in this issue

GECCO 2016
Denver, Colorado

Women@GECCO
2015

CFPs for GECCO
2016, EVO* 2016
and PPSN 2016

*Guest editorial from **Marc Schoenauer**, Chair of SIGEVO*

The times they are a-changing

Summer 2015 has been a time of several changes in SIGEVO, the ACM Special Interest Group on Evolutionary Computation:

Most importantly, and most sadly, **John Holland** passed away on August 9. A forthcoming Special Issue of this newsletter will be entirely dedicated to his memory, so I will not go much further now. We were all greatly influenced by the visionary ideas of this early pioneer of our field. The man is gone, but his ideas remain and will continue to flourish forever, disseminated in our memes, if not in our genes, through generation after generation of talented researchers around the world.

Another change, announced inside our previous issue, is that of the Editor in Chief of this newsletter. **Pier Luca Lanzi** created the SIGEVO newsletter 10 years ago. He has spent an incredible amount of time and effort to make it a publication of very high quality, both in content and in appearance. I want here to publicly thank him, and acknowledge all that SIGEVO owes him. **Emma Hart** has enthusiastically agreed to take over. And though the bar has been set very high by Pier Luca, I have no doubt that Emma and her team will set it even higher, as you have already seen in the last issue. Thank you, and a long life to this second era of the newsletter!

Yet another change that you will have already heard about in Madrid last July is the ritual renewal of one third of SIGEVO Executive Board, elected by last year SIGEVO members ... even though it is a pity that participation in the election was very low (less than 20%). I am very pleased to announce the arrival on the Board of **Emma Hart** and **Gabriela Ochoa**, and I wish to salute the out-going Board members: **Anna Esparcia**, who did such a great job as General Chair of GECCO last year, and Pier Luca Lanzi, already mentioned above. But the Board also considered that more new blood was mandatory to keep a body such as SIGEVO moving. Hence two more honourable members of our community have been invited to participate in the Board's activities: **Enrique Alba**, whose experience as chair of GECCO 2013 will be more than useful in the Business Committee, and **Christian Gagné**, who was Publicity Chair of GECCO 2014, and is already making an enormous contribution in helping to set up the new web site for our SIG and, more importantly, for our conferences (starting with GECCO 2016). This is yet another forthcoming change, and it deserves to be introduced more thoroughly, but as I have already taken too much space here, you will have to wait for a further issue of this newsletter for more details.

Finally, after its renewal, the Board elected new officers. **Wolfgang Banzhaf**, who had been chair for 2 mandates (4 years), had to step down, and I have the great honour, and very difficult task, of replacing him. I would like to seize this new opportunity to heartily thank Wolfgang for these 4 years of highly efficient and seamless service to our community, making SIGVEO the wealthy SIG that it is now.

And don't worry, I will not be alone to handle SIGEVO current matters: I am very grateful to **Una-May O'Reilly** and **Franz Rothlauf**, who have both gracefully accepted to continue as vice-chair and treasurer respectively, and to **Jürgen Branke**, who will take over as the new secretary. With such a team, and the whole extended Board behind us, I feel quite confident that we can bring more beneficial changes to SIGEVO in the future, for the greater benefit of our community at large.

And it is now time for me to definitely give back the keyboard to Emma, and let you enjoy reading this first issue of the Volume 8 of SIGEVO newsletter.

* Due to technical reasons, part of the original editorial text was found missing in an earlier version of this pdf and has now been updated.

evo* 2016 — Porto, Portugal — March 30 - April 1

GECCO — Denver, Colorado, USA — July 20-24 2016

PPSN 2016 — September 17-21st 2016, Edinburgh, Scotland

GECCO, Colorado and Summer 2016

Darrell Whitley, Fort Collins, Colorado

GECCO will be held in Denver, Colorado in July 2016. There are always great papers and groundbreaking research at GECCO. So come for the research. Then, after all that hard work, if you want to add some extra vacation days to your trip to Colorado, there are lots of exciting things to do. Summer time in Colorado means long sunny days and big sky. So you should get outdoors.

