

Denotes a CIS-Sponsored Conference

Δ Denotes a CIS Technical Co-Sponsored Conference

* 2019 IEEE Conference on **Computational Intelligence for Financial Engineering and Economics (IEEE CIFEr 2019)**

May 4-5, 2019 Place: Shenzhen, China General Chairs: Hisao Ishibuchi, Dongbin Zhao Website: http://www.ieee-cifer.org/ website_cifer/about_2019.html

△ 3rd International Symposium on Autonomous Systems (ISAS 2019)

May 29-31, 2019 Place: Shanghai, China General Chairs: Yong-Duan Song, Xinping Guan Website: http://www.isas.cqu.edu.cn/ index_en.html

△ 2019 IEEE Colombian Conference on Applications in Computational Intelligence (ColCACI)

June 4-7, 2019 Place: Barranquilla, Colombia General Chair: Alvaro David Orjuela-Cañon Website: http://ieee-colcaci.org/

* 2019 IEEE Conference on **Computational Intelligence in Bioinformatics and Computational Biology (IEEE CIBCB 2019)**

July 9–11, 2019 Place: Siena, Italy General Chair: Giuseppe Nicosia Website: https://cibcb2019.icas.xyz/

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* 2019 IEEE Congress on **Evolutionary Computation** (IEEE CEC 2019)

June 10-13, 2019 Place: Wellington, New Zealand General Co-Chairs: Mengjie Zhang, Kav Chen Tan Website: http://www.cec2019.org

* 2019 IEEE International **Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications** (IEEE CIVEMSA 2019)

June 14-16, 2019 Place: Tianjin, China General Co-Chairs: Yong Hu, Dong Ming, Mel Siegel Website: http://civemsa2019.ieee-ims .org/

* 2019 IEEE International **Conference on Fuzzy Systems** (FUZZ-IEEE 2019)

June 23-26, 2019 Place: New Orleans, USA General Chairs: Timothy C. Havens, James M. Keller Website: http://www.fuzzieee.org

△ 1st International Conference on Process Mining (ICPM 2019)

June 24-26, 2019 Place: Aachen, Germany General Chair: Wil van der Aalst Website: http://icpmconference.org

△ 2019 International Joint **Conference on Neural Networks (IJCNN)**

July 14-19, 2019 Place: Budapest, Hungary General Chair: Chrisina Jayne, Zoltán Somogyvári

Website: http://www.ijcnn.org

* 9th Joint IEEE International **Conference on Development and Learning and on Epigenetic Robotics (IEEE ICDL-EpiRob 2019)**

August 19-22, 2019 Place: Oslo, Norway General Chairs: Jim Torresen, Kerstin Dautenhahn Website: https://icdl-epirob2019.org/

* 2019 IEEE Smart World **Congress (IEEE SWC 2019)**

August 19-23, 2019 Place: Leicester, United Kingdom General Chairs: Liming Chen, Joel Rodrigues, Alistair Duffy Website: http://www.smart-world .org/2019/

* 2019 IEEE International **Conference on Games** (IEEE CoG 2019)

August 20-23, 2019 Place: London, United Kingdom General Chairs: Diego Perez Liebana, Sanaz Mostaghim Website: http://ieee-cog.org

* 2019 IEEE International **Conference on Data Science** and Advanced Analytics (IEEE DSAA 2019)

October 5-8, 2019 Place: Washington DC, USA General Chairs: Philip S.Yu, Richard De Veaux Website: http://dsaa2019.dsaa.co/

△ 2019 Third International **Conference on Intelligent Computing in Data Sciences (ICDS)**

October 28-30, 2019 Place: Marrakech, Morocco General Chair: Jaouad Boumhidi, Hani Hagras, El Habib Nfaoui Website: http://www.researchnetwork .ma/icds2019/index.html

* 2019 IEEE Latin American **Conference on Computational** Intelligence (2019 IEEE LA-CCI)

November 11-15, 2019 Place: Guayaquil, Ecuador General Chair: Otilia Alejandro Website: http://la-cci.org

* 2019 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2019)

December 6-9, 2019 Place: Xiamen, China General Chair: Tingwen Huang Website: http://ssci2019.org

* 2020 IEEE World Congress on Computational Intelligence (IEEE WCCI 2020)

July 19-24, 2020 Place: Glasgow, UK General Chairs: Amir Hussain,

Marios M. Polycarpou, Xin Yao Website: https://www.wcci2020.org

* 2020 IEEE Conference on Games (IEEE CoG 2020)

Website: TBA

Website: TBA

August 24-27, 2020 Place: Osaka, Japan General Co-Chairs: Ruck Thawonmas and Kyung-Joong Kim

* 2020 IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2020)

December 1-4, 2020 Place: Canberra, Australia General Chair: Hussein Abbass

* 2021 IEEE Congress on **Evolutionary Computation** (IEEE CEC 2021)

June 28–July 1, 2021 Place: Kraków, Poland General Co-Chairs: Jacek Mańdziuk, Hussein Abbass Website: TBA

* 2021 IEEE International **Conference on Fuzzy Systems** (FUZZ-IEEE 2021)

July 11-14, 2021 Place: Luxembourg, Luxembourg General Chairs: Christian Wagner, Holger Voos Website: TBA

Publication Spotlight

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issue, accurate content push is needed, where the main challenges are proving precise descriptions of users and supporting the big data nature of users and contents. Content-centric networking (CCN) has emerged as a new network architecture to meet today's requirement for content access and delivery. By using the named content, CCN makes it possible to track users' real-time interests and motivates us studying a novel con-

tent accurate push (or called content recommendation) system. In this paper, we model this issue as a novel contextual multiarmed bandit based Monte Carlo tree search problem and propose a big data support online learning algorithm to meet the demand of content push with low cost. To avoid destroying CCN's energy efficient feature, the energy consumption is considered into our module. Then, we theoretically prove that our online learning algorithm achieves sublinear regret bound and sublinear storage, which is very efficient in the big data context and do not increase the network burden. Experiments in an offline collected dataset show that our approach significantly increases the accuracy and convergence speed against other state-of-the-art bandit algorithms and can overcome the cold start problem as well."