

# **IX Latin American Summer School on Computational Intelligence, Concepción, Chile. November 30 and December 1, 2015.**

## **Organizing Committee**

- **Chair: Daniel Sbarbaro, Universidad de Concepción**
- **Co-chair: Doris Sáez, Universidad de Chile**
- **Honorary Chair: Pablo Estévez, Universidad de Chile**
- **Program Chair: Gonzalo Acuña, Universidad de Santiago de Chile**
- **Tutorials: Claudio Held, Universidad de Chile**
- **Poster Competition Chair: Pablo Zegers, Universidad de los Andes  
Miguel Figueroa, Universidad de Concepción**
- **Publicity: Millaray Curilem, Universidad de la Frontera  
Jorge Pezoa, Universidad de Concepción**

January 30, 2016

The Chilean Chapter of the IEEE Computational Intelligence Society organized the IXth Latin American Summer School EVIC2013. Summer Schools on Computational Intelligence have been organized at the Universidad de Chile since 2003 and have demonstrated to be an important opportunity of exchange and update for undergraduate and graduate students from electrical engineering, computer science, mathematics, and related areas. This year, in order to promote the participation of students in the southern regions of Chile, EVIC 2015 took place in Concepción, at the Universidad de Concepción (500 kms south of Santiago). EVIC2015 continued the tradition and offered an attractive program for its target audience.

Computational Intelligence meets a set of biologically inspired techniques addressed to complex engineering problems, such as Intelligent Control, Robotics, Optimization, Pattern Recognition, Prediction and others. The great advantage of these techniques is not only that they have demonstrated excellent results but mostly because of their flexibility to adapt to a wide variety of problems, from medicine to astronomy, through almost all knowledge areas. For this reason it is important that our students know their progress and applications in order to encourage their study. The aim of the EVIC2015 Summer School was then to promote Computational Intelligence and to disseminate the latest results of research and development of this interesting area, especially among graduate students and academics from Chile and other Latin American countries.

## **PROGRAM**

The program was structured as follows:

### **1. Plenary Sessions**

The plenary talks of EVIC 2015 were:

- P1: Dra. Dipti Srinivasan, “Computational Intelligence (CI) in Smart Grid”..
- P2: Dr. Pablo Estevez “CI Challenges and Opportunities in the Big Data Era in Astronomy”.
- P3: Dra. Dipti Srinivasan, “Computational Intelligence-based Demand side management”.
- P4: Dr. Miguel Figueroa, “Learning systems in CMOS VLSI with local adaptation”

### **2. Tutorial Sessions**

National experts presented tutorials on topics related to their expertise areas.

- T1: “Máquinas de Vectores de Soporte para el Reconocimiento de Patrones en Señales Biomédicas.”. Prof. Millaray Curilem, Dpto. Ing. Eléctrica. Universidad de la Frontera.
- T2: Dr. Gonzalo Acuña “Elaboración de Modelos para Sistemas Dinámicos No-Lineales utilizando Herramientas de la Inteligencia Computacional.”, Universidad de Santiago, Chile
- T3: Laboratorio de Computación, Dr. Jorge E. Pezoa – “Tutorial hands on de nesC para la programación de inteligencia ambiental.”, Universidad de Concepcion
- T4: Dr. Claudio Held “ Introducción a la Lógica Difusa, Teoría y Aplicaciones”, Universidad de Chile.

### **3. Poster Competition**

The aim of this Completion is that students can present their applications using Computational Intelligence tools, from undergraduate and graduate works. Authors exposed their work to a jury (Miguel Figueroa, Pablo Estevez and Claudio Held) who evaluated them.

Poster competition award:

<b>Award</b>	<b>Authors</b>	<b>Title</b>	<b>Institution</b>	<b>Country</b>
1st place	Carlos Celemín y Javier Ruiz del Solar	An 3nteractive machine learning approach for non-experts teacher	Universidad de Chile	Chile
2nd place	:Camilo Soto, Millaray Curilem, César San Martín, Gustavo Fuentelba, Fernando Huenupan, Carlos Cardona y Luis Franco	Feature selection for the automatic classification of volcanic seismic signals using support vector machines and genetic algorithm	Universidad de la Frontera	Chile
3th place	Diego Candia, Steven Laurels y Catherine Tallon- Baudry	Automated detection of consciousness patterns in the heart-brain coupling of patients awakening from coma	Universidad de Chile	Chile

Student participation in the posters competition: 8 posters.

