Final Program

The 1st ACIS International Virtual Conference of Artificial Intelligence

(ACIS-IAI'21)

Oct 13-15, 2021

Northwestern Polytechnical University, Xi'an

http://acisinternational.org/conferences/ai-2021/

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Program at a Glance

Wednesday, Oct 13, 2021

Time CST (UTC+8)	Activity	Location
Welcome to join Tencent Meeting Theme：IAI21 Time：2021/10/13 08:00-13:00 (GMT+08:00) Beijing time Join the meeting with the link below： https://meeting.tencent.com/dm/giufswaVSa1e Meeting ID：832 377 430 Dial by your local number +8675536550000,,832377430# (Mainland China) +85230018898,,,2,832377430# (Hongkong, China)		
8:20-8:45	Opening Ceremony Keynote	Prof. Lei Zhang Construction of nonlinear spatiotemporal data model and its depth calculation
8:45-9:00	Speech 1	Gulustan Dogan, Sinem Sena Ertas and Iremnaz Cay Human Activity Recognition Using Convolutional Neural Networks
9:00-9:15	Speech 2	Quanfeng Wang, Chen Li, Yuanxu Zhang and Jian Gao Point Cloud-based 3D Underwater Pose Estimation Using RANSAC and VFH Descriptors
9:15– 9:30	Speech 3	Hongyu Yao and Peng Wang High-Pass Modulation Pansharpening Based on Full Scale Regression
9:30-9:45	Speech 4	Huawen Ma, Jixin Ma, Han Wang, Pengsheng Li and Wencai Du A Comprehensive Review of Investor Sentiment Analysis in Stock Price Forecasting
9:45-10:00	Speech 5	Xiaofang Deng, Liuyue Shi, Yanlong Li, Huipin Qin and Lin Zheng A Void-Avoidable and Reliability-Based Opportunistic Energy Efficiency Routing for Mobile Sparse Underwater Acoustic Sensor Network
10:00-10:15	Speech 6	Cuiling Li, Xiaofang Deng, Huipin Qin, Lin Zheng and Hongbing Qiu Joint Task offload and Resource Allocation for Cognitive Edge Computing Using AI Algorithm
10:15-10:30	Speech 7	Zhenghan Li, Nanchang Cheng and Wenchao Song Research on Chinese Event Extraction Method Based on RoBERTa-WWM-CRF
10:30-10:45	Speech 8	Yi Zhang, Yifeng He and Gang Dong Downlink Design and Operating Mode Optimization of Remote Sensing Satellite Data Transmission System

10:45-11:00	Speech 9	Yifeng He, Anzhong Jin, Lei Chen, Shikang Nie, Yi Zhang and Gang Dong Acquisition Algorithm of High-Order BOC Modulation Satellite Communication Signal Based on Big Data
11:00-11:15	Speech 10	Qi Yan, Huachun Li and Yifeng He High-Reliability Design Methods of the 1553B Bus Communication Software for Manned Spacecraft
11:15-11:30	Speech 11	Shikang Nie, Guangting Li, Xin Liu, Xin Zhang, Chenchen Lin and Yifeng He Research on LDPC channel coding technology in satellite communication system
11:30-11:45	Speech 12	Chunpu Li Artificial Intelligence Technology in UAV Equipment
11:45-12:00	Speech 13	Ningbo Fan and Jia Tian Views on the Low-Cost Internet Satellite Systems
12:00-12:15	Speech 14	Li Guangting, Zhang Xin, Nie Shikang, Chen Yibo, Lin Chenchen and He Yifeng Road Extraction in SAR Iimage Based on the Image Dynamics and Watershed Transformation

Keynote

Construction of nonlinear spatiotemporal data model and its depth calculation

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Abstract

In the talk, we redefined the Collatz conjecture. Furthermore, we proposed the strong Collatz conjecture: For any integer N greater than 1, perform the Collatz transform on N, repeat the process m_{sc} finite times, and the transform result $N_m < N$. We have proved that if the strong Collatz conjecture is true, the Collatz conjecture must also be true. Based on the computer data structure of a tree, a non-negative integer inheritance decimal tree is constructed, and the nodes on the inheritance decimal tree correspond to non-negative integers. We further defined the Collatz-leaf node (corresponding to the Collatz-leaf integer) on the decimal tree. Collatz-leaf nodes must satisfy the strong Collatz conjecture. Through mathematical derivation, we have proved that the Collatz-leaf node (corresponding to the Collatz-leaf integer) has the characteristics of inheritance. With computer large numbers and big data calculation, we have concluded that all nodes at and below a depth of 800 are Collatz-leaf nodes. Correspondingly, all integers greater than or equal to 10^{799} are Collatz-leaf integers. The clone nodes at depth 800 correspond to all non-negative integers less than 10^{799}. Therefore, we prove that all integers greater than 1 satisfy the strong Collatz conjecture and the maximum number of strong Collatz transforms is $m_{scMax} < 800$. The strong Collatz conjecture is true, so the Collatz conjecture must also be true. For any integer N greater than 1, the maximum number of Collatz transforms from N to 1 is $m_{cMax} < 800 * (N - 1)$.

ACIS Journal Information

International Journal of Networked and Distributed Computing (IJNDC)
IJNDC is a world-class international journal. IJNDC Journal has been indexed in ESCI and Scopus and will ultimately be indexed in SCI **approximately** within one year or so.

http://www.atlantis-press.com/publications/ijndc/

International Journal of Software Innovation (IJSI)
IJSI is a world-class international journal. IJSI Journal has been indexed in ESCI and Scopus and will ultimately be indexed in SCI **approximately** within one year or so.

http://www.igi-global.com/ijsi

International Journal of Big Data Intelligence and Applications (IJBDIA)
IJBDIA is a world-class international journal. IJBDIA Journal has been indexed in Scopus.

http://www.igi-global.com/ijbdia

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