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United Kingdom and Republic of Ireland Chapter Report

The United Kingdom and Republic of Ireland (UKRI) IEEE Computational Intelligence Society (CIS) chapter endeavors to support the UKRI Computational Intelligence research community in as many ways as possible by collating and making available relevant information and news about computational intelligence research in the UKRI area as well as facilitating knowledge dissemination and interaction among researchers in the region. Currently the chapter is going through a transition phase which saw the re-launch of the website and a number of initiatives which are underway to support the development of the chapter and its aims to contribute towards the progression of computational intelligence research activities and cohesion in the UK and RI and to the success of the society as a whole. The chapter is relatively large, consisting of 205 members including one life member (LM), 6 fellows (F), 34 senior members (SM), 129 members (M) and 36 graduate student members (GSM). The chapter is spread over a wide geographical area, over two islands Great Britain and Ireland with Northern Ireland, England, Scotland and Wales being part of the UK in addition to the Rep. of Ireland, resulting in a dispersion of members over five distinct geographical areas. Over the past two years, efforts have been focused on developing a model to support chapter activities across all regions, with activities in Northern Ireland serving as a template for activities in other regions. This article outlines our progress and experiences to date and our development strategy which we hope to put into action in 2010 to make activities more widespread across the geographical boundaries within the UKRI area, to engage members in all areas and provide a service which can benefit CI researchers across the society, not only in the UKRI.

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Committee

The chapter committee is made up as follows with plans to recruit new volunteers to support the role out of planned initiatives in 2010:- Damien Coyle (Chair & Treasurer), Intelligent Systems Research Centre, University of Ulster, Northern Ireland; Ke Chen, (Vice Chair), School of Computer Science, University of Manchester, England; Leslie Smith, (Past Chair and Scotland Representative), Department of Computing Science, University of Stirling, Scotland; Ammar Beletreche, Intelligent Systems Research Centre, University of Ulster, (Northern Ireland Representative); and Simon Coupland, Centre for Computational Intelligence, DeMonfort University, Leicester (England Representative).

This year, a major focus has and will be on recruiting chapter officers to undertake the following roles:

Regional Representatives

The role of geographical area representatives is to organize regular chapter events in their region within the UKRI (at least twice yearly but hopefully many more) and report on the activities and outcomes of these events. For the e-newsletter, each regional representative will keep abreast of other CI-related events, activities, developments and news in their region. The information is then populated in the chapter newsletter which is distributed to the UKRI chapter members annually. The following regional representatives have recently joined the committee: Ammar Belatreche (Northern Ireland Representative) and Simon Coupland (England Representative). We are currently aiming to recruit enthusiastic Rep. of Ireland, Scotland and Wales representatives.

Industrial Liaison

Computational Intelligence research has made significant strides in supporting the development of many new technologies. The UKRI region has a vibrant technology development industry and many other service and process related industries which can benefit significantly from further interaction with computational intelligence based researchers. It is very important that the UKRI chapter supports both industry and academics in the

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field by encouraging interaction through the facilitation of relevant events and organization of lectures within industry and aimed at those who are conducting CI research in industry. It is also important that we gain industrial support for the initiatives we organize and develop better communication with industry to find out what new applications can benefit from CI research, identify current challenging problems in industry which may be used to test and validate the latest developments in CI research, keeping researchers abreast of job opportunities for CI researchers and keeping industry informed about exceptional candidates for challenging research positions as well as helping academic-industry collaboration and exploiting funding opportunities. Obviously researchers and research labs already have a good working relationship with industrial partners and many industry-academic collaborations push the boundaries of the state-the-art computational intelligence technologies. However the UKRI region can benefit significantly from better awareness of particular projects and industry needs and therefore the industrial liaison within the chapter will have a role in enhancing this interaction and reporting on important CI-related research within industry and/or academia-industry partnerships as well as creating awareness of industry needs among CI researchers. David Elizondo, Centre for Computational Intelligence, DeMonfort University, Leicester, has just taken on the role of industrial liaison for the chapter.

Women Representative

There are only a handful of women members in the chapter even though the IEEE Women in Engineering (WIE) is the largest international professional organization dedicated to promoting women engineers and scientists. It is therefore a goal of the chapter to increase the number of women members and encourage more participation from women working in the field of computational intelligence. This year we intend to assign the role of women representatives to one of the chapter's women members in the hope of addressing this goal. It is known that there are many active and successful women CI researchers in the UKRI region and the chapter could benefit significantly from their expertise by either having more women present their work in the lectures/seminars in one of the regional meetings or establishing a small group of women CI researchers to feed their views on what initiatives the chapter and society can develop to support women in CI research and to encourage more of the UKRI women engineers to engage in CI research. The appointed women representative will play a major important role in addressing this need and contribute towards the gender bias within the chapter membership demographics.

