### **Conference Schedule**

September 26, 2010								
08:30	Opening							
09:20	Room A (in Taiyuan University of Science and Technology)							
09:20	Keynote Speech I							
10:20	Room A (in Taiyuan University of Science and Technology)							
10:20								
10:40	Coffee Break							
10.10	Session A01: Session A02:				Session A03:			
10:40			Recent Advances on Swarm-based		Theories and Applications for			
11:40	Swarm-based Computing	(1)	Computing(2)			Social Network Security and Intelligent Computation		
11.10	Room A	Roor		n B	intenige	Room C		
11:40	Lunch							
13:15	Restaurant (in Academic Exchange Center)							
13.15	Session A04:	ssion A04: Session A05:		Session A06:		Session P01:		
10.15	Theories and	Fast Logic		Middleware and		Poster Session (01)		
13:15	Applications for Social Network Security	Computation, Ontologies and		Component Tec	hnology			
15:15	Network Security		-valued Logic in					
		Semantic Networks						
15.15	Room A	Room B		Room C		Room P		
15:15	Coffee Break							
15:40	Conce Break							
	Session A07:	Session A07: Session A08:		Session A09:		Session P02:		
15:40	Pattern Analysis and	Complex Networks and		Intelligent Syste	em and	Poster Session (02)		
	Optimization & Multimedia Information	Granular Computing		Evolutionary Algorithms				
17:40	Processing			1118011111111				
	Room A		Room B	Room (		Room P		
17:40	Dinner							
20:00	Restaurant (in Academic Exchange Center)							

		September 27,	, 2010				
08:30	Keynote Speech II						
09:20	Room A (in Taiyuan University of Science and Technology)						
09:20	Keynote Speech III						
10:20	Room A (in Taiyuan University of Science and Technology)						
10:20							
	Coffee Break						
10:40							
	Session B01:	Session B02:	Session B03:	Session B10:			
10:40	Applications in Smart Home	Business Management Application and Fuzzy	Application of Intelligent Computation	Wireless Sensor Network and Internet			
	Home	Logic	& Neural Networks and	Technique			
11:40		Logic	Connectionist Models	reemiique			
	Room A	Room B	Room C	Room P			
11:40	Lunch						
13:15	Restaurant (in Academic Exchange Center)						
	Session B04:	Session B05:	Session B06:	Session P03:			
13:15	The Synergy between	Image	Image	Poster Session (03)			
	AI and Brain Science	Processing/Pattern	Processing/Pattern				
15:15		Recognition(1)	Recognition (2)				
15.15	Room A	Room B	Room C	Room P			
15:15							
15:40	Coffee Break						
10.10	Session B07:	Session B08:	Session B09:	Session P04:			
	Knowledge	Neural Networks and	Neural Networks and	Poster Session (04)			
15:40	Management &	Connectionist Models	Connectionist Models				
	Technical Innovation		& Network based				
17:40	and Network based System Design		System Design				
	Room A	Doom D	Poom C	Poom D			
17.40	KOOIII A	Room B	Room C	Room P			
17:40	Banquet						
20:00	Restaurant (in Academic Exchange Center)						

September 28, 2010
Travelling









# International Conference on Computational Aspects of Social Networks 2010

September 26-28, Taiyuan, China http://www1.tyust.edu.cn/cason/ (Taiyuan) http://bit.kuas.edu.tw/~cason10/ (Taiwan)

### **Conference Program**

September 25, 2	2010
Registration	14:00-21:00
(Academic Exchange Center)	
September 26, 2	2010
Registration	08:00-17:30
Opening	08:30-09:20
Keynote Speech I	09:20-10:20
Coffee Break	10:20-10:40
Session A01-A03	10:40-11:40
Lunch	11:40-13:15
Session A04~A06	13:15-15:15
Poster Session P01	13:15-15:15
Coffee Break	15:15-15:40
Session A07~A09	15:40-17:40
Poster Session P02	15:40-17:40
Dinner	17:40-20:00
September 27, 2	010
Registration	08:00-17:30
Keynote Speech II	08:30-09:20
Keynote Speech III	09:20-10:20
Coffee Break	10:20-10:40
Session B01-B03, B10	10:40-11:40
Lunch	11:40-13:15
Session B04~B06	13:15-15:15
Poster Session P03	13:15-15:15
Coffee Break	15:15-15:40
Session B07~B09	15:40-17:40
Poster Session P04	15:40-17:40
Banquet	17:40-20:00
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September 28, 2	W1U
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### **Session List**

### September 26, 2010, 10:40-11:40

A01: Recent advances on Swarm-based Computing (1) A02: Recent advances on Swarm-based Computing (2)

A03: Theories and Applications for Social Network Security and Intelligent Computation

### September 26, 2010, 13:15-15:15

A04: Theories and Applications for Social Network Security

A05: Fast Logic Computation, Ontologies and Multi-valued Logic in

Semantic Networks

**A06**: Middleware and Component Technology

**P01**: Poster Session (01)

#### September 26, 2010, 15:40-17:40

A07: Pattern Analysis and Optimization & Multimedia Information Processing

A08: Complex Networks and Granular Computing
A09: Intelligent System and Evolutionary Algorithms

