2019 The 3rd International Conference on Computer Science and Artificial Intelligence

第三届计算机科学与人工智能国际会议

WORKSHOP

The 11th International Conference on Information and Multimedia Technology

第十一届信息与多媒体技术国际会议

Beijing, China | December 6-8, 2019

中国北京|2019 年 12 月 6-8 日

Co-Sponsored By

Published By
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Dear distinguished delegates,

It is our great honor and pleasure to welcome you to 2019 the 3rd International Conference on Computer Science and Artificial Intelligence (CSAI 2019) and its workshop-The 11th International Conference on Information and Multimedia Technology (ICIMT 2019) which are held in Beijing, China on December 6-8, 2019.

CSAI and ICIMT 2019 keep promoting the information exchange on computer science and information technology and aims to promote international cooperation and provide an opportunity for researchers around the world to exchange ideas and the latest research results. The evaluation of all the papers was performed based on the reports from anonymous reviewers, who are qualified in the field of Computer Science and Artificial Intelligence as well as Information and Multimedia Technology. As a result of their hard work, we are pleased to have accepted 66 presentations coming from initially from 115 submissions. The presentations are divided into 1 poster session and 6 parallel sessions.

A word of special welcome is given to our keynote speakers who are pleased to make contributions to our conference and share their new research ideas with us. They are Prof. Ying Tan Peking University, China; Prof. Girija Chetty, University of Canberra, Australia; Prof. Anu Gokhale, from Illinois State University, USA.

We’d like to express our heartfelt appreciation to our sponsors- Beijing Computer Federation and Young Education Consultant Ltd.co for supporting this event. Our thanks goes to our conference chairs, keynote speakers, session chairs, authors, and audiences. Thanks to your support and help, we can hold this conference successfully and always keep making progress. We wish and hope that you will enjoy this conference in a comprehensive experience embracing computer science and information technology as well as culture, friendship, and this famous city. Wish you all enjoy your staying here. Thank you for your attention!

We look forward to meeting you again next time!

Yours sincerely,

Conference Organizing Committee
## TIMETABLE

### December 6, 2019 (Friday) | Conference Preparations

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<tr>
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<th>Event</th>
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</thead>
<tbody>
<tr>
<td>10:00-17:00</td>
<td>Registration &amp; Materials Collection</td>
<td>Hotel Lobby (1st floor)</td>
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</tbody>
</table>

### December 7, 2019 (Saturday) Morning | Keynote Speeches

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:00-9:10</td>
<td>Opening Remarks - TBA</td>
<td>Meeting Room (1st floor)</td>
</tr>
<tr>
<td>09:10-9:50</td>
<td>Keynote Speech I - Prof. Anu Gokhale</td>
<td>Meeting Room (1st floor)</td>
</tr>
<tr>
<td>9:50-10:00</td>
<td>Group Photo</td>
<td></td>
</tr>
<tr>
<td>10:00-10:30</td>
<td>Coffee Break &amp; Poster Presentations</td>
<td></td>
</tr>
<tr>
<td>10:30-11:10</td>
<td>Keynote Speech II - Prof. Ying Tan</td>
<td>Meeting Room (1st floor)</td>
</tr>
<tr>
<td>11:10-11:50</td>
<td>Keynote Speech III - Prof. Girija Chetty</td>
<td>Meeting Room (1st floor)</td>
</tr>
<tr>
<td>12:00-13:30</td>
<td>Lunch</td>
<td>YueFu Palace</td>
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</table>

### December 7, 2019 (Saturday) Afternoon | Author Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>13:30-16:15</td>
<td>Session 1</td>
<td>Intelligent algorithms and calculations</td>
<td>Meeting Room 3 (2nd floor)</td>
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<td></td>
<td>Session 2</td>
<td>Deep learning and reinforcement learning</td>
<td>Meeting Room 4 (2nd floor)</td>
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<tr>
<td>16:15-16:30</td>
<td>Coffee Break</td>
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<tr>
<td>16:30-18:30</td>
<td>Session 3</td>
<td>Machine vision and image processing</td>
<td>Meeting Room 3 (2nd floor)</td>
</tr>
<tr>
<td></td>
<td>Session 4</td>
<td>Artificial intelligence and information system</td>
<td>Meeting Room 4 (2nd floor)</td>
</tr>
<tr>
<td>18:30-20:00</td>
<td>Dinner</td>
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<td>YueFu Palace</td>
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</table>