GOLD Representative

GOLD stands for Graduates of the Last Decade and is an IEEE-wide initiative but the IEEE CIS has its own GOLD subcommittee. In the chapter we are seeking active participation from GOLD members within the UKRI to get involved and outline their views on what the IEEE and/or the IEEE CIS chapter can do to help the development and progression of GOLD members. We are very keen to establish an active group of GOLDs in CI in the UKRI region and are looking for a GOLD representative to establish a working group aimed at developing and supporting new and innovative initiatives for new graduates and early-stage careerists working in academia (perhaps undertaking a Ph.D.), in industry or in government. The chapter strongly believes that the ideas of our younger members about how the CIS can support initiatives within the CIS community for graduates and those in the early stages of their career is of critical importance for the society as it progresses into the future. The GOLD representative will be involved in mobilizing support from, and interaction between, all GOLD members within the CIS UKRI chapter.

The IEEE Computational Intelligence Society has a GOLD subcommittee and recently a review was undertaken to decide the true added value of the GOLD subcommittee to younger members of the society. It was agreed that the committee has a role to play in getting young people more involved in the CIS and its activities. The CIS GOLD subcommittee aims to help GOLDs find a role in which they can play to enhance their participation in the society (perhaps as a full member of the GOLD subcommittee) and allow them to gain valuable experience in committee membership and society involvement which can enhance their profile or be a stepping stone towards further technical committee involvement in the society. If through the GOLD subcommittee a particular research interest group is developed then this group could be invited to join or form a task-force. In such cases GOLD could be seen as an incubator committee for future committee members/Task

Force leaders/volunteers and this could be considered a significant benefit of joining the CIS and/or engaging GOLD. GOLD is also seen as a committee which educates younger members about the structure of the society and various committees which work behind the scenes.

The UKRI chapter is very keen to help the society's GOLD subcommittee in developing initiatives and will continue to actively encourage younger members across the society to get active within the society. The best way to begin doing this is either to get involved in chapter activities at local level or in the CIS GOLD subcommittee. The chapter strongly believes that the real value of your membership can only be unlocked through active society engagement and interaction with other members. The UKRI Chapter will continue to endeavour to endorse and facilitate active participation and involvement of our younger members.

Prominent researchers and Pioneers in Evolutionary Computing at the Workshop and Summer School on Evolutionary Computing and Lecture Series by Pioneers, Intelligent Systems Research Centre, University of Ulster, Magee Campus, Derry, Northern Ireland, UK, 18–22 August, 2008 which was sponsored by the IEEE Computational Intelligence Society. From left-right: Liam Maguire (Co-chair), Kenneth DeJong (Pioneer), Carlos Fonseca (Session Chair), Nazmul Siddique (Co-chair), Hans-P. Schwefel (Pioneer), David B Fogel [Pioneer and then President of the Computational Intelligence Society (2008–2009)].

Recent Activities

With the UKRI being spread across such a wide geographical area it is impossible to have a regular event in specific locations which all chapter members can attend and therefore meetings are organized by geographical area. In Northern Ireland the chapter holds a meeting in conjunction with events being held at the Intelligent Systems Research Centre, University of Ulster which is open for all to attend. We encourage members and officers from each region within the chapter to organise similar meetings and we are currently engaged in a process of recruiting chapter officers who will organise regular technical meetings in their respective regions i.e., England, Rep. of Ireland, Scotland and Wales. Having meetings closer to each group of members in these areas will make them more accessible to members on a regular basis. In addition, this year it is our intention to decide a prominent research topic/theme within the UK, possibly application focused, in which the chapter can take a more prominent role in supporting. Presently the chapter is very supportive of local events and initiatives and regularly provides technical co-sponsorship to a number of conferences in the UK and Rep. of Ireland. A list of events and conferences supported by the chapter over the past few years and details of local chapter meetings and lectures can be found on the events page of the chapter website http://ewh.ieee.org/r8/ukri/cis/events.html.

Newsletter

Biannually the CIS aims to publish a newsletter. The newsletter includes mostly information about UKRI activities, outlining what research UKRI members have been engaged in, summarizing newly published journal papers or collating details of grants which have been awarded for CI based research that would be of interest to other UKRI researchers, events and initiatives in the regions as well as topical information and interviews with prominent CI researchers. We also are keen to hear from UKRI members who would like to bring an event or special issue to the attention of UKRI members. Knowing and providing information like this can help members who may have similar interests or are undertaking similar or complementary research to be aware of potential collaboration opportunities which could be mutually beneficial among a number of parties. Highlights of a recent newsletter included notifying members of a number of significant awards for UKRI researchers, an interview with the 2008–2009 President of the IEEE CIS (Dr. David Fogel) and a new virtual presence in Second Life. The newsletter can be viewed here http://ewh.ieee.org/r8/ukri/cis/newsletter.html

Virtual meeting room in chapter building. IEEE Computational Intelligence Society UKRI chapter virtual building in Second Life.