**P02**: Poster Session (03)

#### September 27, 2010, 9:50-11:50

**B01**: Applications in Smart Home

**B02**: Business Management Application and Fuzzy Logic

**B03**: Application of Intelligent Computation & Neural Networks and

**Connectionist Models** 

**B10**: Wireless Sensor Network and Internet Technique

#### September 27, 2010, 13:15-15:15

B04: The synergy between AI and Brain Science
B05: Image Processing/Pattern Recognition (1)
B06: Image Processing/Pattern Recognition (2)

P03: Poster Session (03)

#### September 27, 2010, 15:40-17:40

B07: Knowledge Management & Technical Innovation and Network based System Design

**B08**: Neural Networks and Connectionist Models

**B09**: Neural Networks and Connectionist Models & Network based System Design

P04: Poster Session (04)

Recent advances on Swarm-based Computing (1)

Session Chairs: Prof. Zhihua Cui, Taiyuan University of Science and

Technology, China

Prof. Li-Ping Xie, Taiyuan University of Science and

Technology, China

A01-01, CASoN-2010-IS02-02

#### Nonlinear Time-Varying Stability Analysis of Particle Swarm Optimization

Wei-Bing Fan, Zhi-Hua Cui, Yong-Jing Chen, and Ying Tan

Taiyuan University of Science and Technology, China

A01-02, CASoN-2010-IS02-03

#### Using Hungry Particle Swarm Optimization to Direct Orbits of Chaotic Systems

Xing-Juan Cai and Zhi-Hua Cui

Taiyuan University of Science and Technology, China

A01-03, CASoN-2010-IS02-04

# Social Cognitive Optimization Algorithm with Reactive Power Optimization of Power System

Zhan-Hong Wei, Zhi-Hua Cui and Jian-Chao Zeng

Taiyuan University of Science and Technology, China

A01-04, CASoN-2010-IS02-05

#### NW-based Particle Swarm Optimization

Xiao-Bo Zhou

Taiyuan University of Science and Technology, China

A01-05, CASoN-2010-IS02-06

### A Hybrid Vector Artificial Physics Optimization with One-Dimensional Search Method

Gang-Jun Yang, Li-Ping Xie, Ying Tan, and Jian-Chao Zeng

Taiyuan University of Science and Technology, China

A01-06, CASoN-2010-IS02-07

#### Particle Swarm Optimization Based on Self-organizing Topology Driven by Fitness

Si-Min Mo, Jian-Chao Zeng, and Ying Tan

Lanzhou University of Technology, China

Recent advances on Swarm-based Computing (2)

Session Chairs: Prof. Li-Chao Chen, Taiyuan University of Science and

Technology, China

Dr. Jin-Xia Liu, Lanzhou University of Technology,

China

A02-01, CASoN-2010-IS02-08

#### Community Detection Based on Modularity Density and Genetic Algorithm

Jin-Xia Liu and Jian-Chao Zeng

Lanzhou University of Technology, China

A02-02, CASoN-2010-IS02-09

#### The Researching and Modeling of a Multi-Agent Based Group Awareness Model

Lin-Xia Yan

Taiyuan University of Science and Technology, China

A02-03, CASoN-2010-IS02-10

#### Intelligent Operation Parameters Optimization for Screw Conveyor Based on PSO

Jiang-Hui Cai and Wen-Jun Meng

Taiyuan University of Science and Technology, China

A02-04, CASoN-2010-IS02-11

#### Research on Optical Fiber Methane Gas Sensor of Spectral Absorption Type

Xiao-Mei Yan, Ji-Long Zhang, and Zhi-She Wang

Taiyuan University of Science and Technology, China

A02-05, CASoN-2010-IS02-12

#### Demand Forecasting Based on Internet of Things

Jian-Ping Qiu and Li-Chao Chen

Taiyuan University of Science and Technology, China

A02-06, CASoN-2010-IS02-14

#### A Component Clustering Algorithm Based on Semantic Similarity and Optimization

Ying-Jun Zhang, Yao-Peng Ren, Li-Chao Chen, and Bin-Hong Xie

Taiyuan University of Science and Technology, China

Theories and Applications for Social Network Security and Intelligent Computation

Session Chairs: Prof. Tianhua Liu, Shenyang Normal University, China

Prof. Hongfeng Zhu, Shenyang Normal University,

China

A03-01, CASoN-2010-IS05-01

# An ID-based Multi-server Authentication with Key Agreement Scheme without Verification Table on Elliptic Curve Cryptosystem

Tian-Hua Liu, Hong-Feng Zhu

Shenyang Normal University, China

A03-02, CASoN-2010-IS05-02

#### A Novel Method to Characterize Unwanted Email Traffic

Yang Sun and Hong-Feng Zhu

Shenyang Normal University, China

A03-03, CASoN-2010-IS05-03

# An Efficient Intrusion Detection and Prevention System Against SIP Malformed Messages Attacks

Hong-Bin Li, Hu Lin, Hui-Chao Hou, and Xue-Hua Yang Shenyang Institute of Computing Technology, China

A03-04, CASoN-2010-IS05-05

# Improving Network Security and Performance by Multipath Routing in Ad Hoc Networks

Shi-Dong Yu, Hang Li, Hong-Feng Zhu, and Chen Wang Shenyang Normal University, China

