



## 2018 IEEE CIS Awards

The IEEE CIS Awards recognize outstanding achievements and meritorious service in the field of computational intelligence. The awards to be conferred in 2018 include:

2018 IEEE CIS Neural Networks Pioneer award to **Prof. Lee Giles** for pioneering role in the application of neural networks for information extraction in large data repositories.



2018 IEEE CIS Fuzzy Systems Pioneer award to **Prof. Bernadette Bouchon-Meunier** for influential contributions to fuzzy learning and reasoning.



2018 IEEE CIS Fuzzy Systems Pioneer award to **Prof. Rudolf Kruse** for fundamental contributions to fuzzy learning, theory and applications.



2018 IEEE CIS Evolutionary Computation Pioneer award to **Prof. Kalyanmoy Deb** for pioneering contribution, development, and leadership in evolutionary multi-criterion optimization.



2018 IEEE CIS Outstanding TNNS Paper award to Qinglai Wei, Derong Liu, and Xiong Yang, **Infinite Horizon Self-Learning Optimal Control of Nonaffine Discrete-Time Nonlinear Systems**, IEEE Transactions on Neural Networks and Learning Systems, vol. 26, no. 4, pp. 866-879, Apr. 2015.



2018 IEEE CIS Outstanding TFS Paper award to Shaocheng Tong, Shuai Sui, and Yongming Li, **Fuzzy Adaptive Output Feedback Control of MIMO Nonlinear Systems with Partial Tracking Errors Constrained**, IEEE Transactions on Fuzzy Systems, vol. 23, no. 4, pp. 729-742, 2015.



2018 IEEE CIS Outstanding TEVC Paper award to Xingyi Zhang, Ye Tian, Ran Cheng, and Yaochu Jin, **An Efficient Approach to Nondominated Sorting for Evolutionary Multiobjective Optimization**, IEEE Transactions on Evolutionary Computation, vol. 19, no. 2, pp. 201-213, Apr. 2015.



2018 IEEE CIS Outstanding TAMD Paper award to Wei-Long Zheng, and Bao-Liang Lu, **Investigating Critical Frequency Bands and Channels for EEG-based Emotion Recognition with Deep Neural Networks**, IEEE Transactions on Autonomous Mental Development, vol. 7, no. 3, pp. 162-175, 2015.

## Important Message

### ★ Call-for-Proposals: Activity Promotion Grants

IEEE CIS has strategic plans to promote member activities through chapters and set up an activity promotion grant. We accept proposals until **Dec. 1, 2017** or the funding has all been used up. ([Details](#))

### ★ Proposals for IEEE CIS Conferences in 2019

Proposals for the organization of IEEE CIS financially sponsored conferences in 2019 must be submitted as soon as possible, and no later than **Dec. 31, 2017**. ([Details](#))

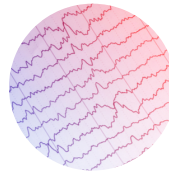
### ★ Nomination for Distinguished Lecturer

The IEEE CIS DLP committee invites all Society's Technical Committees Chairs, Chapter Chairs, EiCs, and AdCom / ExCom members to nominate Distinguished Lecturers (2018-2020). The nominations should be received by **Aug. 30, 2017**. ([Details](#))

### ★ Call for Senior Member Applications

The IEEE CIS Senior Members Subcommittee encourages you to consider applying to become a Senior Member, and we can assist

2018 IEEE CIS Outstanding CIM Paper award to Gregory Ditzler, Manuel Roveri, Cesare Alippi and Robi Polikar, **Learning in Nonstationary Environments: A survey**, IEEE Computational Intelligence Magazine, vol. 10, no. 4, pp. 12-25, Nov. 2015.



2018 IEEE CIS Outstanding Chapter award to **Hyderabad Chapter** for outstanding contributions to membership development by organizing events involving innovative ideas, keeping in view aspirations and needs of its members.



2018 IEEE CIS Outstanding PhD Dissertation award to **Prof. Zhi-Hui Zhan**, Research into Machine Learning Aided Particle Swarm Optimization and Its Engineering Application, South China University of Technology, China.



2018 IEEE CIS Outstanding Early Career award to **Prof. Ke Tang** for contributions to the development, analysis and application of novel evolutionary computation approach for large-scale optimization.



★ Conference Calendar (2017-2018)

★ 2017 IEEE Smart World Congress (SWC 2017)  
San Francisco, USA  
Aug. 4-8, 2017

★ 2017 IEEE Conference on Computational Intelligence and Games (CIG 2017)  
New York, USA  
Aug. 22-25, 2017

★ 2017 IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB 2017)  
Manchester, UK  
Aug. 23-25, 2017

★ Seventh Joint IEEE International Conference on Developmental Learning and Epigenetic Robotics (ICDL-EpiRob 2017)  
Lisbon, Portugal  
Sep. 18-21, 2017

★ 2017 IEEE International Conference on Data Science and Advanced Analytics (DSAA 2017)  
Tokyo, Japan  
Oct. 19-21, 2017

★ 2017 IEEE Latin American Conference on Computational Intelligence (LA-CCI 2017)  
Arequipa, Peru  
Nov. 8-10, 2017

★ 2017 IEEE Symposium Series on Computational Intelligence (SSCI 2017)  
Hawaii, USA  
Nov. 27-30, 2017

★ 2018 IEEE World Congress

## Technical Activities

### Physics of the Mind

How does language interact with cognition? Do we think using language or is language just a label for completed thoughts? Why the music ability has evolved from animal cries to Bach and Lady Gaga? Relations between cognition, language, and music, have been discussed at the 2017 International Joint Conference on Neural Networks (IJCNN 2017) in the Tutorial “Physics of the mind” and in the Special Session “Mind, Brain, and Cognitive Algorithms” organized by Prof. L. Perlovsky, Chair of the Task Force on “Mind and Brain” within the IEEE CIS Neural Networks Technical Committee. Mathematical models of the mind and cultures bear on contemporary world, and may be used to improve mutual understanding among peoples around the globe and reduce tensions among cultures.



