

2020 International Conference on Machine Learning and Big Data Analytics for IoT Security and Privacy (SPIoT-2020)

Conference Program

November 6, 2020, Shanghai, China

Due to the COVID-19 outbreak problem, SPIoT-2020 conference will be held online by Tencent Meeting (<https://meeting.tencent.com/>)

Greeting Message

SPIOT 2020 is an international conference dedicated to promoting novel theoretical and applied research advances in the interdisciplinary agenda of Internet of things. The "Internet of Things" heralds the connections of a nearly countless number of devices to the internet thus promising accessibility, boundless scalability, amplified productivity and a surplus of additional paybacks. The hype surrounding the IoT and its applications is already forcing companies to quickly upgrade their current process-es, tools, and technology to accommodate massive data volumes and take ad-vantage of insights. Since there is a vast amount of data generated by the IoT, a well-analysed data is extremely valuable. However, the large-scale deployment of IoT will bring new challenges and IoT security is one of them.

The philosophy behind machine learning is to automate the creation of analytical models in order to enable algorithms to learn continuously with the help of available data. Continuously evolving models produce increasingly positive results, reducing the need for human interaction. These evolved models can be used to automatically produce reliable and repeatable decisions. Today's machine learning algorithms comb through data sets that no human could feasibly get through in a year or even a life-time's worth of work. As the IoT continues to grow, more algorithms will be needed to keep up with the rising sums of data that accompany this growth.

One of the main challenges of the IoT security is the integration with

communication, computing, control, and physical environment parameters to analyse, detect and defend cyber-attacks in the distributed IoT systems. The IoT security includes: (i) the information security of the cyber space, and (ii) the device and environmental security of the physical space. These challenges call for novel approaches to consider the parameters and elements from both spaces, and get enough knowledge for ensuring the IoT's security. As the data has been collecting in the IoT, and the data analytics has been becoming mature, it is possible to conquer this challenge with novel machine learning or deep learning methods to analyse the data which synthesize the information from both spaces.

We would like to express our thanks to Professor John Macintyre, University of Sunderland, Professor Junchi Yan, Shanghai Jiaotong University for being the keynote speakers at the conference. We thank the General Chairs, Program Committee Chairs, Organizing Chairs, and Workshop Chairs for their hard work. The local organizers' and the students' help are also highly appreciated.

Our special thanks are due also to editors Dr. Thomas Ditzinger for publishing the proceedings in *Advances in Intelligent Systems and Computing* of Springer.

Conference Program at a Glance

Friday, Nov. 6, 2020, Tencent Meeting		
9:50-10:00	Opening ceremony	Jinghua Zhao
10:00-10:40	Keynote 1: John Macintyre	
10:40-11:20	Keynote 2: Junchi Yan	
11:20-11:40	Best Paper Awards	Xiaomeng Ma
14:00-18:00	session 1	Shunxiang Zhang
	session 2	Xianchao Wang
	session 3	Xiao Wei
	session 4	Shaorong Sun
	session 5	Ranran Liu
	session 6	Jun Ye
	session 7	Qingyuan Zhou
	Short papers poster	

SPIOT 2020 Keynotes 1

The Next Industrial Revolution: Industry 4.0 and the Role of Artificial Intelligence

Prof. John MacIntyre
University of Sunderland, UK



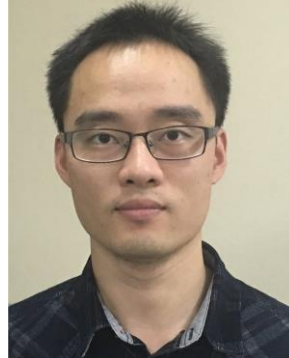
Abstract: The fourth industrial revolution is already approaching – often referred to as “Industry 4.0” – which is a paradigm shift which will challenge our current systems, thinking, and overall approach. Manufacturing industry will be transformed, with fundamental changes possible in how supply chains work, and how manufacturing becomes agile, sustainable, and mobile. At the heart of this paradigm shift is communication, connectivity, and intelligent manufacturing technologies. Artificial intelligence is one of the key technologies that will make Industry 4.0 a reality – and yet very few people really understand what A.I. is, and how important it will be in this new industrial revolution. A.I. is all around us already – even if we don't realise it!