A03-05, CASoN-2010-0067

# Quantum Algorithms and Mathematical Representation of Bio-molecular Solutions for the Clique Problem in a Finite-dimensional Hilbert Space

Weng-Long Chang, Ting-Ting Ren, Mang Feng, Jun Luo, Kawuu Weicheng Lin, Minyi Guo, Lai-Chin Lu, Chih-Chiang Wang, and Gwo-Jia Jong National Kaohsiung University of Applied Sciences, Taiwan

A03-06, CASoN-2010-0073

Quantum Algorithms and Mathematical Representation of Bio-molecular Solutions

#### for the Hitting-set Problem on a Quantum Computer

Weng-Long Chang, Ting-Ting Ren, Mang Feng, Jun Luo, Kawuu Weicheng Lin, Minyi Guo, Lai-Chin Lu, Gwo-Jia Jong, and Chih-Chiang Wang National Kaohsiung University of Applied Sciences, Taiwan

A03-07, CASoN-2010-0153

# Study of Power System Short-term Load Forecast Based on Artificial Neural Network and Genetic Algorithm

Xin-Hui Du, Feng Tian, and Shao-Qiong Tan Taiyuan University of Technology, China

A03-08, CASoN-2010-0159

# Application of Neural Network and Support Vector Machines to Power System Short-term Load Forecasting

Xin-Hui Du, Liang Wang, Jian-Cheng Song, and Yan Zhang Taiyuan University of Technology, China

A03-09, CASoN-2010-0282

# The Application of Particle Swarm Optimization to Solving Nonlinear Equations Zhi-Hong Shuang

Taiyuan University of Science and Technology, China

A03-10, CASoN-2010-0626

# Application of Maintaining the Shortest Path Method in the Game Map Path-Finding

Zheng-Hong Hu and Jin Li Taiyuan Normal University, China

Theories and Applications for Social Network Security Session Chairs: Prof. Xuan Ding, Tsinghua University, China Prof. Wei Wang, Tsinghua University, China

A04-01, CASoN-2010-IS05-07

An Improved Tree-Based Distribution Group Key Agreement Protocol

Cheng-Zhe Li, Hong-Feng Zhu, and Tian-Hua Liu

Shenyang Normal University, China

A04-02, CASoN-2010-IS05-09

Application of Trusted Boundary Based on Port Trust Value in Campus Area Network

Ning Jiang, Lian-Cheng Shan, Hong-Feng Zhu, and Jian Yu Shenyang Normal University, China

A04-03, CASoN-2010-IS05-10

A New Algorithm of Image Segmentation based on Bidirectional Search

Pulse-Coupled Neural Network

Liu Yang and Kang Lei

Shenyang University, China

A04-04, CASoN-2010-IS05-11

Multi-sensor image fusion algorithm based on NSCT and PCNN

Chen Yao and Kang Lei

Shenyang University, China

A04-05, CASoN-2010-0210

A Core-based Community Detection Algorithm for Networks

Wei Wang and Chun-Ping Li

Tsinghua University, China

A04-06, CASoN-2010-0414

A Brief Survey on De-anonymization Attacks in Online Social Networks

Xuan Ding, Lan Zhang, Zhiguo Wan, and Ming Gu

Tsinghua University, China.

A04-07, CASoN-2010-0464

Network Design and Implementation of the Emote Dynamic Monitoring System on Servicing Tower Cranes

Chon-Gren Gao, Yu-Feng Yin, Yu-Xi Han, and Guang Zeng Taiyuan University of Science and Technology, China

A04-08, CASoN-2010-0494

A New Network Collaborative Manufacturing Based on the STEP-NC

Jian-Hua Han, Juan Du, and Xian-Guo Yan Taiyuan University of Science and Technology, China

A04-09, CASoN-2010-0522

Research on the Evolutionary Mechanism of Social Network Based on Competitive Selection

Jin-Tao Lu, Li-Cheng Ren, Yin-Pu Yao, and Guang-Dong Xu Taiyuan University of Science and Technology, China

A04-10, CASoN-2010-0612

Network Analysis of Underground Transportation Hub Safety Monitoring System
Jia Wang, Shu-Feng Liu, Zhi-Xin Chen, and Xiao-Hui Wang
Beijing University of Civil Engineering and Architecture, China

Fast Logic Computation, Ontologies and Multi-valued Logic in Semantic Networks

Session Chairs: Prof. Jim-Min Lin, Ching Yun University, Taiwan Prof. Chiou-Yng Lee, Lunghwa University of Science and Technology, Taiwan

A05-01, CASoN-2010-IS06-01

Concurrent Error Detection in Systolic Array AB^2 Multiplier using Linear Codes Chiou-Yng Lee

Lunghwa University of Science and Technology, Taiwan

A05-02, CASoN-2010-IS06-02

Fast Optimal Normal Basis Multiplier with Type-2<sup>kw</sup> over GF(2<sup>m</sup>)

Che-Wun Chiou, Jim-Min Lin, and Chiou-Yng Lee Ching Yun University, Taiwan

A05-03, CASoN-2010-IS06-03

Indoor Service Robot with Multi-sensors Implementation on the MOM

Wen-Yo Lee Yun-Ter Su, and Ta-Chih Hung Lunghwa University of Science and Technology, Taiwan •