### December 8, 2019 (Sunday) Morning | Author Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 5</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>09:30-12:00</td>
<td>Session 5</td>
<td>Model construction and method</td>
<td>Meeting Room 3 (2nd floor)</td>
</tr>
<tr>
<td>09:30-12:00</td>
<td>Session 6</td>
<td>Computer Network and Data Engineering</td>
<td>Meeting Room 4 (2nd floor)</td>
</tr>
<tr>
<td>12:00-14:00</td>
<td>Lunch</td>
<td></td>
<td>YueFu Palace</td>
</tr>
</tbody>
</table>
Conference Venue

Foreign Experts Building Beijing

北京外国专家大厦

Add: No.8, Huayanbeili, Chaoyang District, Beijing, China, 100029

Foreign Experts Building Beijing is located in the Middle part of the north 4th Ring Road, south-east of Jianxiang Bridge. With its convenient transportation and comprehensive services including accommodation, conference, food and beverage, entertainment, it has been an ideal choice for foreign experts and guests home and abroad.

北京外国专家大厦坐落于朝阳区北四环中路, 健翔桥东南侧, 交通十分便利, 它是客房、餐饮、会议、娱乐为一体的综合性服务设施。

Room Reservation Contact

Ms. Zhu
Tel: +86-13581686778
Web: http://www.bjfebhotel.com/restaurant_zh-cn.html
How to get to the Foreign Experts Building Beijing from Beijing-Capital International Airport?

➢ Taxi

Taxi----Around 40 minutes (30.3km)

➢ The affordable way: Capital Airport Line → Metro Line 10 → Bus 658

Metro+ Walking---around one hour and eighteen minutes

Get on the Capital Airport Line at the Terminal 3 (2 Stations)
首都国际机场航站楼 3 乘坐首都机场线（2个站）
↓
Get off at San Yuan Qiao Station
三元桥站下车
↓
Get on the Metro Line 10 (outer loop) at the San Yuan Qiao Station (6 Stations)
三元桥站换乘地铁 10 号线（外环-6个站）
↓
Get off at JianDe Men Station (C)
健德门下车（C 口）
↓
Get on the bus 658 at JianDeMen Qiao North Station (2 Stations)
健德门桥北站上车（ 2 个站）
↓
Get off at JianXiang Qiao East Station
健翔桥东站下车

Tips:

💰 Currency: Chinese Yuan

📞 Important Phone Numbers

Fire: 119        Police: 110        Medical Emergency: 120
Recommendation of Hotel Nearby

 mẽ Comfortable Hotel Nearby

1. **Excemon Beijing Hongxiang Hotel** (1.9 km from Foreign Experts Building Beijing)
   北京辰茂鸿翔酒店
   
   **Address:** No.15 Longxiang Road, Hai Dian, 100191 Beijing, China
   地址：北京海淀区北京市海淀区龙翔路 15 号
   
   **Booking Link:** [http://www.booking.com/Share-RagClO](http://www.booking.com/Share-RagClO)

2. **Gehua New Century Hotel Beijing** (4.3 km from Foreign Experts Building Beijing)
   北京歌华开元大酒店
   
   **Address:** No.19 Gulouwai Main Street, Chaoyang, 100120 Beijing, China
   地址：北京朝阳区北三环鼓楼外大街 19 号（近安华桥）
   
   **Booking Link:** [http://www.booking.com/Share-d3B5DT](http://www.booking.com/Share-d3B5DT)

3. **Park Plaza Beijing Science Park** (4.9 km from Foreign Experts Building Beijing)
   北京丽亭华苑酒店
   
   **Address:** 25 Zhichun Road., Hai Dian, 100083 Beijing, China
   地址：北京海淀区知春路 25 号
   
   **Booking Link:** [http://www.booking.com/Share-bNpSDL](http://www.booking.com/Share-bNpSDL)

4. **Holiday Inn Beijing Haidian** (5.4 km from Foreign Experts Building Beijing)
   北京红杉假日酒店
   
   **Address:** Building A, No.89 Shuangqing Road, Hai Dian, 100085 Beijing, China
   地址：北京海淀区双清路 89 号 A 座
   
   **Booking Link:** [http://www.booking.com/Share-ugSGrNn](http://www.booking.com/Share-ugSGrNn)

мес High Class Hotel Nearby

5. **Pangu 7 Star Hotel Beijing** (2.2 km from Foreign Experts Building Beijing)
   北京盘古七星酒店
   