Professor John MacIntyre has been working in A.I. for more than 25 years and is Editor-in-Chief of Neural Computing and Applications, a peer-reviewed scientific journal publishing academic work from around the world on applied A.I. Professor MacIntyre will give a picture of how Industry 4.0 will present both challenges and opportunities, how artificial intelligence will play a fundamental role in the new industrial revolution, and provide insights into where A.I. may take us in the future.

SPIOT 2020 Keynotes 2

Unsupervised learning of optical flow with patch consistency and occlusion estimation

Professor Junchi Yan
Shanghai University, China



Junchi Yan is currently an Associate Professor with Department of Computer Science and Engineering, Shanghai Jiao Tong University. Before that, he was a Senior Research Staff Member and Principal Scientist with IBM Research, China where he started his career in April 2011. He obtained the Ph.D. at the Department of Electrical Engineering of Shanghai Jiao Tong University, China in 2015. He received the ACM China Doctoral Dissertation Nomination Award and China Computer Federation Doctoral Dissertation Award. His research interests are mainly machine learning. He serves as an Associate Editor for IEEE ACCESS and a Managing Guest Editor for IEEE Transactions on Neural Networks and Learning Systems. He once served as Senior PC for CIKM 2019. He also serves as an Area Chair for ICPR 2020 and CVPR 2021. He is a Member of IEEE.

Oral Presentation Instruction

1. Timing: a maximum of 10 minutes total, including speaking time and discussion. Please make sure your presentation is well timed. Please keep in mind that the program is full and that the speaker after you would like their allocated time available to them.

2 You can use CD or USB flash drive (memory stick), make sure you scanned viruses in your own computer. Each speaker is required to meet her/his session chair in the corresponding session rooms 10 minutes before the session starts and copy the slide file(PPT or PDF) to the computer.

3 It is suggested that you email a copy of your presentation to your personal inbox as a backup. If for some reason the files can't be accessed from your flash drive, you will be able to download them to the computer from your email.

4 Please note that each session room will be equipped with a LCD projector, screen, point device, microphone, and a laptop with general presentation software such as Microsoft PowerPoint and Adobe Reader. Please make sure that your files are compatible and readable with our operation system by using commonly used fronts and symbols. If you plan to use your own computer, please try the connection and make sure it works before your presentation.

5 Movies: If your PowerPoint files contain movies please make sure that they are well formatted and connected to the main files.

Short paper Presentation Instruction

1. Maximum poster size is 0.8 meter wide by 1 meter high.

2. Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart.

3. Please note that during your short paper session, the author should stay by your short paper to explain and discuss your paper with visiting delegates.

Registration

Since we use online meeting way, no registration are needed for SPIOT 2020.

All accepted papers will be categorized into following sessions:

Session 1: Novel machine learning methods for IoT security

- SPIOT016 The Innovation of UI Design Courses in Higher Vocational Colleges Based on the Internet Perspective
- SPIOT021 Predicting the Getting-on and Getting-off Points Based on the Traffic Big Data
- SPIOT022 The Prediction analysis of Passengers Boarding and Alighting Points Based on the Big Data of Urban Traffic
- SPIOT023 Verifiable Random Number Based on B-Spline Curve
- SPIOT031 An Improved Particle Swarm Optimization Algorithm Based on DFC&HRS
- SPIOT041 Application and Practice of ID3 Algorithms in College Students' Education
- SPIOT045 Construction of Human Knee Joint Mechanics Model and Study on Mechanical Characteristics of Flexion movement based on neural network algorithm
- SPIOT046 Application of Artificial Intelligence Technology in Physical Fitness Test of College Students
- SPIOT059 Theoretical Research on College Students' Professional Literacy Design Based on Deep Learning
- SPIOT079 Artificial Intelligence is the Technical Guarantee of Network Security
- SPIOT093 Intelligent Question Answering System of Medical Knowledge Map Based on Deep Learning
- SPIOT103 Construction and Practice of Red Teaching Resources Based on Machine Learning
- SPIOT108 Reasonable Approach and Development Trend of Artificial Intelligence Sports Development
- SPIOT111 Returnee Migrant Workers' Entrepreneurship Based on Artificial Intelligence
- SPIOT112 Improvement of College Teachers' Teaching Ability under the Background of the Development of Artificial Intelligence Platform
- SPIOT115 Influence Factors of Using Modern Teaching Technology in the Classroom of Junior Middle School Teachers under the Background of Artificial Intelligence——Analysis Based on HLM
- SPIOT128 Analysis and Design of Personalized Learning System Based on Decision Tree Technology
- SPIOT129 Deep Learning Classification and Recognition Model Construction of Face Living Image Based on Multi-Feature Fusion
- SPIOT134 A Prediction Method of Blood Glucose Concentration Based On Nonlinear Auto-Regressive Model
- SPIOT141 Signal Processing Based On Machine Learning Optical Communication
- SPIOT143 Refined Management of Installation Engineering Cost based on Artificial Intelligence Technology

- SPIOT144 Application of Artificial Intelligence Technology in International Trade Finance
- SPIOT147 An Improved Genetic Algorithm for Vehicle Routing Problem
- SPIOT160 A Machine-Learning Based Store Layout Strategy in Shopping Mall
- SPIOT161 Risk Analysis in Online Peer-to-Peer Lending Based on Machine Learning: A Decision Tree Implementation on PPDai.com
- SPIOT163 The Application of BP Neural Network in the Opioid Crisis
- SPIOT171 Design of Personalized Intelligent Learning Assistant System under Artificial Intelligence Background
- SPIOT180 Application of Artificial Intelligence in Intelligent Decision-making of Human Resource Allocation
- SPIOT214 Research on Early Warning of Security Risk of Hazardous Chemicals Storage Based on BP-PSO
- SPIOT230 The Application of Artificial Intelligence and Machine Learning in Financial Stability
- SPIOT246 Application of alternative routing configuration mechanism based on Genetic Algorithm in power communication network
- SPIOT255 Safety Situation Assessment of Underwater Nodes based on BP Neural Network

Session 2: Big data analytics for IoT security

- SPIOT001 The Innovation of College Counsellor's Work Based On Big Data Analysis
- SPIOT005 Analysis of India's Big Data Industry
- SPIOT008 The Application of Computer Virtual Technology in Modern Sports Training
- SPIOT015 The Research on the Development and Utilization of Hospital Archive Information in the Big Data Era
- SPIOT026 Integration and Optimization of College English Teaching Information Resources in the Context of Big Data
- SPIOT048 Discussion on the Training of Cross-border E-commerce Application Talents Based on the Internet Era
- SPIOT049 Level of Technology Innovation Development and Promotion Strategies of High Technology Industry in Hubei Province Based on Smart City
- SPIOT053 Wisdom Media Era of Big Data in the Application of the Short Video from the Media
- SPIOT054 Development and Risk of Smart City
- SPIOT055 Impact of Education with Chinese Feature Reform of Management Courses Based on Big Data Analysis on Employment Quality of College Students
- SPIOT065 Test on the Combined Application of Nitrogen and Phosphate Fertilizer to Provide Intelligent Fertilization for Silage Maize Yield and Quality
- SPIOT066 Development and Innovation of Education Management Information in College with Big Data
- SPIOT089 Data Visualization Association Algorithm Based on Spatio-Temporal Association Big Data
- SPIOT095 A Proposed Three-dimensional Public Security Prevention and Control System Based on Big-Data
- SPIOT110 Innovation of Ideological and Political Education Model in the Context of Big