A05-04, CASoN-2010-IS06-04

A Large Payload EMD Embedding Scheme with High Stego-image Quality

Kuo-Nan Chen, Chin-Chen Chang, and Huang-Ching Lin National Chung Cheng University, Taiwan

A05-05, CASoN-2010-0162

The Temporal Description Logic TL-SI and its Decidability Algorithm

Kun Hu, Xue-Li Yu, Zhi Li, and Hong-Kang Zhu Taiyuan University of Technology, China

A05-06, CASoN-2010-0331

Research on Services Matching and Ranking Based on Fuzzy QoS Ontology

Hong-Kang Zhu, Xue-Li Yu, Guang-Ping Zhuo, and Kun Hu Taiyuan University of Technology, China

A05-07, CASoN-2010-0378

Research and Application on Integration Model of Coal Scientific Data Based on

### Ontology

Yue-Dong Lv, Li-Chao Chen, and Yong-Yi Guo Taiyuan University of Science and Technology, China

A05-08,CASoN-2010-0497

A Web Service Matchmaker Based on Fuzzy Logic and OWL-S

Bin-Hong Xie, Ying-Jun Zhang, and Yong-Yi Guo Taiyuan University of Science and Technology, China

### Middleware and Component Technologies

Session Chairs: Prof. Zhou Chuan-Sheng, Shenyang Normal University, China

Prof. Xiao-Fei An, Shenyang Normal University, China

A06-01, CASoN-2010-IS07-01

#### Research on Component Based Online Shopping System Design

Chuan-Sheng Zhou and Li-Hua Niu

Shenyang Normal University, China

A06-02, CASoN-2010-IS07-02

### Research on UML State Diagram Based Component Test System

Chuan-Sheng Zhou

Shenyang Normal University, China

A06-03, CASoN-2010-IS07-03

# Design of Message-Oriented Middleware of Distance Teaching Platform Based on Distributed Message Control

Xiao-Fei An and Li-Ying Bian

Shenyang Normal University, China

A06-04, CASoN-2010-IS07-04

#### Research on Application of Philosophy in Programming

Shi-Chang Hu and Jian Yu

Shenyang Normal University, China

A06-05, CASoN-2010-IS07-05

#### Research on Orthogonal Relation Decomposition and Object Design

Shi-Chang Hu and Jian Yu

Shenyang Normal University, China

A06-06, CASoN-2010-IS07-06

#### Research on Object Programming Methodology

Shi-Chang Hu and Jian Yu

Shenyang Normal University, China

A06-07, CASoN-2010-IS07-07

An Algorithm of Detection Duplicate Information Based on Segment

Zhe Liu and Zhi-Gang Zhao Shenyang Normal University, China

#### P01

### Poster Session (01)

P01-01, CASoN-2010-IS02-01

#### Analysis the Uncertainties of the Ant Colony Algorithm

Yi Zhang, Meng Zhang, and Xin-Yan Cao

Jilin Business and Technology College, China

#### P01-02, CASoN-2010-IS02-13

# A Constructing Method of Decision Tree and Classification Rule Extraction for Incomplete Information System

Hai-Feng Yang, Zhi-Hai Xu, Ji-Fu Zhang, and Jiang-Hui Cai Taiyuan University of Science and Technology, China

P01-03, CASoN-2010-0133

#### Clock Synchronization Method for Star-Structure Wireless Sensor Network

Xiao-Fang Li, Chun-Bo Chang, and Wen-Hua Gao

Taiyuan University of Science and Technology, China

P01-04, CASoN-2010-0190

### Two-phase Particle Swarm Optimization with Scale-free Network Model

Hua-Ping Mu, Chang-Yi Jiao, and Jian-Chao Zeng

Hebi College of Vocation and Technology, China

P01-05, CASoN-2010-IS05-04

# A Robust and Efficient Password-authenticated Key Agreement Scheme without Verification Table Based on Elliptic Curve Cryptosystem

Hong-Feng Zhu and Tian-Hua Liu

Shenyang Normal University, China

P01-06, CASoN-2010-IS05-06

#### An Enhanced PID Based Active Queue Management Algorithm

Chi-Min Zhou, Li-Guo Deng and Jing Zhao

Chengdu University, China

Pattern Analysis and Optimization & Multimedia Information processing Session Chairs: Prof. Xue-Mei Yang, Xianyang Normal University, China Prof. Hua-Li Zhao, Xidian University, China

A07-01, CASoN-2010-IS12-04

### An Improved Method of Location of the Circular Target

Qin Li, Fei-Peng Da, and He-Ming Huang Southeast University, China

A07-02, CASoN-2010-IS12-07

# A Predictor-corrector Smoothing Newton Method for Solving the Second-order Cone Complementarity

Hua-Li Zhao and Hong-Wei Liu Xidian University, China

A07-03, CASoN-2010-IS12-09

# Prediction of O-Glycosylation Sites in Protein Sequence by Kernel Principal Component Analysis

Xue-Mei Yang, Xue-Wei Cui, and Xue-Zhu Yang Xianyang Normal University, China

A07-04, CASoN-2010-0399

#### Research on Temperature Field Measuring of Oxygen Propane

Rui-Ping Zhang

Taiyuan University of Science and Technology, China

A07-05, CASoN-2010-0500

#### Joint Temporal-Spatial Error Concealment for Multiple Description Video Coding

Hui-Hui Bai, An-Hong Wang, Meng-Meng Zhang, and Xiao-Ming Guo Beijing Jiaotong University, China