   **Address:** No. 27 Central North 4Th Ring Drive, Chaoyang, 100101 Beijing, China
   地址：北京朝阳区北四环中路 27 号
   
   **Booking Link:** [http://www.booking.com/Share-I7CEej](http://www.booking.com/Share-I7CEej)

6. **InterContinental Beijing Beichen** (2.0 km from Foreign Experts Building Beijing)
   北京北辰洲际酒店
   
   **Address:** No.8 Beichen West Road, Chaoyang, 100105 Beijing, China
   地址：北京朝阳区北辰西路 8 号院 4 号楼
   
   **Booking Link:** [http://www.booking.com/Share-N0vwja](http://www.booking.com/Share-N0vwja)
December 6, 2019 (Friday) | 10:00-17:00

Registration & Materials Collection

会议签到+资料领取

Hotel Lobby, 1st floor

酒店大堂，1楼

Give your **Paper ID** to the staff.

Sign your **name** in the attendance list and check the paper information.

Check your **conference kit**, which includes conference bag, name tag, lunch coupon, conference program, the receipt of the payment, the USB of paper collection.

❗ Attention

✧ In order to keep everyone's property safety, kindly notice that only the author wearing the attendance card can be allowed to enter the venue. If you have any companying person, please do inform our staff in advance when you do the registration. Thanks for your understanding and cooperation.

✧ Please keep all your belongings at any time. The organizer of the conference does not assume any responsibility for the loss of personal stuff of the participants.

✧ Don’t stay too late in the city, don’t be alone in the remote area. Be aware of the strangers who offer you service, signature of charity, etc., at many scenic spots.

**WeChat Group**

![WeChat Group QR Code]

Please join us for questions about the conference, we will at your disposal.
Poster Guideline

Please read it carefully:

✧ Please bring your own poster.

✧ Prepare the Poster

*Your poster should cover the KEY POINTS of your work.

*The title of your poster should appear at the top about 25mm (1”) high.

*The author(s) name(s) and affiliation(s) are put below the title.

*Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart. Suggested Poster with size of A1 (594mm×840mm width*height), with conference short name and paper ID on right up corner.

✧ During poster session, the author should stand by your poster, explaining and answering doubts or questions.

✧ Carefully prepare your poster well in advance of the conference. All illustrations, charts, etc., to be posted should be prepared in advance as materials for these purposes will not be available at the meeting site.

Oral Presentation Guideline

✧ Get your presentation PPT files prepared. Please copy your PPT to the computer 15 minutes before your session on December 7 and December 8. The size of PPT is 16:9.

✧ Regular oral presentation: 15 minutes (including Q&A).

✧ Laptop, projector & screen, laser sticks will be provided by the conference organizer.

✧ Certificate of Presentation will be awarded after your presentation by the session chair.

✧ One Best Presentation will be selected from each parallel session and the author of best presentation will be announced and awarded after the session by the session chair.
### [December 7, 2019 (Saturday)] Morning

#### Opening & Keynote Speeches

Meeting Room (1st floor)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker &amp; Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:10</td>
<td>Conference Chair Opening Remarks</td>
<td>TBA</td>
</tr>
</tbody>
</table>
| 09:10-09:50| Keynote Speech I                           | Prof. Anu Gokhale
Illinois State University, USA
**Speech Title:** AI: Countering Flaws in Algorithm Design and Applications |
| 09:50-10:00| Group Photo                                |                                                                                  |
| 10:30-11:10| Keynote Speech II                          | Prof. Ying Tan
Peking University, China
**Speech Title:** Latest Progress in Swarm Intelligence, Fireworks Algorithm and Applications |
| 11:10-11:50| Keynote Speech III                         | Prof. Girija Chetty
University of Canberra, Australia                                                |

Lunch @ YueFu Palace| 粤福宫
<12:00-13:30>
**[December 7, 2019 (Saturday)] Afternoon**