Rocky Mountain National Park

The Rocky Mountains dominate the western skyline when you are in Denver. One of the best ways to see the Rocky Mountains is to visit Rocky Mountain National Park just an hour north of Denver. The highest continuous highway in the continental United States, Trail Ridge Road, passes through the Park, topping out in alpine tundra at 12,183 feet (3713 meters) surrounded by peaks that reach up to 14,159 feet (4346 meters). There are numerous places to go hiking in and around the Park. (A local favorite outside of the Park is "Lumpy Ridge" just north of the town of Estes Park.) Most days there are herds of elk wandering in the Park, or anywhere else they decide to go. And if you know where to look, you might also find moose (for example, early in the morning around Brainard Lake, just off the Peak to Peak highway). There are also big horn sheep and black bears in and around the Park and the surrounding canyons.

If you are really motivated you can climb a mountain. Long's Peak is the most popular climb in Rocky Mountain National Park (and I have heard that a member of the GECCO community has a cabin near the trailhead).

Whitewater Rafting on the Cache La Poudre

The Rocky Mountains are justifiably famous for White Water Rafting. To the south of Denver, there is rafting on the Arkansas River. To the north, there is rafting on the beautiful, wild and scenic Poudre River. Just be careful: the water is ice cold, and the current is swift. The Poudre River is also a destination for those who want to fly fish for wild trout.

If you are not excited about renting a car, and exploring the mountains, there are also many things to see and do in Denver. Denver is known as "The Mile High City" because the elevation at the Capital Building in Denver is 5280 feet: one mile high.

The GECCO conference will be held at the Denver Technology Center, a few miles south of the heart of the city. But there is a "lightrail" train that connects the Tech Center to downtown and points in between. Downtown Denver has a very nice art museum: DAM, the Denver Art Museum. The museum includes not only modern art, but also an excellent Native American (American Indian) collection. And there is a very vibrant nightlife in LoDo (lower downtown Denver) with all types of restaurants. Colorado is home to an amazing number of microbreweries and many restaurants serve their own custom microbrew, plus local favorites. There is even a Denver Brewery Tour. So after a long day of conferencing at GECCO, catch the lightrail and checkout LoDo during your visit to Denver. From the city center you can also catch a taxi and go to the Denver Zoo and the Natural History Museum, or the Denver Botanic Gardens to see the bonsai and Japanese garden.

Red Rocks in Denver

In an around Denver, there are also great musical venues. Fiddler's Green Amphitheatre is very close to the GECCO conference venue (just one lightrail stop away from the Denver Tech Center), and attracts world class musical artists. And of course, Red Rocks in Denver is one of the most famous concert venues in the world. Red Rocks is a natural outdoor amphitheater surrounded by giant (really giant) red rock formations. The biggest and the best play Red Rocks. Red Rocks is on the west side of Denver, but the train does go to that general neighborhood. There are also musical venues downtown at the Ogden and the Fillmore theaters: here you will find emerging artists, or that outsider band. You can find out about who is playing in Denver by visiting Westword.com. But if someone you really want to see will be playing Fiddler's or Red Rocks, plan on getting tickets two or three months in advance. These venues sell out fast.

Colorado is an amazing place with an abundance of natural beauty. So come to GECCO in 2016, and stay a few extra days to relax and enjoy the scenery.
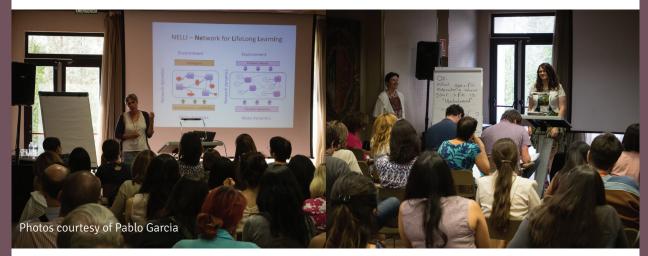
2015 GECCO Workshop - Women@GECCO

Report by **Carola Doerr**, **Gabriela Ochoa** and **Nur Zincir-Heywood**

GECCO 2015 hosted the third edition of the women@GECCO workshop, with a continued and increasing high participation rate. This year, more than 60 colleagues including both women and men, participated in the workshop and the associated work-life-panel discussion. Women are still an under-represented cohort in evolutionary computation both in industry and academia. The broad objective of this workshop series is to share ways that will generate, encourage, and support academic, professional, and social opportunities for women in evolutionary computation.