Data

- SPIOT121 Communication Response of Internet Rumor Audiences Based on Big Data Analysis
- SPIOT132 Design of University Admissions Analysis System Based on Big Data
- SPIOT135 Big Data on the Influence of SMEs in Export Trade Financing Costs
- SPIOT136 Big Data and Economics Research
- SPIOT139 Protection and Value of DaYing Zhuotong Well Based on Big Data
- SPIOT140 Analysis and Research on Modern Education Technology under "Internet+" and Big Data Technology Environment
- SPIOT145 Management Innovation of Network Society Based on Big Data
- SPIOT148 Short Term Load Forecasting Model of Building Power System with Demand Side Response Based on Big Data of Electrical Power
- SPIOT149 Big Data in Art Design
- SPIOT173 User Interface Code Automatic Generation Technology Based on Big Data
- SPIOT175 Cultural Heritage Research Model Based on Big Data
- SPIOT181 Changes in Enterprise Human Resource Management in the Context of Big Data
- SPIOT182 The Research on Big Data Promoting Innovation and Development of Inclusive Finance
- SPIOT185 Spatial Econometric Analysis of House Prices in Guangdong Province Based On Big Data
- SPIOT188 State Grid Yichang Power Supply Company's Young Employee Training Plan Based On "Big Data Profile"
- SPIOT191 Framework of Smart Regulation System for Large-scale Power Grid Based on Big Data and Artificial Intelligence
- SPIOT197 "21-st Digital Maritime Silk Road" Based on Big Data and Cloud Computing Technology Facing Opportunities and Challenges--from Digital Trade Perspective
- SPIOT200 Outdoor Sports Industry Platform Construction Based On Big Data Technology
- SPIOT201 Exploration on the Application of Personalized Teaching System Based on Big Data
- SPIOT204 A Big-Data Based Study on the Construction of Beforehand Alarming System for Public Health Emergency
- SPIOT205 Internet of Things Information Construction Combined with Big Data in Cloud Computing Environment
- SPIOT234 Research on the development and management of electric energy under the background of big data
- SPIOT248 Secure big data computing based on Trusted Computing and key management

Session 3: Data mining and statistical modelling for the secure IoT

- SPIOT014 The Research on Student Data Analysis System Based on Data Mining
- SPIOT018 The Application and Research of Data Mining Technology in Enterprise Service
- SPIOT028 Influencing Factors of Undergraduates Using App Learning Based on TAM Model -- Taking MOOC App as an Example

- SPIOT032 Malicious JavaScript Detection Method Based on Multilayer Perceptron
- SPIOT034 Computational Simulation of Magnetic Field of FC-Mold
- SPIOT035 Construction of Simulated Seismic Experiment (Experience) Platform
- SPIOT050 Social E-Commerce and Marketing Strategy Based on Data Analysis
- SPIOT068 Innovation Research and Practice of Studio Teaching Mode in the Context of Smart City
- SPIOT069 Effects of Combined Application of Nitrogen and Phosphorus Fertilizers on Photosynthetic Characteristics of Silage Corn, Laying the Foundation of Agricultural Information
- SPIOT083 Imagination of Virtual Technology Application in Sports Field
- SPIOT091 Effect of Time Slot Search on DAG Scheduling Strategy in Heterogeneous Clusters
- SPIOT100 "Internet +" in the Marketing Mode of Electric Power Electricity Value-Added Services to Users
- SPIOT109 Influencing Factors of Rural Entrepreneurship by University Students in Qiannan under the Background of Informatization
- SPIOT122 Transformation of Local Government Administrative Management Concept Based on Smart City Construction
- SPIOT150 Analysis and Simulation of Oxidation Causes during Steam Turbine Oil Use Based on Fenton Oxidation
- SPIOT164 Optimization of Berth Shore Bridge Allocation Based on Simulated Annealing Algorithm
- SPIOT166 Information Security Terminal Architecture of Mobile Internet of Things under the Background of Big Data
- SPIOT170 The Evolution of Network Platform Ecology from the Perspective of We Media
- SPIOT172 Multimodal and Multidimensional Interactive Teaching Mode of Comprehensive English under the Background of Big Data
- SPIOT178 Logistics Development under the Background of Internet
- SPIOT186 Model Analysis of Bowl Buckle High Support Formwork Construction Technology Based on Computer Simulation Technology
- SPIOT189 Vulnerability Discovery and Security Protection Based on Web Application
- SPIOT190 Comprehensive Evaluation of Rural Development Level Based on Data Mining
- SPIOT192 Intelligent Monitoring System of High-voltage Cabling
- SPIOT196 Strategic Thinking on High-Quality Development of Digital Economy in Yangtze River Delta Region of China in the Era of Big Data
- SPIOT211 Data Distributed Storage Scheme in Internet of Things Based on Blockchain
- SPIOT236 Design of unified management platform for power operation and maintenance based on Cloud Computing Technology
- SPIOT243 Research on economic growth based on MCMC principal component regression analysis

