Egypt Chapter Report

The Egypt IEEE Computational Intelligence Society (CIS) Chapter aims to unite researchers and engineers with an interest in the field and promote Computational Intelligence in Egypt. The chapter was established with many goals in mind: 1) encourage and make it easy for the researchers to cooperate and increase their contribution in the area of computational intelligence; 2) help to investigate the usage of the computational intelligence expertise to address challenging real-life problems in different branches of science and engineering; 3) Disseminate the computational intelligence knowledge to students, researchers and engineers through organizing a mix of educational and research workshops. These activities target raising the awareness of the CIS and attract new researchers and engineers to this ever growing field. Towards realizing these goals, the chapter has organized several computational intelligence related activities, including workshops, symposiums, seminars and competitions focusing on postgraduate students and qualified engineers as well as undergraduate students. Since its inception, the chapter has witnessed strong cooperation with industry encouraging industry to benefit from the computational intelligence concepts and techniques.

Presentation

The Chapter was founded in winter 2008 through an initiative led by Professor Hani Hagras (The German University in Cairo) who later became the founding chair. Through the support of the German University in Cairo (GUC) the chapter launch was announced along with the chapter’s first activity in May 2008. The chapter has, and remains to receive continuous support from the IEEE Egypt Section. Since its birth, the chapter committee is elected from the CIS members in Egypt. The Chapter Standing Chair is Dr. Rabie Ramadan (Cairo University). The Chapter has two Vice Chairs who are Dr. Nayer Wanas (Microsoft Innovation Lab in Cairo) and Engineer Moustafa Nawito (The German University in Cairo) who also acts as the Chapter Treasurer. The Chapter Secretary is Engineer Sherif Ali (INTENSO Ltd). The Chapter Educational Chair is Prof. Mohamed Moustafa (Ain Shams University) while the Membership Activities Chair is Engineer Nahel Mohammed (The Arab Science and Technology Foundation). Sherif Mowafey and Ms. Mohga Ahmed are the Junior Activities Chair and Women Activities Chair respectively.

The chapter maintains a very active website that publicise the chapter and its activities as well the society (http://ewh.ieee.org/r8/egypt/cis). In addition, dissemination of information about the activities of the chapter are done through a mailing list of the CIS members in Egypt as well through the IEEE mailing list in Egypt. The chapter has also several representative junior members in the different Egyptian Universities who disseminate the chapter and society events and activities in their local institutions. Moreover, the junior activities chair tours Egypt to disseminate CIS and the chapter amongst the

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The Chapter Launch Event held in May 2008 shows the Chapter founders together with Prof. Ashraf Mansour (The German University in Cairo Chairman) (fifth from the right) and Prof. Samir Shaheen (IEEE Egypt Section Vice Chair) (third from the right).
high school and undergraduate students, which is a unique approach adopted by the CIS chapter in Egypt. The chapter also has Women in Computational Intelligence Chair who is organizing various activities to raise and disseminate the knowledge about the chapter and CIS to women engineers. The chapter has also an industry liaison chair aiming to establish and maintain close links with the industry.

Although the chapter remains in its early years, the chapter has increased the size of its membership with a high level of retention. We estimate that the number of the Egyptian CIS members has tripled since its launch.

**Activities**

The Chapter has several activities which aim to serve the local scientific, professional, governmental and educational communities alike, in addition to promoting the CIS. Amongst the most notable activities of the chapter are the following:

- The chapter has organized a mix of educational and research workshops which aimed to raise the awareness of the CIS, attract new researchers and engineers to the field and raise the number of members to the CIS.
- The chapter has organized computational intelligence related competitions aimed at postgraduate students and qualified engineers as well undergraduate students. These competitions help to promote the CIS amongst the undergraduate students (who are the future researchers and engineers) which will help to increase the base of computational intelligence researchers in the field.
- The chapter has a junior activities chair who tours the country to disseminate CIS and the chapter amongst the high school and undergraduate students where most recently he has toured the city of Port Said.
- The chapter also has Women in Computational Intelligence chair who is organizing various activities to raise the disseminate the knowledge about the chapter and CIS to women engineers. Currently, the women activity chair is cooperating with WIE (IEEE Women In Egypt society) members to get women involved in many of CIS activities.
- Planning for organizing an industrial event for Egypt companies is currently underway and led by Dr, Nayer Wanas the chapter Vice chair. This event targets the industry to increase awareness of the different aspects of computational intelligence. Through this activity, the chapter is expected to introduce computational intelligence to the industry and illustrate how these technologies may help solve many real-world problems.

**Workshops**

The chapter has organized several scientific workshops as follows:

- **“The National Workshop on Intelligent Systems and Their Applications” organized in the Faculty of Engineering, Cairo University, 5–6 November 2008.** The workshop was partly supported by Cairo University. The workshop was a two days event and it was attended by about 70 delegates from all around Egypt. The workshop has featured invited talks and practical hands on session. The workshop has helped to introduce people to the theory and practice of Computational Intelligence and its various applications. The workshop was a great success as indicated by the feedback forms submitted from the delegates as well as the number of members who have decided to join the IEEE CIS following the workshop.