The program started off with an invited talk by Prof. **Emma Hart**, head of the Centre for Algorithms, Visualisation and Evolving Systems at Edinburgh Napier University, on Lifelong Learning: An Academic & Personal Perspective. Emma's work explores novel bio-inspired techniques for solving a range of real-world optimization and classification problems, as well as the fundamental properties of immune-inspired computing through modeling and simulation. Her current research focuses on systems that can continue learning over their lifetime, with applications in optimization and robotics. She is also involved in knowledge transfer and commercial activities, applying evolutionary and learning techniques to real-world problems.

Emma gave an inspirational talk following her career journey, which involved moving from Chemistry to Evolutionary Computing to Artificial Immune System, to finally integrating these strands into her most recent research topic: life-long learning hyper-heuristics. She stressed the importance of people and collaborations in underpinning and supporting the life-long learning process of an academic career. Her talk was very well received. The audience was clearly engaged and motivated as evidenced by the multiple questions and comments. This type of talks is certainly important as a model and inspiration for more junior female researchers.

Photos courtesy of Pablo Garcia

The invited talk was followed by a new element in the workshop series, a so-called science-slam, where the speakers are invited to introduce their research topics in a creative and non-standard way, in less than 5 minutes. We had five excellent and surprisingly engaging contributions this year. **Tea Tusar** (INRIA Lille, France), **Madalina Drugan** (Vrije Universiteit Brussels, Belgium), **Julia Handl** (Manchester Business School, UK), **Amarda Shehu** (George Mason University, US), and **Arina Buzdalova** together with **Irina Petrova** (both ITMO University, St. Petersburg, Russia) volunteered to pioneer the science slam. Their creative contributions involved rhymes, Lego puzzles, stories explaining why having a "bad-hair day" can be inspiring for your research, and engaging visuals and animations. The audience agrees: attending a scientific talk has rarely been this much fun!

Another new element of the workshop was a poster session, giving attendees the opportunity to get to know each other in a speed-dating fashion. The idea was to provide an informal, enthusiastic, and welcoming environment for sharing research ambitions and personal stories. The event was a great opportunity to connect to fellow researchers in evolutionary computation.

The women@GECCO workshop was complemented by a discussion on strategies for maintaining a rich and sustainable work-life balance. This year's discussion was organized by **Emily Dolson, Anya E. Johnson** and **Nur Zincir-Heywood**. Since we feel it is important to have each participant personally interact with the issues of work/life balance as they relate to them, we decided to shift from the panel format used last year to a more discussion-oriented format this year. To get everyone on the same page and to give everyone a chance to talk, we asked the participants to split into groups to discuss the following two questions for about 15 minutes: (i) What does work/life balance mean to you?, and (ii) What are some signs that your life is in balance? Out of balance? Then, each group shared

Photo courtesy of Pablo Garcia

what they had discussed with the rest of us. This turned into a full group discussion where we were asking questions and sharing advice, and moving onto topics such as "What can the supervisors do to model good work/life balance for their students?". Different issues were brought up throughout the discussion from time management, to prioritization of tasks, to identifying opportunities, to networking and meeting people. The conversation was still going strong when our allotted time was up!

Workshop Organisation: Women@GECCO 2015 has been organized by **Carola Doerr** (CNRS and Université Pierre et Marie Curie, Paris 6, France), **Anna Esparcia** (Universitat Politècnica de València, Spain), **Gabriela Ochoa** (University of Stirling, Schotland), **Una-May O'Reilly** - Chair (Massachusetts Institute of Technology, US), **Nur Zincir-Heywood** (Dalhousie University, Canada), and **Christine Zarges** (University of Birmingham, UK). Leigh Sheneman, Amanda Whitlock, and Emilia Tantar have contributed invaluable support and discussion for the organization of the work-life balance panel.Interested in contributing to the workshop? Share your ideas!: Readers interested in contributing to the 2016 edition of the women@GECCO workshop, e.g., as a co-organizer or as a speaker in the science slam, are strongly encouraged to contact the organizers. We also appreciate any form of feedback and ideas for future editions; please do not hesitate to address them to Carola (Carola.Doerr@mpi-inf.mpg.de)