A07-06, CASoN-2010-0536

# An Improved Unsupervised Learning of Motion Estimation Based on Diamond Searching for Distributed Video Coding

Hai-Fang Wang and An-Hong Wang Taiyuan University of Science and Technology, China

A07-07, CASoN-2010-0546

FDCT-Based Digital Watermarking Algorithm for Gray Images

Jiang Yu, Lin-sheng Li, An-Hong Wang, and Qi-Chuan Tian Taiyuan University of Science and Technology, China

A07-08,CASoN-2010-0615

### A Multiple Direction Information Transmission Interface For Multi-transport Hub In ISCS Networks

Lei Zhang, Xin Chen, Zhi-Xin Chen, and Jia Wang Beijing University of Civil Engineering and Architecture, China

A07-09, CASoN-2010-0631

An Improved Dynamic XML Encoding Scheme Applied in Map Information Guang-Xing Guo, Gui-Mei Yin, and Jin Li Taiyuan Normal University, China

# Complex networks and Granular Computing Session Chairs: Prof. Zhen Jin, North University of China, China Prof. Gang Xie, Taiyuan University of Technology, China

A08-01, CASoN-2010-IS09-01

# Monotonicity of Eventually Positive Solutions for a Second Order Nonlinear Difference Equation

Hui-Qin Chen and Zhen Jin Datong University, China

A08-02, CASoN-2010-IS09-03

#### Analysis of A Delayed SIR Epidemic Model

Jin-Zhu Zhang, Jian-Jun Wang, Tie-Xiong Su, and Zhen Jin North University of China, China

A08-03, CASoN-2010-IS10-01

#### ROI of HRCT Enhancement and De-noising Based on Rough Set

Gang Xie, Cheng-Dong Yan, Tian-Rui Cao, and Fang Wang Taiyuan University of Technology, China

A08-04, CASoN-2010-IS10-04

#### Solving 0-1Knapsack Problem Based on Rough Set Theory

Zhi-Jun Zhang, Yan Wu, and Gao-Wei Yan Taiyuan University of Technology, China

A08-05, CASoN-2010-IS10-05

#### Granular Computing Reduction Method for SDG Model

Gang Xie, Wen Wang, and Ze-Hua Chen Taiyuan University of Technology, China

A08-06, CASoN-2010-0096

#### A MEC-based Attribute Reduction Algorithm in Rough Sets

Jun-Qin Cao, Xiao-Song Li, and Jia-Peng Feng Taiyuan University of Science and Technology, China

A08-07, CASoN-2010-0552

### Optimization Model for Railway Freight Station Layout Based on Agent

Yan-Ping Du, Yun-Yun Zhao, Li-Min Jia, and Yong Qin Beijing Jiaotong University, China

Intelligent System and Evolutionary Algorithms

Session Chairs: Prof. Chung C. Chang, Chinese Culture University,

Taiwan

Dr. Chao-Li Sun, Taiyuan University of Science and

Technology, China

A09-01, CASoN-2010-IS11-01

# Applying Web Service Technology to Build a Wireless LAN Problem Diagnosis Expert System

Chung C. Chang and Shih-Chieh Hsieh

Chinese Culture University, Taiwan

A09-02,CASoN-2010-IS11-02

# An e-Learning System for Information Management Education Based on Web Services

Chung C. Chang and Kou-Chan Hsiao

Chinese Culture University, Taiwan

A09-03, CASoN-2010-IS11-03

#### Evaluating Nearest-Neighbor Queries Based on Uncertainty Model

Mei-Tzu Wang

Chinese Culture University, Taiwan

A09-04, CASoN-2010-IS11-04

# Integrating Multiple Linear Regression and Multicriteria Collaborative Filtering for Better Recommendation

Chein-Shung Hwang, Yu-Cheng Kao, and Ping Yu

Chinese Culture University, Taiwan

A09-05, CASoN-2010-IS11-05

# Effects of Computer Game-based Instruction on Students' Programming Achievement in Taiwan

Chein-Shung Hwang, Yi-Ching Su and Kuo-Cheng Tseng Chinese Culture University, Taiwan