Chapter website and Virtual Presence

http://ewh.ieee.org/r8/ukri/cis/.

The chapter website which was redesigned and re-launched in 2008 is updated regularly with the latest news and events in the region. The website's contents are also virtually accessible. The chapter has been experimenting with virtual meeting and networking tools and has established a virtual building within Second Life—the popular Virtual World. This IEEE CIS UKRI chapter building allows people exploring the virtual world to view all the chapter information. The virtual building contains the chapter website mirrored, a notice board for new information, a space for

presenting CI information and history, Chapter committee members' contact details, audio and visual streaming of virtual conferences, a virtual conference room and boardroom for virtual meetings, a visitor feedback and rating board and rotating events' notice page. This virtual space provides a new method to enable members and the public to obtain information about the chapter and provide a new way of interacting with members, creating public awareness and having virtual meeting discussions. This is still at an experimental stage but we would be keen to get more members to meet within Second Life and to investigate the success of meetings and virtual interactions in Second Life. This can help determine if it is useful for existing members, as a tool to attract new members and improve public awareness of CI and CI related technologies and benefits. We would encourage all CIS members who have access to Second Life to teleport in and pay a visit to the virtual CIS UKRI chapter building and provide feedback.

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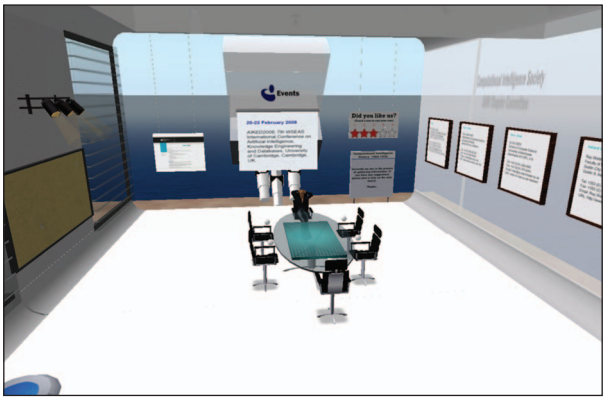
Computational Intelligence Research Centres (UKRI Database)

A number of chapter members have suggested that we compile a list of UKRI based computational intelligence related research centres/laboratories for the website. We are currently collating information on the various research labs/centres and plan to conduct a series of interviews with directors of research labs so that they can publicise the main research focus within the lab, how the labs got started and where they see the labs' major focus will be in the future. This would also involve gathering some information on the personal profile of the director and providing an overview of the centre/labs/groups activities' major outcomes (in R&D, tech transfer, links with industry etc). This would be very beneficial in terms of exposing the CI research in the region and for publicizing the activities of UKRI CI based research centres/groups. The following directors of Computational Intelligence focused researcher centers have agreed to provide answers to a series of questions relating to the centres and these will be published in the forthcoming newsletter and on the website.:

- Prof. Robert John, Centre for Computational Intelligence (CCI), DeMonfort University Leicester, England. http://www.cci.dmu.ac.uk/
- Prof. Martin McGinnity, Intelligent Systems Research Centre (ISRC), University of Ulster, Northern Ireland. http://isrc.ulster.ac.uk/
- Prof. Xin Yao, Centre of Excellence for Research in Computational Intelligence and Applications (CERCIA), University of Birmingham, Birmingham, England. http://www.cercia.ac.uk/.



Computational Intelligence Society UKRI chapter virtual building in Second Life.

Awards

We also like to promote the top class research being conducted by UKRI researchers. In recent years, chapter members have been very successful in the Society's awards process having received Outstanding Doctoral Dissertation awards 2 years running, Neural Networks pioneers awards and a number of IEEE CIS Transactions best paper awards.

Summary

The chapter aims to encourage UKRI members to learn more about the chapter, the society and the IEEE, to provide their views on what the chapter could or should do for CI research in the UKRI region and to seek active participation in chapter activities and initiatives. We are always keen to hear from chapter members and would be very keen to develop the chapter so that all CIS members benefit through supporting initiatives and activities, facilitating more collaboration, interaction and research exploitation, as well as attracting new members to strengthen the CI research community in the UKRI and create more public awareness of the exciting topics which exist under the computational intelligence umbrella.

Time is difficult to find and an expensive commodity in today's society and working environment, be it academia, research, industry, but we believe that by investing time and effort in the chapter and obtaining guidance and feedback from CI researchers, the CIS UKRI chapter can be much better, much more useful to researchers in the region and can be in the position to provide meaningful service and good resources for UKRI CI researchers in the future. We want the UKRI CIS chapter to be the integral part of the CI research community in the UKRI. Ongoing efforts and plans for the future to achieve this are currently being actively pursued.