Carola is a permanent researcher with the CNRS and the Université Pierre et Marie Curie (Paris 6). She studied mathematics at Kiel University (Diploma in 2007) and computer science at the Max Planck Institute for Informatics and Saarland University (PhD in 2011). From Dec. 2007 to Nov. 2009, Carola Doerr has worked as a business consultant for McKinsey & Company, mainly in the area of network optimization. She was a post-doc at the Université 7 in Paris and the Max Planck Institute for Informatics in Saarbrücken. Carola Doerr's main research interest is in the theory of randomized algorithms, both in the design of efficient algorithms as well as in randomized query complexities. She has published several papers in the field of evolutionary computation.

Gabriela Ochoa is a Senior Lecturer (Associate Professor) in Computing Science at the University of Stirling in Scotland. Her research interests lie in the foundations and application of evolutionary algorithms and heuristic search methods, with emphasis on autonomous (self-*) search, hyper-heuristics and fitness landscape analysis. She has published over 80 international peer reviewed papers. She is associate editor of Evolutionary Computation (MIT Press), was involved in founding the Self-* Search track at GECCO (now joined with Search-Based Software Engineering), chaired EvoCOP 2014 and 2015 as is program chair for PPSN 2016. She has served as secretary of the Women@GECCO group.

Dr. Nur Zincir-Heywood is a Professor of Computer Science at Dalhousie University, Canada. She received her PhD in 1998 in Computer Science and Engineering from Ege University, Turkey. Prior to moving to Dalhousie in 2000, Dr. Zincir-Heywood was a researcher at Sussex University, UK and Karlsruhe University, Germany as well as working as an instructor at the Internet Society Network Management workshops. She has published over 150 papers in network management, security, information systems and computational intelligence fields. She has substantial experience of industrial research in systems security and network management related topics with Raytheon, RUAG, Gtech, Palomino, Genieknows, and Public Safety Canada. Dr. Zincir-Heywood is a member of the IEEE and ACM.

CFPs: EVO*2016 - The Leading European Event on Bio-Inspired Computation

30 March to 1 April 2016, Porto, Portugal

Submission deadline extension: 11 November 2015

CFP - EuroGP: 19th European Conference on Genetic Programming

EuroGP is the premier annual conference on Genetic Programming, the oldest and the only meeting worldwide devoted specifically to this branch of evolutionary computation. It is always a very enjoyable event attracting participants from all continents, offering excellent opportunities for networking, informal contact, exchange of ideas and discussions with fellow researchers, in a friendly and relaxed environment. High quality papers describing new original research are sought on topics strongly related to the evolution of computer programs, ranging from theoretical work to innovative applications. The conference will feature a mixture of oral presentations and poster sessions. In 2015, the EuroGP acceptance rate was 50% (33.3% for oral presentations).

Full details: http://www.evostar.org/2016/cfp_eurogp.php

CFP - EvoMUSART: 5th International Conference on Evolutionary and Biologically Inspired Music, Sound, Art and Design

Following the success of previous events and the importance of the field of evolutionary and biologically inspired (artificial neural network, swarm, alife) music, sound, art and design, evomusart has become an evo* conference with independent proceedings since 2012. Thus, evomusart 2016 is the fifth International Conference on Evolutionary and Biologically Inspired Music, Sound, Art and Design.

The use of biologically inspired techniques for the development of artistic systems is a recent, exciting and significant area of research. There is a growing interest in the application of these techniques in fields such as: visual art and music generation, analysis, and interpretation; sound synthesis; architecture; video; poetry; design; and other creative tasks.

The main goal of evomusart 2016 is to bring together researchers who are using biologically inspired computer techniques for artistic tasks, providing the opportunity to promote, present and discuss ongoing work in the area.