Session 4: Data confidentiality and privacy in IoT

- SPIOT013 The Construction and Implementation of the Security Defense System of University Campus Network

- SPIOT020 Study on Outlet Height Optimization of Behind-levee Drainage Pumping Stations
- SPIOT029 Marketing Mode of Wechat Public Account for College Students' Job Searching -Based on Computer Informationization
- SPIOT030 Public Credit Information Data Quality Evaluation and Improvement
- SPIOT056 Reform of Database and Data Warehouse Course based on OBE-CDIO Model
- SPIOT058 Enhancement of Risk Prevention Ability of Students Funding Subjects in the Age of All Media
- SPIOT061 Privacy Protection under the Construction of Smart Cities in China —from the Perspectives of Legislation
- SPIOT077 The Application of Virtual Reality Technology in Environmental Art Design
- SPIOT086 Application of VR Technology in Teaching Archery
- SPIOT088 Public Opinion Guidance with New Government Media in the Smart City
- SPIOT090 Needs Analysis of the AR Application in the Packaging Design of Ya'an Tibetan Tea
- SPIOT092 Construct Sharing Mechanism of College Students' Physical Health Monitoring Service Based on Geographic Information System
- SPIOT098 Probability Programming and Control of Moving Agent Based on MC-POMDP
- SPIOT101 Investigation on Power Marketing Model Based on Hierarchical Management System in a Smart City
- SPIOT105 Application Research of Virtual Reality Technology
- SPIOT130 Online Booking Laboratory Management System
- SPIOT146 University Education Management Based on Internet of Things Technology
- SPIOT151 The Influencing Mechanism of Richness of UGC on Purchase Intention -- An Empirical Analysis Based on "Content + Transaction" APP Users
- SPIOT165 Path Planning Algorithm of Mobile Robot Based On IAFSA
- SPIOT167 Virtual Machine Software in Computer Network Security Teaching
- SPIOT176 Key Technologies of Virtual Reality Fusion and Interactive Operation for Intelligent Learning in Network Environment
- SPIOT187 An Approach to Observing China's Higher Educational Equity: The Application of Multimedia and Database in Liberal Arts Education after Lockdown
- SPIOT198 Key Technologies of Automobile Assembly Intelligent Transfer Platform Based on Visual Perception
- SPIOT206 Personnel Management Optimization of University Library Based on Complex Network Theory
- SPIOT212 Load Optimization Scheme Based on Edge Computing in Internet of Things
- SPIOT213 Fire detection method based on improved glowworm swarm optimization-based TWSVM
- SPIOT219 A data privacy protection scheme for underwater network
- SPIOT244 Optimization of production and operation plan of oil pipeline based on Q Algorithm

Session 5: Data-driven co-design of communication, computing and control for IoT security

