

# FINAL PROGRAM



**2-4 March 2015**

**Arab Open University**

**Organized by**



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eurosis



**UKRI SPC**



The international association for decision makers



# NOTES

# MESM'2015 – GAMEON-ARABIA'2015 FINAL PROGRAMME

Overhead and LCD Projector are standard

The underlined authors are usually the presenters.

Conference Site: [Arab Open University](http://www.aou.org.bh), Bahrain Branch, Building No. 890, Road No. 3220, Block No. 732, A'Ali, Bahrain

For any local information contact: Dr. Khaldoon Al-Roomi,  Email: [director.bahrain@aou.org.bh](mailto:director.bahrain@aou.org.bh)  University Tel: +973 1740 7077 website: <http://www.aou.org.bh>

**Only papers in gray boxes are eligible for the best paper award**

## Monday, March 2, 2015

09.30 - 15.00 **Registration**

10.00 - 10.30 **Welcome**

**Welcome Address**

Dr. Khaldoon Al-Roomi, AOU, Bahrain

**Welcome Speech**

Professor Riyadh Y. Hamza

General Secretary of the High Education Council

Et al...

10.30 - 11.00 **Coffee/Tea Break**

11.00 - 12.30 **Session I**

### DATA SIMULATION

11.00-12.30

**Session Chairperson:**

Mr. Hammad Nabhan, IT Dept. Arabian Gulf University

**COMPLEX\_01**

**Ghana Class Room Interactions Evaluated through Networks and Simulation**

Liz Johnson..... 5

**Monday, March 2, 2015**

**INFO\_01**

**Data and Control Flow Visualization by Transforming Software into Schematic Diagrams**

Nils Potthoff, Christoph Brandau, Carsten Gremzow

and Dietmar Tutsch..... **20**

**INFO\_03**

**Region Feature Extraction Based on Improved Texture Feature Extraction Method in High Resolution Image**

D. Antony Pandiarajan, S. Hameetha Begum and S.N. Nisha Rani ..... **28**

12.30 - 13.30 **Lunch Break**

13.30 - 14.30 **Session II**

**NETWORKS AND LOGISTICS SIMULATION**

**13.30-14.30**

**Session Chairperson:**

Dr. Abdelhadi Abdel Wahab, Vice Dean for Technological Studies,  
Arabian Gulf University

**NET\_04**

**Performance Evaluation of Video Conferencing over Ad Hoc Wireless Networks using Different Routing and Queuing Techniques**

Azeddien M. Sllame, Abdelrahim Raey, Basher Mohamed

and Abdelhafed Alagel ..... **37**

**BIO\_08**

**Hybrid Modelling of Integrated Care Systems**

Tillal Eldabi ..... **42**

**Monday, March 2, 2015**

14.30 - 15.00 **Coffee/Tea Break**

15.00 - 17.00 **Session III**

**COMPUTERS IN MEDICINE AND BIOLOGY**

**15.00-17.00**

**Session Chairperson:**

Associate Prof. Mohamad Sabry, Arabian Gulf University

**XXXX**

**Computer Simulation of Diabetic Gastroparesis**

Omar Al Qabandi ..... 5A

**XXXX**

**Mathematical Modeling and Simulation of Adynamic Ileus**

Ammar Mohammad Yasser..... 6A

**xxxxx**

**Computer Analysis of the Electrical Wave Phenomenon in the Small Intestine**

Abdullah Rafea ..... 7A

**xxxx**

**Bolus Propulsion in the Gut**

Omar Al Qatrawi ..... 8A

**xxxx**

**Computer-Aided Evaluation of Motility in the Post-Surgical Human Stomach**

Noor Shamlooh..... 9A

**xxxx**

**Systems Biology Approach in Medicine**

Roustem Miftahof..... 10A

17.00 -

**FREE EVENING**

## Tuesday, March 3, 2015

09.00 - 14.00     **Registration**

09.00 - 10.00     **Session IV**

### TUTORIAL

**09.00-10.00-**

**Session Chairperson:**

Liz Johnson, Managing Editor of the Journal on Policy & Complex Systems

**TUT\_01\_01**

[Understanding Complexity I: Simple Applications for Political Science and Policy Research & Theory Development](#)

[Liz Johnson](#)

10.00 - 10.30     **Coffee/Tea Break**

10.30 - 12.30     **Session V**

### TUTORIAL

**10.30-12.30-**

**Session Chairperson:**

Liz Johnson, Managing Editor of the Journal on Policy & Complex Systems

**TUT\_01\_02**

[Understanding Complexity I: Simple Applications for Political Science and Policy Research & Theory Development](#)

[Liz Johnson](#)

12.30 - 13.30     **Lunch Break**

**Tuesday, March 3, 2015**

13.30 - 14.30 **Session VI**

### **TUTORIAL**

**13.30-14.30**

**Session Chairperson:**

Liz Johnson, Managing Editor of the Journal on Policy & Complex Systems

**TUT\_02\_01**

**[Understanding Complexity II: A Simple Guide to Using & Developing Agent-Based Models for Research](#)**

Liz Johnson

14.30 - 15.00 **Coffee/Tea Break**

15.00 - 17.00 **Session VII**

### **WORKSHOP**

**15.00-17.00**

**Session Chairperson:**

Prof. Dr. Roustem Miftahof, Arabian Gulf University

**WO\_01**

**[INTRODUCTION TO COMPUTATIONAL BIOLOGY](#)**

**Organized by Arabian Gulf University, Kingdom of Bahrain - Under the Patronage of His Excellency Dr. Khalid Al Ohaly, President of Arabian Gulf University**

Recent advances in biology have created new opportunities for understanding biological problems from an integrated systems perspective. This emerging field, known as computational biology, is an integration of concepts and ideas from life sciences, engineering disciplines and computer science, and emphasizes the functional behavior of components working together. Whereas systems computer modeling and design are well-established in engineering disciplines, until recently it has been relatively rare in biology.

