

Organizers:  
Paulo J Oliveira  
(Coimbra, Portugal)  
Catarina R Oliveira  
(Coimbra, Portugal)



Coimbra, Portugal, 22-24 May 2019



## Symposium 5 | Bioinformatics and Machine Learning in Biomedicine

**Organizer:** Ernesto Costa (Coimbra, Portugal)  
Francisco Pereira (Coimbra, Portugal)  
Armindo Salvador (Coimbra, Portugal)  
Alex Freitas (Kent, UK)

**Day:** Wednesday 22 afternoon and Thursday 23 morning  
**Meeting room:** Meeting Room Petipa, Hotel Vila Galé ( Congress venue 1 )

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### Wednesday, 22 May

#### 14.00-16.00 **Session 1: Bioinformatics and Machine Learning in Biomedicine I**

Chairs: Ernesto Costa (Coimbra, Portugal)  
Natal van Riel (Eindhoven, Netherlands)

**Machine Learning and Bioinformatics for Ageing Research**  
Alex Freitas (University of Kent, UK)

2 Speakers selected from submitted abstracts

**Predicting Glucose in Diabetic Patients Using Structured Grammatical Evolution**  
Nuno Lourenço (Coimbra, Portugal)

16:00-16:30 Coffee-break

#### 16.30-18.00 **Session 2: Bioinformatics and Machine Learning in Biomedicine II**

Chairs: Francisco Pereira (Coimbra, Portugal)  
Teresa Oliveira (Coimbra, Portugal)

**Predicting disease progression in Amyotrophic Lateral Sclerosis using Machine Learning: Learning from longitudinal data using time windows and progression patterns**  
Sara Madeira (Lisbon, Portugal)

1 Speaker selected from submitted abstracts

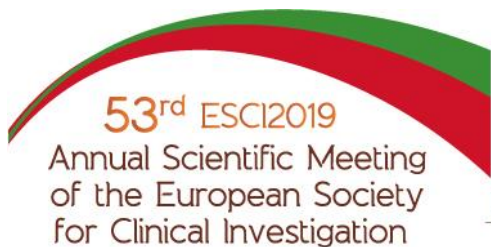
**Predicting acute kidney injury and clinical deterioration in hospital inpatients**  
Chris Farmer (University of Kent, UK)

18.00 - 19.00 Opening Ceremony

19.00 - 20.00 Opening lecture by a Key-note speaker

20.00 - 21.00 Welcome drink

21.00 - 22.00 Champions League in Biomedicine and Experimental Biology



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## Thursday, 23 May

### 08.30-10.00 **Session 3: Bioinformatics and Machine Learning in Biomedicine III**

Chairs: Armindo Salvador (Coimbra, Portugal)  
Nuno Lourenço (Coimbra, Portugal)

#### **Integrated machine learning and mechanistic modelling of Metabolic Syndrome development and dynamics**

Natal van Riel (Eindhoven, Netherlands)

1 Speaker selected from submitted abstracts

#### **Discovering Low-Energy Atomic Clusters with Machine Learning**

Francisco Pereira (Coimbra, Portugal)

10:00-10:30 Coffee-break

### 10.30-12.30 **Session 4: Bioinformatics and Machine Learning in Biomedicine IV**

Chairs: Alex Freitas (Kent, UK)  
Chris Farmer (Kent, UK)

#### **The impact of Bioinformatics and Machine Learning in drug discovery**

Joel Arrais (Coimbra, Portugal)

2 Speakers selected from submitted abstracts

#### **Artificial Intelligence Application to Drug Development**

Irina Moreira (Coimbra, Portugal)