- **“The National Workshop on Multi-Agent Systems and Their Applications” organized in the Faculty of Engineering, Ain Shams University, 4th April 2009.** The workshop was partially supported by Ain Shams University and JELECOM Ltd. The workshop was chaired by Prof. Hani Mahdi from Ain Shams University. The workshop was attended by about 60 delegates from all around Egypt. This workshop was more research oriented towards the integration of computational intelligence.
intelligence and agents (this was also the subject of the IEEE Symposium on Intelligent Agents (IA) held in Nashville on the 30th and 31st of March within IEEE Symposium Series on Computational Intelligence (SSCI 2009)). The workshop featured invited talks and practical hands on sessions. The workshop was a great success as indicated by the feedback forms submitted from the delegates as well as the number of members who have decided to join the IEEE CIS following the workshop.

“"The Computational Intelligence and Smart Environments Symposium"” organized in the German University in Cairo, 9th of July 2009 and partially sponsored by INTENSO Company. The workshop was partially supported by the German University in Egypt. The workshop was chaired by Dr. Rabie Ramadan from Cairo University.

The symposium was attended by about 30 delegates from all around Egypt. This symposium was more research oriented towards the integration of computational intelligence and smart environments.

“"The National Workshop on Neural Networks and Evolutionary Computation”” organized in Ain Shams University on 11th of July 2009 and partially sponsored by INTENSO Company. The workshop was chaired by Prof. Mohamed Moustafa from Ain Shams University.

The workshop was attended by about 35 delegates from all around Egypt. This workshop was more research oriented towards recent trends in Neural Networks and Evolutionary Computation.

Public Lectures

The chapter also has organized public lectures given by top key researchers in the field such as the

The talk given by Professor Mohamed Kamel from Waterloo University, Canada on the topic of “Computational Intelligence and Cooperative Intelligent Systems”. This public lecture was attended by about 70 delegates and the talk was organized in the German University in Cairo in

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May 2008. The talk was supported by the German University in Cairo.

Another lecture was organized at Al-Azhar University (Ladies Branch) as part of the Chapter Women in Computational Intelligence activities. The lecture was entitled “Introduction to Computational Intelligence and Their Applications”. The lecture introduced the computational intelligence to undergraduate students to encourage them to apply the computational intelligence in their graduation projects. The event was great success where more than 200 ladies attended the event and later on many of them joined the CIS community.

In August 3rd, 2009, the chapter organized a public lecture was given by Dr. Nayer Wanas, Microsoft Innovation Center in Cairo, entitled “Innovations in Computational Intelligence”. The lecture was in conjunction with the Egypt Engineering day event. The lecture is attended by almost 300 delegates.

Competitions

The chapter has organized three Computational Intelligence competitions targeting the:

- Dissemination of knowledge of computational intelligence to undergraduate and postgraduate students.
- Recognition of outstanding graduate students in Egyptian Universities.
- Increasing the interest in integrating computational intelligence in the undergraduate education programs in Egypt.

Promoting excellence in graduation projects.

The organized competitions are as follows:

- The first competition is aimed at postgraduate students and qualified engineers and is entitled “The Face Gender Classification Competition 2009” which employ computational intelligence techniques for gender classification based on extracted facial features.
- The second competition is targeted towards the undergraduate students which is the “Outstanding Graduation Project that Employ Computational Intelligence in Industrial Applications”. This award will encourage undergraduate students who are the future researchers and engineers to know and develop new implementations of computational intelligence industrial application. This will help to increase the base of computational intelligence industrial applications in Egypt in the future. This award is sponsored by Egypt Telecom Company.
- The third competition is targeted towards the undergraduate students which is the “Outstanding Graduation Project that Employ Technical Contribution to Computational Intelligence”. This award will encourage undergraduate students who are the future researchers and engineers to try to develop novel technical contributions of computational intelligence. This will help to increase the base of computational intelligence research in Egypt in the future. This award is also sponsored by Egypt Telecom company.

A committee from Prof. Hani Mahdi (Ain Shams University), Dr. Mohamed Moustafa (Ain Shams University), Dr. Nayer Wanas (Microsoft Innovation Lab in Cairo), Dr. Rabie Ramadan (Cairo University), and Eng. Sherif Ali (INTENSO Co.) reviewed 25 undergraduate projects to select the winners. The winners were announced during the awards ceremony in the Egyptian Engineering day, the largest yearly engineering event in Egypt.

A Look to the Future

The growth of the IEEE CIS chapter in Egypt over the past 18 month has been surprising to many. It has been possible with the efforts of many individuals who have placed time and effort to realize these events. Despite this growth and success, the IEEE CIS Egypt chapter remains to aspire to continue its growth. While the initial activities mostly focused on introducing different communities to the basic elements of computational intelligence, future events are envisioned to become more involved and technically deeper. In addition, the chapter would put effort to increase the level of engagement and collaboration between the CIS community members in joint work. We also hope to create and vibrant community and become an active chapter in the growth of the IEEE Computational Intelligence Society.