**Authors’ Parallel Presentations**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:30-16:15</td>
<td><strong>Meeting Room 3 (2nd floor)</strong></td>
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<tr>
<td></td>
<td><strong>Session 1 -- Intelligent algorithms and calculations</strong></td>
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<td>Chaired by -- TBA</td>
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<td><strong>11 Presentations</strong></td>
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<td>B2-011, B1-003, B1-004, B1-005, B1-014,</td>
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<td>B1-026, B1-040, B1-05, B1-073, B1-027, B1-1005</td>
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</tr>
<tr>
<td>16:15-16:30</td>
<td>Coffee Break</td>
<td>Outside Meeting Room</td>
</tr>
<tr>
<td>16:30-18:30</td>
<td><strong>Session 3 -- Machine vision and image processing</strong></td>
<td>Meeting Room 3</td>
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<td>Chaired by -- TBA</td>
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<td></td>
<td><strong>8 Presentations</strong></td>
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<th>Location</th>
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<tbody>
<tr>
<td>13:30-16:15</td>
<td><strong>Meeting Room 4 (2nd floor)</strong></td>
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<td></td>
<td><strong>Session 2 -- Deep learning and reinforcement learning</strong></td>
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<td>Chaired by --- TBA</td>
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<tr>
<td></td>
<td><strong>11 Presentations</strong></td>
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<tr>
<td>16:15-16:30</td>
<td>Coffee Break</td>
<td>Outside Meeting Room</td>
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<tr>
<td>16:30-18:30</td>
<td><strong>Session 4--Artificial intelligence and information system</strong></td>
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<td>Chaired by --- TBA</td>
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<td></td>
<td><strong>8 Presentations</strong></td>
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</tbody>
</table>

**Dinner @ YueFu Palace**

<18:30-20:00>
### [December 8, 2019 (Sunday)] Morning

#### Authors’ Parallel Presentations

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<thead>
<tr>
<th>Meeting Room 3 (2nd floor)</th>
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</thead>
<tbody>
<tr>
<td><strong>Session 5 -- Model construction and method</strong></td>
<td>Chaired by -- TBA</td>
</tr>
<tr>
<td><strong>10 Presentations</strong></td>
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<tr>
<td>B1-058, B2-008, B2-014, B1-032, B1-039</td>
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<thead>
<tr>
<th>Meeting Room 4 (2nd floor)</th>
<th>9:30-12:00</th>
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<tbody>
<tr>
<td><strong>Session 6 -- Computer Network and Data Engineering</strong></td>
<td>Chaired by --- TBA</td>
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<tr>
<td><strong>10 Presentations</strong></td>
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</tbody>
</table>

**Lunch @ YueFu Palace**

<12:00-14:00>
### Travel Project

#### [Travel Recommendation]

**Assembly Time:** The tour guide will inform you in advance after booking. 预定后导游会提前告知

**Assembly Point:** Hotel Pick-up 五环内酒店上门接

**Opening Time:** Tuesday – Sunday 景点开放时间：周二-周日

**Duration Time:** 7:30-15:30

**Attention:** The Travel Project is only for recommendation, the conference organizer will not provide reservation service. 此项目仅作推荐，会议组不提供预定服务。

### Overview

<table>
<thead>
<tr>
<th>Tian An Men- The Palace Museum- The Summer Palace- Tsinghua University (Outside) 天安门-故宫博物院-颐和园-清华大学（外观）散团</th>
<th>*或在北京大学散团，以当天安排为准</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tian An Men:</strong> The Tiananmen Square lies at the cross-section between the central axis of Beijing. When it was first built in the 15th year of Yongle, it was called Chengtian Gate. It was twice destroyed in the Ming Dynasty, once by lightening, once by war. In 1651, or the 8th year of Emperor Shunzhi’s reign in the Qing Dynasty, the Emperor named Fulin had it rebuilt on a large scale and changed its name to Tiananmen. Tiananmen Square at 880 meters long and 500 meters wide, measuring 440,000 square meters. To its east is the National Museum; to its west, the Great Hall of the People. In the middle of it stands the Monument to People's Heroes, to the south of which is Chairman Mao's Memorial Hall. The national flag ceremony held in the square every day stirs strong patriotic feelings in the bosom of everyone who loves New China.</td>
<td></td>
</tr>
<tr>
<td><strong>The Palace Museum</strong> is housed in the Forbidden City, the Chinese imperial palace from the Ming Dynasty to the end of the Qing Dynasty. It is located in the middle of Beijing, China. For almost five centuries, it served as the home of the Emperor and his household, and the ceremonial and political centre of Chinese government. Built from 1406 to 1420, the complex consists of 980 surviving buildings with 8,707 bays of rooms and covers 720,000 square metres. The palace complex exemplifies traditional Chinese palatial architecture, and has influenced cultural and architectural developments in East Asia and elsewhere. The Forbidden City</td>
<td></td>
</tr>
</tbody>
</table>
was declared a World Heritage Site in 1987, and is listed by UNESCO as the largest collection of preserved ancient wooden structures in the world.