Full details: http://www.evostar.org/2016/cfp_evomusart.php

CFP - The 16th European Conference on Evolutionary Computation in Combinatorial Optimisation

The 16th European Conference on Evolutionary Computation in Combinatorial Optimisation is a multidisciplinary conference that brings together researchers working on metaheuristics for solving difficult combinatorial optimisation problems appearing in various industrial, economic, and scientific domains. Prominent examples of metaheuristics include: evolutionary algorithms, simulated annealing, tabu search, scatter search and path relinking, memetic algorithms, ant colony and bee colony optimisation, particle swarm optimisation, variable neighbourhood search, iterated local search, greedy randomized adaptive search procedures, estimation of distribution algorithms, and hyperheuristics. Successfully solved problems include scheduling, timetabling, network design, transportation and distribution problems, vehicle routing, travelling salesman, graph problems, satisfiability, energy optimisation problems, packing problems, and planning problems.

Full details: http://www.evostar.org/2016/cfp_evocop.php

CFP - EvoApplications: 19th European Conference on the Applications of Evolutionary Computation

EvoApplications, the European Conference on the Applications of Evolutionary Computation -formerly known as EvoWorkshops- brings together researchers in a variety of areas of application of Evolutionary Computation and other Nature-inspired techniques.

EvoApplications invites high quality contributions for its 18th edition, which will be held as part of the EvoStar 2016 event in Porto, Portugal, April 2016 and co-located within EvoStar with three related conferences: EuroGP, EvoCOP and EvoMUSART.

EvoApplications 2016 is composed of 13 tracks, each focusing on an area of application of genetic and evolutionary computation and other related Computational Intelligence fields.

Full details: http://www.evostar.org/2016/cfp_evoapps.php

July 20 - 24, Denver, Colorado, USA

Workshop and Tutorial Proposals: November 6, 2015
Abstract Deadline: January 27, 2016
Submission of Full Papers: February 3, 2016

Tutorials CFP: The GECCO 2016 Organizing Committee invites proposals for tutorials. Proposals are due by November 6, 2015 and will be reviewed by the GECCO 2016 Organizing Committee based on their significance to the conference, the breadth and depth of the topics, and the expertise and credentials of the presenters. Tutorials will be free to all attendees of the conference. Slide sets of accepted tutorials will be published in the ACM Digital Library as part of a companion volume to the conference proceedings.

Full details here: http://www.sigevo.org/gecco-2016/tutorials.html

Workshop CFP: The GECCO 2016 Organizing Committee invites proposals for workshops. Proposals are due by November 6, 2015. GECCO workshops provide the possibility to jointly develop visions and exchange ideas in an informal setting, especially if focused on an emerging research field or interdisciplinary research area.

Attendance at the workshops will be free for all GECCO attendees. Workshop organizers are responsible for coordination, publicity, and the reviewing of submitted papers. Accepted workshop papers will be published in the ACM Digital Library in a companion volume to the conference proceedings.

Full details here: http://www.sigevo.org/gecco-2016/workshops.html

Papers CFP: The GECCO 2016 Program Committee invites the submission of technical papers describing your best work in genetic and evolutionary computation. Abstracts need to be submitted by January 27, 2016. Full papers are due by the non-extensible deadline of February 3, 2016.

Each paper submitted to GECCO will be rigorously evaluated in a double-blind review process. The evaluation is on a per-track basis, ensuring high interest and expertise of the reviewers. Review criteria include significance of the work, technical soundness, novelty, clarity, writing quality, and sufficiency of information to permit replication, if applicable. All accepted papers will be published in the ACM Digital Library.

Researchers are invited to submit abstracts of their work recently published in top-tier conferences and journals to the Hot Off the Press track. Contributions will be selected based on quality and interest to the GECCO community.

Full details here: http://www.sigevo.org/gecco-2016/papers.html

CFP - PPSN 2016: 14th International Conference on Parallel Problem Solving from Nature

Tutorials proposal deadline: 18 November 2015
Workshop proposal deadline: 4 January 2016
Paper Submission deadline: 4 April 2016

PPSN 2016
September 17-21st 2016, Edinburgh, Scotland

Tutorials CFP: The PPSN 2016 Organizing Committee invites proposals for tutorials. The tutorial topic should enjoy broad interest within the community. It can be an established or emerging research topic within the field itself, but also from a related research field or about an interesting application area. The proposed topic should be broad enough to provide a gentle introduction to the research area, but it should also cover the most important contributions in depth. The planned duration of the tutorials is two hours. The tutorials will be held in conjunction with the International Conference on Parallel Problem Solving from Nature (PPSN 2016).