<b>Institution</b>	<b>Country</b>	<b>Number</b>
Universidad de la Frontera.	Chile	1
Universidad de Chile	Chile	4
Universidad de Concepción	Chile	2
Universidad de Santiago de Chile	Chile	1
<b>TOTAL</b>		<b>8</b>

## **PARTICIPANTS:**

<b>Institution</b>	<b>N. of participants</b>
FACH	4
Pontificia Universidad Católica de Valparaíso	1
Universidad de Concepción	15
Universidad de la Satisima Concepción	9
Universidad del BioBio	19
Universidad de Santiago de Chile	3
Universidad de Chile	25
Universidad de la Frontera.	16
<b>Total</b>	<b>92</b>

We are satisfied of the organization of the event and the level of participation of students. We would like to thank the IEEE CIS, the Universidad de Chile and the Universidad de Concepción for supporting the event. We also would like to thank all the professors and student whose participation enhanced this version of EVIC.

### **Scholarships**

The beneficiaries with the scholarships were 49 students, with 100% of the amount. Also 12 postgraduates students received a per diem amount of US\$ 50.

## Pictures



1. Organizing committee and international guests



2. Dr. Dipti Srinivasan, National University of Singapore, "Computational Intelligence in Smart Grid"





3.- Dr. Pablo Estevez, "Computational intelligence challenges and opportunities in the big data era in astronomy"

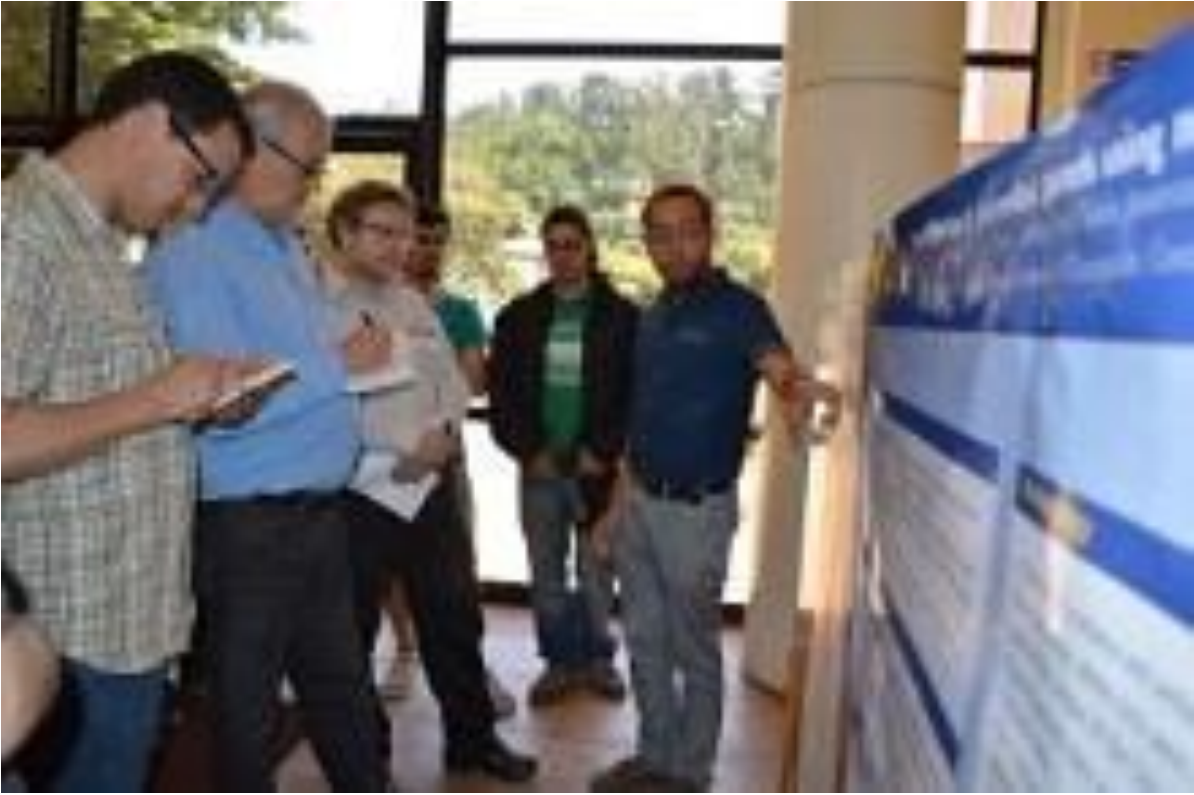


4.- First Place Poster Competition, Student Carlos Celemin





5.- Atendees



6.- Poster Competition