The Summer Palace is a vast ensemble of lakes, gardens and palaces in Beijing. It was an imperial garden in the Qing Dynasty. Mainly dominated by Longevity Hill and Kunming Lake, it covers an expanse of 2.9 square kilometres (1.1 sq mi), three-quarters of which is water.

Longevity Hill is about 60 m (200 ft) high and has many buildings positioned in sequence. The front hill is rich with splendid halls and pavilions, while the back hill, in sharp contrast, is quiet with natural beauty. The central Kunming Lake, covering 2.2 square kilometres (540 acres), was entirely man-made and the excavated soil was used to build Longevity Hill.

In December 1998, UNESCO included the Summer Palace on its World Heritage List. It declared the Summer Palace "a masterpiece of Chinese landscape garden design.

Tsinghua Old Gate was built in 1909. In May of that year, the Qing dynasty government approved the application from the Department of Foreign Affairs to establish a school in the suburbs of Beijing. Tsinghua Garden was chosen as the site for the school. The Gate was the main entrance to the school campus at that time.

In 1933, after the expansion of the residential area, the former enclosing wall was moved to further out. A new gate, now Tsinghua's West Gate, became the new main entrance. Ever since, the original gate has been called Er Xiao Men (means "the second school gate").

※ Included 費用包含
Air-conditioned vehicle; Entrance Tickets; Lunch;
Chinese Tourist Guide; Hotel pickup
此次行程包含您的所含景点首道大门票, 行程中乘坐巴士的费用, 导游费和午餐, 五环内酒店上门接。

※ Not Included 費用不含
Personal consumption; Hotel return service; Boat ticket in The Summer Palace; all the costs excluded;
个人消费, 从解散点送回酒店, 颐和园内船票, 及费用包含外的一切费用

※ Note
- If you are interested, please make a reservation directly on the travel agency website: https://m.tb.cn/h.eGrD4AG.
- This social program is optional and chargeable.
- The pickup point and specific tour time are subject to the arrangement that day.
- The travel agency will not send you back to hotel, please go back to the hotel by yourself.
- Please keep your belongings with you. The travel agency will not be responsible for the loss of your personal property.
Speech Title: Latest Progress in Swarm Intelligence, Fireworks Algorithm and Applications

Abstract: Inspired from the collective behaviors of many swarm-based creatures in nature or social phenomena, swarm intelligence (SI) has been received attention and studied extensively, gradually becomes a class of efficiently intelligent optimization methods. Inspired by fireworks’ explosion in air, the so-called fireworks algorithm (FWA) was proposed in 2010. Since then, many improvements and beyond were proposed to increase the efficiency of FWA dramatically, furthermore, a variety of successful applications were reported to enrich the studies of FWA considerably. In this talk, the novel swarm intelligence algorithm, i.e., fireworks algorithm, is briefly introduced and reviewed, then several effective improved algorithms are highlighted, individually. In addition, the multi-objective fireworks algorithm and the graphic processing unit (GPU) based FWA are also briefly presented, particularly the GPU-based FWA is able to speed up the optimization process extremely. Extensive experiments on benchmark functions demonstrate that the improved algorithms significantly increase the accuracy of found solutions, yet decrease the running time sharply. Finally, several typical applications of FWA, in particular, for big-data application, are presented in detail.