A09-06, CASoN-2010-0009

#### A new Electromagnetism-like Algorithm with Chaos Optimization

Qing-Hua Wang, Jian-Chao Zeng, and Wei-Ping Song

Taiyuan University of Science & Technology, China

#### A09-07, CASoN-2010-0255

### Path Planning of Soccer Robot Based on Artificial Immune Mechanics

Xiao-Song Li, Jun-Qin Cao, and Chun-Bo Chang

Taiyuan University of Science and Technology, China

### A09-08,CASoN-2010-0339

### Multi-objective Hybrid Differential Evolution Algorithm Based on Pareto Pptimal

**Solution Migration** 

Xiao-Zhen Wang, Peng Li, and Guo-Yan Yu

Guangdong Ocean University, China

### A09-09,CASoN-2010-0573

# Generalized Predictive Control of Nonlinear System Based on Mind Evolutionary Algorithm

Hong-ge Guo, Ke-Ming Xie, and Gang Xie

Taiyuan University of Technology, China

#### P02

### Poster Session (02)

P02-01, CASoN-2010-IS05-08

#### Cell Image Segmentation Based on An Improved Watershed Transformation

Shu Li, Lei Wu and Yang Sun

China Medical University, China

P02-02, CASoN-2010-IS12-02

# Iterative Methods of Common Fixed Points for Nonexpansive Mappings and Nonspreading Mappings

Le-Rong Ma and Xing-Hui Gao

Yanan University, China

P02-03, CASoN-2010-0309

#### The Innovative Design of an Outdoor Centrifugal Water Filter

Jing-Chen Xie

Chienkuo Technology University, China

P02-04, CASoN-2010-0405

### A New SDV Anonymous Proxy Signature Scheme

Xiang Wang

Zhengzhou Information Science and Technology Institude, China

P02-05, CASoN-2010-IS12-03

# Shrinking Projection Methods for Maximal Monotone Operators and Quasi-φ-nonexpansive Mappings

Xing-Hui Gao and Le-Rong Ma

Yanan University, China

P02-06, CASoN-2010-IS12-06

#### A Hybrid Harmony Search Algorithm for Numerical Optimization

Peng-Jun Zhao

Shangluo University, China

Applications in Smart Home

Session Chairs: Prof. Chun-Lin Lu, Kun Shan University, Taiwan

Prof. Kuo-Sheng Cheng, National Cheng Kung

University, Taiwan

B01-01, CASoN-2010-IS08-01

#### A Peer-to-Peer Home Service Infrastructure Based on OSGi Event Admin

Chung-Fan Liu and Chun-Lin Lu

Kun Shan University, Taiwan

B01-02, CASoN-2010-IS08-02

#### Analysis of the EM Field Distribution in Smart Home

Churng-Jou Tsai, Bo-Yuan Tsai, Jinn-Kwei Guo, Yu-Sheng Lin, and Yeong-Her Wang Kun Shan University, Taiwan

B01-03, CASoN-2010-IS08-03

#### Device Synchronization for the Light Control in ZigBee Networks

Jinn-Kwei Guo, Churng-Jou Tsai, Chun-Lin Lu and Chang-Fan Liu Kun Shan University, Taiwan

B01-04, CASoN-2010-IS08-04

#### A Web-based Light Electric Vehicle for Homecare Use – A Pilot Study

Kuo-Sheng Cheng, Deng-Chuan Cai, Tsorng-Juu Liang, Meng-Hui Hsu, Chun-Lin Lu, Ji-Jer Huang, and Dong-Her Shih

National Cheng Kung University, Taiwan

B01-05, CASoN-2010-IS08-05

#### Design of Interactive e-Care Dining Table for Smart kitchen

Ling-Erl Cheng, Chao-Hsiung Tseng, and Chun-Lin Lu Kun Shan University, Taiwan

B01-06, CASoN-2010-IS08-06

#### A Touch-Dim Network for the Dimming Control of Lighting System

Jyh-Ching Juang, Hung-Chi Wang, Chun-Lin Lu, Wen-Ming Chen, and Ching-Wen Hsu

National Cheng Kung University, Taiwan

Business Management Application and Fuzzy Logic

Session Chairs: Prof. Jui-Fang Chang, National Kaohsiung University of

Applied Sciences, Taiwan

Prof. Chun-Wei Lu, the International University of

Kagoshima, Japan

B02-01, CASoN-2010-IS13-01

Applying TOPSIS Method to Evaluate the Business Operation Performance of Vietnam Listing Securities Companies

Tien-Chin Wang, Jui-Fang Chang, Truong Ngoc Anh, Wan-Tseng Chang National Kaoshiung University of Applied Sciences, Taiwan

B02-02, CASoN-2010-IS13-02

Evaluation of Efficiency of Capital Sources Utilization and Company Performance of E-Life Mall in Kaohsiung City Based on Data Envelopment Analysis

Jung-Fang Chen, Pei-Yu Hsieh, and His-Wen Chen

National Kashsiung University of Applied Sciences, Taiwan

B02-03, CASoN-2010-IS13-03

Using Genetic Algorithms to Construct a Low-risk Fund Portfolio Based on the Taiwan 50 Index

Jui-Fang Chang, Tien Chin Wang, and Yuan-Tzu Min

National Kaohsiung University of Applied Sciences, Taiwan

B02-04, CASoN-2010-IS13-04

Foreign Direct Investments by Japanese Manufacturers in Vietnam-Domestic Management and Collaboration

Chun-Wei Lu and Zhong-Min Wen

The International University of Kagoshima, Japan

B02-05, CASoN-2010-0046

Static and Dynamic Approach of Social Roles Identification Using PISNA and Subgraphs Matching

Radosław Brendel and Henryk Krawczyk

Gdansk University of Technology, Poland

B02-06, CASoN-2010-0395

Algorithm of Fuzzy PID Parameters Self tuning and its realization in PLC System

### Hong-Bing Liu

University of Science & Technology of Taiyuan, China

B02-07,CASoN-2010-0409

# A Linear Interpolation Fuzzy Controller with NN Compensator for an Electro-hydraulic Servo System

Yan-Hong Bai, Zhi-Yi Sun, Long Quan, and Shao-Juan Yu Taiyuan University of Science and Technology, China

