Jordan)
- 1569113526 Concept of wide tuning QVCO adapted for multi-standards applications .....  
*D. Ben Issa,, M. Samet and A. Kachouri* ..... (Tunisia)
- 1569114772 A novel concept for multimachine drive systems with rotor time constant estimation .....  
*A. Djahbar, B. Mazari and N. Mansour* ..... (Algeria-Bahrain)
- 1569120831 Supply current and load voltage distortions suppression using the unified power quality conditioner .....  
*H. Djeghloud, H. Benalla and A. Bentounsi* ..... (Algeria)

Lunch



14 h 00  
15 h 30

Tuesday, 15h30-17h30

**Session SCI 5 : Sensors and Instrumentation Systems**

**Chairs :** S. Renaud (France)  
D. Sellami-Masmoudi (Tunisia)

- 1569109836 Performance analysis of FBG sensors system embedded in an optical communications system .....  
*H. Bourdoucen and A. Al-Lawati* ..... (Oman)
- 1569118686 Fall sensor system for seniors .....  
*A. Baleevskikh, A. Makarov and H.-R. Tränkler* ..... (Germany)
- 1569119581 A comparative study of RBF neural network and SVM classification techniques performed on real data for drinking water quality .....  
*M. Bouamar and M. Ladjal* ..... (Algeria)
- 1569120807 A tactile sensors array for biomedical applications .....  
*M. Attari and S. Boukhenous* ..... (Algeria)
- 1569120846 Wind farming interference effects .....  
*A. Calo Casanova, M. Calvo Ramon, L. de Haro y Ariet and P. Blanco González*  
(Spain)

**Closure**

Tuesday, 17h30-18h30



---

*Looking forward to seeing you on SSD'09*

*March 23-26, 2009*

*Djerba, Tunisia,*

*Thank you*

*[www.ssd-conf.org](http://www.ssd-conf.org)*