Bio: Ying Tan is a professor of Peking University, and director of Computational Intelligence Laboratory at Peking University. He worked at Faculty of Design, Kyushu University, Japan, as a professor, and at Columbia University as senior research fellow and at Chinese University of Hong Kong in 1999 and 2004-2005 as a research associate/fellow, and at University of Science and Technology of China in 1998, 2005-2006 as a professor under the 100-talent program of CAS, etc. He is the inventor of Fireworks Algorithm (FWA). He serves as the Editor-in-Chief of International Journal of Computational Intelligence and Pattern Recognition (IJCIPR), the Associate Editor of IEEE Transactions on Evolutionary Computation (TEC), IEEE Transactions on Cybernetics (CYB), International Journal of Swarm Intelligence Research (IJISIR), International Journal of Artificial Intelligence (IJAI), etc. He also served as an Editor of Springer’s Lecture Notes on Computer Science (LNCS) for 32+ volumes, and Guest Editors of several referred Journals, including IEEE/ACM Transactions on Computational Biology and Bioinformatics, Information Science, Neurocomputing, Natural Computing, Swarm and Evolutionary Optimization, etc. He is a senior member of IEEE. He is the founder general chair of the ICSI International Conference series since 2010 and the DMBD conference series since 2016. He won the 2nd-Class Natural Science Award of China in 2009 and many best paper awards. His research interests include computational intelligence, swarm intelligence, swarm robotics, data mining, machine learning, intelligent information processing for information security and financial prediction, etc. He has published more than 300+ papers in refereed journals and conferences in these areas, and authored/co-authored 12 books, including “Fireworks Algorithm” by Springer-Nature in 2015, and “GPU-based Parallel Implementation of Swarm Intelligence Algorithms” by Morgan Kaufmann (Elsevier) in 2016, and 28 chapters in book, and received 4 invention patents.
KEYNOTE SPEAKER

Prof. Anu Gokhale
Illinois State University, USA

Speech Title: AI: Countering Flaws in Algorithm Design and Applications

Abstract: Artificial intelligence or AI continues to transform our world in unimaginable ways, from government and financial institutions to healthcare, aiding decision-making by providing predictions based on historic data. The intelligence behind AI comes from algorithms applied to large datasets. Simply put, algorithms are stepwise instructions for accomplishing a task; these are computational tools that model the decision-making processes to provide comprehensive solutions to complex problems. The creation of an algorithm is often considered proprietary information and very closely guarded by its owners. Additionally, today’s algorithm designs are often armed with machine learning methods based on neural networks which are so complex that even their creators do not exactly know how they work. Not being able to access the inner workings of an algorithm is a challenge for both developers and users. The talk will address the issues and processes that could result in flaws in algorithm design, how repeat applications propagate errors, and conclude with a discussion of methods to counter such effects.

Bio: Dr. Anu A. Gokhale has completed twenty-five years of university teaching and is currently a professor and coordinator of the computer systems technology program at Illinois State University. She is named Fulbright Distinguished Chair in STEM at the University of Pernambuco, Brazil, 2016-17; is a Fulbright Specialist; and was a Fulbright Scholar to India in 2002. She is a Visiting Professor at Shandong University of Science & Technology in Jinan, China during spring 2017. Dr. Gokhale was honored with the 2011 University Outstanding Researcher Award. Originally from India, she has a master’s in physics–electronics from the College of William & Mary, and a doctorate from Iowa State University. She presents and publishes her peer-reviewed research, and pursues multi-year projects funded by agencies like the US Department of Education, US Department of State, and National Science Foundation. The current NSF funded project is in Computing Education for the 21st Century. Dr. Gokhale authored a second edition of her book Introduction to Telecommunications, which has an international edition in Chinese. She continues to be an invited keynote speaker at various conferences, latest ones include: 2016 International Conference on Communication and Information Systems, Bangkok, Thailand; 2015 International Conference on Information Technology, Amman, Jordan; and 2014 International Conference on Control, Robotics and Cybernetics, Singapore. She consults for businesses and has delivered multiple workshops. As an active volunteer in IEEE, she has served as R4 Educational Activities Chair, Women in Engineering Coordinator, Chair of International Electro/Information Technology 2010 Conference, and MGA representative to Educational Activities Board. She was honored with the IEEE Third Millennium Medal.
Bio: Dr. Girija Chetty has a Bachelors and Masters degree in Electrical Engineering and Computer Science, and PhD in Information Sciences and Engineering from Australia. She has more than 35 years of experience in Industry, Research and Teaching from Universities and Research and Development Companies from India and Australia, and has held several leadership positions including Head of Software Engineering and Computer Science, and Course Director for Master of Computing Course. Currently, she is the Head of Multimodal Systems and Information Fusion Group in University of Canberra, Australia, and leads a research group with several PhD students, Post Docs, research assistants and regular International and National visiting researchers. She is a Senior Member of IEEE, USA, and senior member of Australian Computer Society, and her research interests are in the area of multimodal systems, computer vision, pattern recognition and image processing. She has published extensively with more than 150 fully refereed publications in several invited book chapters, edited books, high quality conference and journals, and she is in the editorial boards, technical review committees and regular reviewer for several IEEE, Elsevier and IET journals in Computer Vision, Pattern Recognition and Image Processing.