B02-08,CASoN-2010-0634

# Fuzzy Interpolative Reasoning Based on the Footprints of Uncertainty of Interval Type-2 Fuzzy Sets

Shyi-Ming Chen and Yu-Chuan Chang National Taiwan University of Science and Technology, Taiwan

Application of Intelligent Computation & Neural Networks and Connectionist Models

Session Chairs: Prof. Wan-liang Wang, Zhejiang University of

Technology, China

Prof. Jing Jie, Zhejiang University of Technology, China

B03-01, CASoN-2010-IS15-02

#### A Hybrid Discrete Particle Swarm Optimization for Job Shop Scheduling

Wan-Liang Wang, Jing Zhang, Xin-Li Xu, Jing Jie, and Hai-Yan Wang Zhejiang University of Technology, China

B03-02, CASoN-2010-IS15-04

# A Coverage Enhancement Method of Directional Sensor Network Based on Genetic Algorithm for Occlusion-Free Surveillance

Yi-Bo Jiang, Jin-Wei Yang, Wei-Jie Chen, and Wan-Liang Wang Zhejiang University of Technology, China

B03-03, CASoN-2010-IS15-05

### PFL: Proactive Fuzzy-logic-based AQM Algorithm for Best-effort Networks

Wei-Jie Chen, Wan-Liang Wang, Yi-Bo Jiang, Gui-Sen Li, and Qing-Li Chen Zhejiang University of Technology, China

B03-04, CASoN-2010-IS15-06

### An Improved Cultural Particle Swarm Optimization Algorithm Based on Feedback Mechanism for Economic Load Dispatch Problems

Yali Wu and Li-Qing Xu

Xi'an University of Technology, China

B03-05, CASoN-2010-IS15-07

#### A Bi-swarm Particle Swarm Optimization with Cooperative Co-evolution

Huan-Huan Ji, Jing Jie, Jun-Ji Li, and Ying Tan

Taiyuan University of Science and Technology, China

B03-06, CASoN-2010-0430

### A Speech Recognition System Based on Fuzzy Neural Network Optimized by Time Variant PSO

Ai-Ping Ning, Xue-Ying Zhang, and Hui Sun Taiyuan University of Technology, China

#### B03-07,CASoN-2010-0453

#### A Bi-direction Guard System Design of Car Based on GPS and GSM

Qingcai Huang, Donghong Li, and Qingyun Huang Taiyuan University of science and technology, China

#### B03-08,CASoN-2010-0585

#### Social Network Reduction Based on Stability

Milos Kudelka, Zdenek Horak, Snasel Vaclav, and Abraham Ajith VSB Technical University Ostrava, Czech Republic

#### B03-09,CASoN-2010-0600

#### Fuzzy Probability-based Landscape Prediction Model and Application

Jing Shen, Zhen-Shan Lin, and Liang He Nanjing Normal University, China

#### B03-10,CASoN-2010-0605

# Two-dimensional Exponential Discriminant Analysis and Its Application to Face Recognition

Li-Jun Yan and Jeng-Shyang Pan Harbin Institute of Technology, China

Wireless sensor network and Internet technique

Session Chairs: Prof. Liang Shurui, Beijing University of Posts and

Telecommunications, China

Prof. Mu-Ling Tian, Taiyuan University of Technology,

China

### B10-01, CASoN-2010-0034

#### The virtual Instrument based on labVIEW and Sound Card

Xian-Ling Zhao

Taiyuan University of Science and Technology, China

B10-02,CASoN-2010-0037

### Design of Interactive System on Internet of Laboratory Center

Mu-Ling Tian, Xiu-Mei Jia, and Pei-Xiong Wu

Taiyuan University of Technology, China

B10-03,CASoN-2010-0060

#### A Modified AES Algorithm for the Platform of Smartphone

Liang Shurui, Liu Jie, Zhang Ru, and Wang Cong

Beijing University of Posts and Telecommunications, China

The synergy between AI and Brain Science

Session Chairs: Prof. Prof. Jun-Jie Chen, Taiyuan University of

Technology, China

Dr. Lifang Wang, Taiyuan University of Science and

Technology

B04-01, CASoN-2010-IS16-01

#### Rule Restriction In Event Descriptive Unit Identify

Tao Guo, Jun-Jie Chen, and Hao Guo

Taiyuan University of Technology, China

B04-02, CASoN-2010-IS16-02

# The study on Functional Connectivity between Frontal Eye Field and Other Brain Cortex in Visual Processing

Xiang Jie and Jun-Jie Chen

Taiyuan University of Technology, China

B04-03, CASoN-2010-IS16-03

#### A Chinese Synonyms Reduced Algorithm Based on Sememe Tree

Li-Guo Duan, Jun-Jie Chen, Hai-Fang Li, and Ai-Ping Li

Taiyuan University of Technology, China

B04-04, CASoN-2010-IS16-05

#### Rules Extraction from Neural Network Based on Immune Programming Algorithm

Ke-You Hu, Ling-Yan Liu, and Hai-Fang Li

Taiyuan University of Technology, China

B04-05, CASoN-2010-IS16-06

#### A Semi-Supervised Spectral Clustering Algorithm Based on Rough Sets

Hui-Qing Wang and Jun-Jie Chen

Taiyuan University of Technology, China

B04-06, CASoN-2010-IS16-08

#### A Proposal for an Abstract Model Building Using Inductive Logic Programming

Zhi Li, Xue-Li Yu, Zeng-Rong Liu, and Kun Hu

Taiyuan University of Technology, China

B04-07, CASoN-2010-IS16-09

Real-world Audititory Perception Based on Auditory Feature Binding

Guang-Ping Zhuo and Xue-Li Yu Taiyuan University of Technology, China

Image processing/Pattern recognition (1)