Full tutorial details here: http://ppsn2016.org/conference/call-for-tutorials

Workshop CFP: The PPSN 2016 Organizing Committee invites proposals for workshops to be held in conjunction with PPSN 2016. The workshops are intended to be forums for presenting and discussing, for example, new emerging approaches or critical reflections within a subfield. They provide an excellent opportunity to meet people with similar interests, to be exposed to cutting-edge research and to exchange ideas in an informal setting. The organizers of an accepted workshop are responsible for its coordination, publicity (e.g., for sending out call for papers/abstracts), collecting and reviewing the papers/abstracts, and maintaining a webpage providing a list of accepted talks. Moreover, workshops can decide between half and full day workshops. The workshop format is up to the organizers. However, we encourage to facilitate interactive sessions. We suggest to solicit concept papers or abstracts of not more than a few pages length, instead of full papers. All workshops will be held on the same day.

Full workshop details here: http://ppsn2016.org/conference/call-for-workshops

PhD studentship in Evolutionary High Performance Computing and Optimisation for Wave Energy

We are looking for an outstanding, motivated student for a prospective **PhD Studentship in Applied Mathematics** to participate in a strongly research-oriented project: "Evolutionary High Performance Computing and Optimisation of Large Wave Energy Farms" within the Department of Mathematical Sciences at **Loughborough University** (Loughborough, UK). The project will be jointly supervised with the department of Computer Science and will fall within the scopes of the new Centre for Data Science.

A topical challenge for the wave energy industry is to scale up their technology from single converters to large "wave farms". An integral part of this process is a multi- parameter optimisation of the layout of the devices. We are combining analytical models of wave energy farms together with global optimisation heuristics to optimise the power extraction of such systems.

We are looking for a bright student with passion and motivation to make progress in the above areas. The student would be expected to make a contribution to the field with peer reviewed scientific publications, after receiving state-of-the art training in both Applied Mathematics and Computer Science.

The prospective student ideally has a strong background in Mathematics, Numerical Methods, and some background in Fluid Mechanics. Previous knowledge in Ocean Waves and/or Evolutionary Computation would be a plus.

Interested **UK/EU** prospective students are encouraged to contact **Dr Emiliano Renzi** informally at: E.Renzi@lboro.ac.uk. **The closing date for applications is 9th November 2015**.

Please include in your email:
- A complete resume in PDF format
- A short (max one page) cover letter with a description of yourself and your research interests
- The names of two potential referees

About this newsletter

SIGEVOlution is the newsletter of SIGEVO, the ACM Special Interest Group on Genetic and Evolutionary Computation.
To join SIGEVO, please follow this link [WWW]

Contributing to SIGEVOlution

We solicit contributions in the following categories:

Art: Are you working with Evolutionary Art? We are always looking for nice evolutionary art for the cover page of the newsletter.

Short surveys and position papers: We invite short surveys and position papers in EC and EC related areas. We are also interested in applications of EC technologies that have solved interesting and important problems

Software: Are you are a developer of an EC software and you wish to tell us about it? Then, send us a short summary or a short tutorial of your software.

Lost Gems: Did you read an interesting EC paper that, in your opinion, did not receive enough attention or should be rediscovered? Then send us a page about it.

Dissertations: We invite short summaries, around a page, of theses in EC-related areas that have been recently discussed and are available online.

Meetings Reports: Did you participate to an interesting EC-related event? Would you be willing to tell us about it? Then, send us a short summary, around half a page, about the event.

Forthcoming Events: If you have an EC event you wish to announce, this is the place.

News and Announcements: Is there anything you wish to announce, such as an employment vacancy? This is the place.

Letters: If you want to ask or to say something to SIGEVO members, please write us a letter!

Suggestions: If you have a suggestion about how to improve the newsletter, please send us an email

Contributions will be reviewed by members of the newsletter board.
We accept contributions in LATEX, MS Word, and plain text.
Enquiries about submissions and contributions can be emailed to editor@sigevolution.org

All the issues of SIGEVOlution are also available online at: www.sigevolution.org

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