SPIOT003 Design of a Force Balance Geophone Utilizing Bandwidth Extension and Data Acquisition Interface

SPIOT012 Application of 3ds Max Technology in Archaeology

SPIOT017 The Application of Virtual Reality Technology in ESP Teaching

SPIOT019 Application of Simulation Method Based on Computer Bionic Design

SPIOT027 The Implementation and Application of Computer Simulation Technology in PE Teaching

SPIOT037 Construction of College Communities in the New Media Based on Network Environment

SPIOT040 Political and Ideological Personnel Management Mode Based on Computer Network

SPIOT051 Analysis of Mapping Knowledge Domain on Health and Wellness Tourism in the Perspective of Cite Space

SPIOT057 Application of Smart Retail Mode in Suning.Com

SPIOT062 Construction and Development of High-tech Smart City

SPIOT070 Design and Implementation of Self-Service Tourism Management Information System Based on B/S Architecture

SPIOT073 Chinese Culture Penetration in Teaching Chinese as a Foreign Language in the Era of Mobile Internet

SPIOT076 Application and Outlook of Digital Media Technology in Smart Tourism

SPIOT081 Accounting Informationization in Computer Network Environment

SPIOT087 Mobile Phone GPS and Sensor Technology in College Students' Extracurricular Exercises

SPIOT102 Design of Networking Network Model Based on Network Function Virtualization Technology

SPIOT107 Intelligent Media Technology Empowered Brand Communication of Chinese Intangible Cultural Heritage

SPIOT119 Construction Strategy of Smart English Teaching Platform from the Perspective of "Internet + Education"

SPIOT133 Online Writing Effectiveness under the Blended Teaching Mode of Moscotech APP

SPIOT138 A Narrative Environment Model for the Sustainability of Intangible Cultural Heritage under the 5G Era

SPIOT142 Application Study of VPN on the Network of Hydropower Plant

SPIOT157 Prediction of Technology Trend of Educational Robot Industry Based On Patent Map Analysis

SPIOT159 Coal Handling System of Power Plant Based On PLC

SPIOT162 Discussion on the Construction of Wireless Campus Network Based On SDN Architecture

SPIOT199 Applicational Status Analysis of Artificial Intelligence Technology in Middle School Education and Teaching

SPIOT202 Virtual Enterprise Partner Selection by Improved Analytic Hierarchy Process with Entropy Weight and Range Method

SPIOT226 Research and implementation of Intelligent Tourism Guide System Based on

cloud computing platform

SPIOT237 Analysis of financial needs of new agricultural operators based on K-means clustering algorithm

SPIOT245 Research on the application of virtual network technology in computer network security

SPIOT250 Application of Bionics in Underwater Acoustic Covert Communication

SPIOT251 Energy-saving and efficient underwater wireless sensor network security data aggregation model

SPIOT252 False Data Filtering in Underwater Wireless Sensor Networks

SPIOT254 Research on Underwater Bionic Covert Communication

Session 6: Authentication and access control for data usage in IoT

SPIOT009 The Application of Virtual Reality Technology in Architectural Design

SPIOT010 Computer-assisted Teaching and Cultivate Students' Innovative Thinking Ability

SPIOT038 The Reform Progress and Practical Difficulties of State-owned Hospitals under Information Age—Case Analysis Based on the Reform in a Medical Institution of A Group in China

SPIOT039 Financing Efficiency of SMEs in New Third Board Market in the Information Times

SPIOT044 Application of Virtual Instrument Technology in Electronic Course Teaching

SPIOT060 A Solution for Internet of Things based on Blockchain and Edge Computer

SPIOT063 Discovery and Advice of Free Charging of Electronic Devices

SPIOT074 Design and Implementation of Tourism Information Management System Based on .NET

SPIOT078 A Computer Model for Decision of Equipment Maintenance Spare Parts Reserve

SPIOT082 Risk Level Determination of Science and Technology Service Supply Chain with PA-BP Integrated Model