In this workshop we explore the opportunities for the application of this multidisciplinary approach which brings together systems biology analysis, engineering, and concepts from computer science to solve problems in biology and medicine.

It will be of interest to biologists and doctors wishing to explore the role and advantages of numerical experimentation in their subject areas, as well as for mathematicians interested in new areas of applications.

The workshop will combine introductory input lectures with discussion and time for your questions

## Tuesday, March 3, 2015

19.00 - 22.00 **CONFERENCE DINNER**

More info at the conference on location and meeting place



## Wednesday, March 4, 2015

09.30 - 10.00 **Registration**

09.30 - 10.00 **Session VIII**

### GAMING

**Session Chairperson:**

Mr. Hammad Nabhan, IT Dept. Arabian Gulf University.

**GAME\_01**

**Transmitting Al Ardha: Traditional Arab Sword Dance**

Muqeem Khan..... 49

10.00 - 10.30 **Coffee/Tea Break**

10.30 - 12.30 **Session IX**

### TUTORIAL

**10.30-12.30**

**Session Chairperson:**

Liz Johnson, Managing Editor of the Journal on Policy & Complex Systems

**TUT\_02\_02**

[Understanding Complexity II: A Simple Guide to Using & Developing Agent-Based Models for Research](#)

Liz Johnson

12.30 - 12.45 **Session X**

### CLOSING SESSION

**12.30-12.45-**

**Session Chairperson:**

Dr. Khaldoon AlRoomi, President AOU

Best Paper Award Ceremony and closing statements

## POSTER PRESENTATIONS

During the event the following posters will be displayed in the registration area

### **P\_01**

**A novel computer-based model to simulate diabetic gastroparesis and its therapeutical management**

Yasser Ammar, College of Medicine and Medical Sciences, Manama, Bahrain

### **P\_02**

**Non-linear wave patterns in the small intestine**

Abdullah Rafea, College of Medicine and Medical Sciences, Manama, Bahrain

### **P\_03**

**Numerical simulations of electromechanical activity of the human gastric smooth muscle**

Omar Al Qabandi, College of Medicine and Medical Sciences, Manama, Bahrain

### **P\_04**

**Biomechanics change in postbariatric stomach**

Noor Shamlooh, College of Medicine and Medical Sciences, Manama, Bahrain

### **P\_05**

**Pharmacological modulation of bolus movement in the gut**

Omar Al-Qatrawi, College of Medicine and Medical Sciences, Manama, Bahrain

**SEE YOU NEXT YEAR**

**AT MESM 2016- GAMEON-ARABIA'2016  
(dates and location to be confirmed)**

**ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL**

**Session Chairs** are chosen on a voluntary basis by proposals by either authors or local committee members or are appointed by the Track Chairs, General Program Chair or General Conference Chair. They are responsible for their assigned session. They make sure their speakers are available, take care of the timing within the session, chair the discussion after each presentation and introduce each speaker based on the CV's given to them by the authors. **If a session chair is not available then the first author takes on the responsibility to chair**

**THE NUMBERS NEXT TO THE PRESENTATIONS DENOTE THE PAGE-  
NUMBERS IN THE PROCEEDINGS. IF NO NUMBERS ARE MENTIONED THEN  
THIS PAPER IS NOT PUBLISHED IN THE PROCEEDINGS**

**THE AUTHORS WHO ARE UNDERLINED ARE NORMALLY THE PRESENTERS**

**PAPERS IN GREY BOXES ARE THE EXTENDED PAPERS ELIGIBLE FOR THE  
BEST PAPER AWARD**

**CHECK OUT THE OTHER EUROSIS EVENTS ON OUR WEBSITE:**

<http://www.eurosis.org>

**BEWARE: As some of the authors might not be granted a Bahraini visa it is possible that some of the papers might not be presented.**

# eurosis

EUROSIS was borne out of discussions with the European Community to set up a new kind of Society, which would be project-driven instead of driven by pure membership and conferences.

The aim of the Society is to set up topic related Technical Committees which will link directly to European Projects in the field of computer simulation and related areas and to act as a knowledge pool for future European Networks of Excellence, like MOSAIC.

If you would like to receive more information about EUROSIS, please contact

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I am interested in becoming a EUROSIS member please send me further info

## CONFERENCE LOCATION

### Visitor's Survival Guide

When arriving by plane in Bahrain you will do so at [Bahrain International Airport](#).



Flight Information: 📞 +973 17339339

At the airport you can take a [taxi](#) to the city centre. For information on taxi charges follow the taxi link.

To reach the university you can do so by taxi

Taxis

Speedy Motors 📞 +973 17682999

Bahrain Limo 📞 +973 17266266

Arabian Taxi 📞 +973 17461746

or by bus:

By bus take Bus Lines **9-11-15** where you can exit at the following stops:

Shaikh Zaid Avenue (stop 1-2 or Drivers Training School)

A Ali Avenue 32

### Entry Requirements:

When traveling to Bahrain, this information should help you to prepare for your visit.

- [Visa Information](#)
- [Customs Rules](#)
- [Taxi Rates](#)