### Message from Technical Committee on Cognitive and Developmental Systems Chair

I am honoured to have been appointed to the role of Chair of the IEEE CIS Technical committee on Cognitive and Developmental Systems for 2017. This year the technical committee on cognitive and developmental systems has added two new research goals for our technical committee:

- Building machines capable of life-long adaptation and interaction with social world (existing goal).
- Building machines that can model and recognise cognitive characteristics relevant to development in their human collaborators, and act accordingly to assist human activities

(new goal).

- Using machines as tools to better understand human and animal development and cognition (existing goal).
- Using machines to support human learning and development (new goal).



In pursuit of these goals, this year members of our community have contributed to recent events in human-robot interaction, designing for curiosity and evolution in cognition. It is exciting to see the ongoing efforts of members of our community.

on Computational  
Intelligence (WCCI 2018)  
Rio de Janeiro, Brazil  
Jul. 8-13, 2018  
(SS/Wksp Proposal: Dec. 15)

## Editor

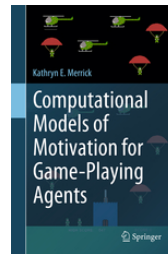
Chuan-Kang Ting  
National Chung Cheng University  
Taiwan  
Email: ckting@cs.ccu.edu.tw

## New Book

### Computational Models of Motivation for Game-Playing Agents

by Kathryn E. Merrick

The focus of this book is on three influential cognitive motives: achievement, affiliation, and power motivation. Incentive-based theories of achievement, affiliation and power motivation are the basis for competence-seeking behaviour, relationship-building, leadership, and resource-controlling behaviour in humans. In this book we show how these motives can be modelled and embedded in artificial agents to achieve behavioural diversity. Theoretical issues are addressed for representing and embedding computational models of motivation in rule-based agents, learning agents, crowds and evolution of motivated agents. Practical issues are addressed for defining games, mini-games or in-game scenarios for virtual worlds in which computer-controlled, motivated agents can participate alongside human players.



## Call for Papers (Journal)

- IEEE CIM Special Issue on Computational Intelligence Techniques in Bioinformatics and Bioengineering (Nov 15)
- IEEE TCDS Special Issue on Language Learning in Humans and Robots (Aug 31)
- IEEE TCDS Special Issue on Neuro-Robotics Systems: Sensing, Cognition, Learning and Control (Nov 30)
- IEEE TETCI Special Issue on New Trends in Smart Chips & Smart Hardware (Aug 1)
- IEEE TETCI Special Issue on Human-Machine Symbiosis (Sep 3)
- Memetic Computing Thematic Issue on Brain Storm Optimization Algorithms (Sep 1)

## Call for Papers (Conference)

- Call for Special Sessions / Tutorials / Competitions / Workshops: IEEE World Congress on Computational Intelligence (WCCI 2018) (Dec 15)
- IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning (ADPRL'17) (Aug 7)
- IEEE Symposium on Computational Intelligence and Data Mining (CIDM'17) (Aug 7)

- [IEEE Symposium on Computational Intelligence in Dynamic and Uncertain Environments \(CIDUE'17\) \(Aug 7\)](#)
  - [IEEE Symposium on Foundations of Computational Intelligence \(FOCI'17\) \(Aug 7\)](#)
  - [International Workshop on Intrinsically Motivated Open-ended Learning \(IMOL 2017\) \(Aug 10\)](#)
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## **Call for Participation**

- [International Symposium on Computational and Business Intelligence \(ISCBI 2017\), Dubai, UAE \(Aug 11-14\)](#)
  - [12 game competitions at IEEE Conference on Computational Intelligence in Games \(CIG 2017\), New York, USA \(Aug 22-25\)](#)
  - [Seventh Joint IEEE International Conference on Developmental Learning and Epigenetic Robotics \(ICDL-EpiRob 2017\), Lisbon, Portugal \(Sep 18-21\)](#)
  - [IEEE SMC Workshop on Brain-Machine Interface Systems \(SMC 2017\), Banff, Canada \(Oct 5-8\)](#)
  - [International Conference on Behavioral, Economic, and Socio-Cultural Computing \(BESC 2017\), Krakow, Poland \(Oct 16-18\)](#)
  - [2017 IEEE International Conference on Data Science and Advanced Analytics \(DSAA 2017\), Tokyo, Japan \(Oct 19-21\)](#)
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## **Career Opportunities**

- [Multiple Positions in Computer Science \(Lecturer, Senior Lecturer and Associate Professors\), UNSW-Canberra, Australia \(Aug 13\)](#)
- [Multiple Positions in Cyber Security \(Lecturer, Senior Lecturer and Associate Professors\), UNSW-Canberra, Australia \(Aug 13\)](#)

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