SPIOT099 Evaluation of the New Engineering Course System for Cyberspace Security

SPIOT106 Exploration on Teaching Reform of Architectural Design Courses from the Perspective of MOOCs

SPIOT116 Large-scale Farmland Management on Improving Production Efficiency under the Background of Smart Agriculture—Based on panel quantile regression

SPIOT120 Impact of Alliance Fitness on Smart Phone Brand Alliance Based on Intelligent Application

SPIOT124 Effective Control Method of the Whole Process Project Cost Based on BIM

SPIOT152 Research and Design of FPGA Embedded System

SPIOT154 Multi-source Heterogeneous and XBOOST Vehicle Sales Forecasting Model

SPIOT155 The Lorentz Component Algorithm for Calculating the Center of the Circular Motion of Charged Particles

SPIOT168 Controller Design Based On LQR for Rotational Inverted Pendulum

SPIOT177 Three-Dimensional Scenic Spot Roaming System Based on Virtual Reality

Technology

- SPIOT183 Research and Development of Simulation System for Industrial Robot Stamping Automation Production Line Based on Virtual Reality
- SPIOT195 Architectural Roaming Animation Based on VR Technology
- SPIOT207 The Measurement Method of Housing Affordability
- SPIOT216 Smart home security based on the Internet of Things
- SPIOT218 CS-based homomorphism encryption and trust scheme for underwater acoustic sensor networks
- SPIOT227 3D animation scene plane design based on Virtual Reality Technology
- SPIOT229 Design of VR Computer Network and Maintenance Experiment System
- SPIOT231 The quantum state engineering by Adiabatic Decoherence-Free Subspace
- SPIOT238 Design and Implementation of Training System for Broadcast Hosts P2P Network Video Live
- SPIOT241 Application Research of enterprise production logistics system based on computer simulation technology
- SPIOT242 Atomic Decay-based Clustering for Operation Log
- SPIOT253 Hybrid Mac Protocol Based On Security In Clustering Topology

Session 7: Experiments, test-beds and prototyping systems for IoT security

- SPIOT002 The Transformation and Remodeling of Literary Education Concept under Mobile Internet Era
- SPIOT004 Teaching Design Based On Network Red Blue Confrontation
- SPIOT006 Construction and Implementation of the "Pyramid" Online Learning Platform for Experimental Teaching
- SPIOT007 The Research on the Strategy of College English Teaching Mode Based on Mobile Terminal under the Background of Internet+
- SPIOT011 The Research on College Physical Education Innovation Based on Internet and New Media
- SPIOT025 The Development Strategy of College English Education under the Language Education Planning in the Age of Artificial Intelligence
- SPIOT043 Construction of Smart City Needed for a Better Life under the Background of the Times——A Perspective of Holistic Governance Theory Based on Governance and the Structure of Local Political Institutions
- SPIOT064 Investigation on the Growth Mechanism of Small and Medium-Sized Agricultural Leading Enterprises from the Perspective of Intelligent Agricultural Niche Theory
- SPIOT071 The Optimization and Construction of College English Teaching by Information Technology
- SPIOT072 The Application of Computer Technology in Chinese Teaching for Foreign Students from the Perspective of Internet
- SPIOT075 The Application of Computer "Virtual Simulation" Experimental Teaching in Basic Football Tactics
- SPIOT085 Application of Campus Happy Running APP in the Reform of University Physical

Education Integration

- SPIOT096 Data Mining of Educational Service Quality of Professional Degree Masters Based on Improved Expectation Confirmation Model
- SPIOT113 Intelligent Development of Urban Housing
- SPIOT114 Effective Approach to Cultivating Physical Education Teaching Skills of Preschool Majors in the Context of Big Data
- SPIOT117 Coordination Game in Online Ride-hailing Market of Smart City
- SPIOT125 Construction of English Learning Community in the Smart City Environment
- SPIOT126 Automatic Dispensing Technology of Traditional Chinese Medicine Formula Granules in Pharmacy under the Background of Artificial Intelligence
- SPIOT137 Exploration and Practice of Coaching Technology in College Career Guidance under the Internet + Era
- SPIOT153 Research on Enterprise Data Governance Based on Knowledge Map
- SPIOT158 Website Design and Implementation of Xunyang Lion's Head Orange
- SPIOT174 Vocational Students' Academic Self-efficacy Improvement Based on Generative PAD Teaching Mode
- SPIOT194 An Improved K-means Clustering Algorithm Based on Density Selection
- SPIOT208 Calculation and Analysis of Family Care Burden Coefficient
- SPIOT209 A Study on the Impact of Formal Social Support on the Mental Health of the Elderly in Urban and Rural China: Based On the 2015 CHARLS Data
- SPIOT232 Bi-Apriori-based Association Discovery via Alarm Logs
- SPIOT233 Research on Perceived Information Model in Product Design under Cloud Computing
- SPIOT239 Early warning management of enterprise human resource crisis based on Fuzzy Data Mining Algorithm of computer
- SPIOT240 New media creative writing and computer application technology

Short paper session

- SPIOT024 Application of Automatic Obstacle Avoidance Unmanned Vehicle Based On Beidou and Inertial Navigation
- SPIOT033 Application of "Computer Network Teaching Platform+ Flipped Teaching Model" in Online Education-Taking "Information Technology Teaching Method" as an Example
- SPIOT047 The Current Situations of Mobile Assisted Language Learning
- SPIOT052 Development of Industrial Chain of Internet of Things Based on 5G Communication Technique
- SPIOT067 Path Choice of Smart City Construction from the Perspective of Economic Growth
- SPIOT080 Computer Audit Quality Control in Big Data Era
- SPIOT084 MOOC System in the Era of Big Data Improves the Effectiveness of College Physical Education
- SPIOT094 Risks and Prevention in the Application of AI
- SPIOT097 Improvement of Microblog Recommendation System Based On Interaction Strategies of Agricultural E-Commerce Enterprise

SPIOT104 Exploration and Construction of "One Ring, Three Deductions" Innovation and Entrepreneurship Talent Cultivation Model for Higher Vocational Art Design Major Based on Information Technology

SPIOT118 Research Progress of Neuroimaging techniques in Organizational Behavior under the Background of Smart City

SPIOT123 Recommendation Strategies for Smart Tourism Scenic Spots Based on Smart City

SPIOT127 Control Strategy of Environmental Control System in Power Transmission

SPIOT156 Low Latency V2X Application of MEC Architecture in Traffic Safety

SPIOT169 Cloud Computing Technology for the Network Resource Allocation on the Research of Application

SPIOT179 Talent Evaluation Model of College Students Based on Big Data Technology

SPIOT184 Application of Cloud Class in Comprehensive English Teaching in the Context of Internet Plus

SPIOT193 The Application of 3D Printing Technology in Sculpture

SPIOT203 The Development Strategy of Current Medical Scientific Research Information

SPIOT210 On the Development of the Industry Trend of "Ai + Education"

SPIOT215 Research on UAV Control Improvement

SPIOT217 Smart sleep mattress based on Internet of things technology

SPIOT220 On the application and research of electronic and electrical technology in power system

SPIOT221 Driving the application of bioinformatics under the development of cloud technology

SPIOT222 Computer network information security and protection strategy under the background of big data

SPIOT223 Design and implementation of legal consultation system based on Android platform

SPIOT224 The application of big data development in power engineering cost

SPIOT225 Design and Research on the Management of the Electricity System of WebGIS

SPIOT228 Application of improved CMAC algorithm in international trade analysis module construction

SPIOT235 Design and research of electroless copper plating in Microelectronics

SPIOT247 Application of neural network algorithm in building energy consumption prediction

SPIOT249 Research and design of big data unified analysis platform based on Cloud Computing