Session Chairs: Prof. Qichuan Tian, Taiyuan University of Science and Technology, China

Prof. Yi-Ying Li, Xidian University, China

B05-01, CASoN-2010-IS17-01

### Directional Two-Dimensional Neighborhood Preserving Projection for Face Recognition

Yi-Ying Li, Qi-Chuan Tian, Quan-Xue Gao, and Jing Xu Xidian University, China

B05-02, CASoN-2010-IS17-02

## Directional Multimode Subspace Analysis with Tensor Representation-Discriminant Feature Extraction

Quan-Xue Gao, Jun Hou, Xiu-Juan Hao, and Yi-Ying Li Xidian University, China

B05-03, CASoN-2010-IS17-03

#### Palmprint Classification Algorithm Based on Wavelet Multi-scale Analysis

Qi-Chuan Tian, Zi-Liang Li, Xu-Hui Sun, Rui-Shan Zong, and Min Wang Taiyuan University of Science and Technology, China

B05-04, CASoN-2010-IS17-04

# An Intelligent Fusion Method of Sequential Images Based on Improved DSmT for Target Recognition

Zhuang Miao, Yong-Mei Cheng, Quan Pan, Jun Hou, and Zhun-Ga Liu Northwestern Polytechnical University, China

B05-05, CASoN-2010-IS17-05

#### Directional Principal Component Analysis for Image Matrix

Quan-Xue Gao, Yi-Ying Li, Ya-Min Liu, and Hai-Jun Zhang Xidian University, China

B05-06, CASoN-2010-IS17-06

### Compressive Sensing for DCT Image

Hui-Hui Bai, An-HongWang, Meng-Meng Zhang Beijing Jiaotong University, China

B05-07, CASoN-2010-IS17-07

### Distributed Video Coding Based on Conditional Entropy Hash

Zhi-Hong Li, An-Hong Wang, and Hai-Fang Wang Taiyuan University of Science and Technology, China

Image processing/Pattern recognition (2)

Session Chairs: Prof. Yao-Hong Qu, Northwestern Polytechnical

University, China

Prof. Renwang Song, Tai Yuan University of Science

and Technology, China

B06-01, CASoN-2010-IS17-08

# A Data Processing Method of Silicon Micro Structural Sensors Based on H∞ Filtering Technology

Yao-Hong Qu and Qi-Chuan Tian

Northwestern Polytechnical University, China

B06-02, CASoN-2010-IS17-10

#### Multi-UAV Cooperative Positioning Based on Delaunay Triangulation

Yao-Hong Qu and Qi-Chuan Tian

Northwestern Polytechnical University, China

B06-03,CASoN-2010-IS17-11

# A Study about Fuzzy Control Algorithm Base on Neural Networks Forecast Model in Active Vibration Isolation Control System

Ren-Wang Song and Lin-Ying Chen

Tai Yuan University of Science and Technology, China

B06-04, CASoN-2010-IS17-12

### Faraday Cup Measurement for Beam Current in Ion Thruster

Lin-Ying Chen, Ren-Wang Song, and Hao-Cheng Jiang

Tai Yuan University of Science and Technology, China

B06-05, CASoN-2010-IS17-13

#### A PMSM Sliding-mode Control System Based-on Exponential Reaching Law

Shu-Zhen Zhang and Xiao-li Ma

Taiyuan University of Science and Technology, China

#### P03

### Poster Session (03)

P03-01, CASoN-2010-IS12-08

### A Snake Model Based on Improved Internal Energy

Hui Zhang, Yue-Ning Wu, and Huai-Ping Yan Xianyang Normal University, China

P03-02, CASoN-2010-IS15-01

#### A Novel Hybrid Algorithm Based On Baldwinian Learning and PSO

Wan-Liang Wang, Li-Li Chen, Jing Jie, Hai-Yan Wang, Xin-Li Xu Zhejiang University of Technology, China

P03-03, CASoN-2010-0322

### A Wireless Ad Hoc Overlay Networks Indexing Mechanism Based on Petri Nets Theory

Zhang Li and Zhang Yang Henan Polytechnic University, Jiaozuo China

P03-04, CASoN-2010-0446

#### G-LMBPNN: A New Fashion Color Prediction Model

Ye-Zhe Wu, Li Sun, and Jia-Jin Le Donghua University, China

P03-05, CASoN-2010-IS15-03

#### An Improved Real Coded Quantum Genetic Algorithm and Its Applications

Xin-Li Xu, Jia-Ying Jiang, Jing Jie, Hai-Yan Wang, and Wan-Liang Wang Zhejiang University of Technology, China

P03-06, CASoN-2010-IS18-02

Social Network Analysis of University Online Forum

Hui-Qing Niu

North University of China, China

Knowledge Management & Technical Innovation and network based system design (1)

Session Chairs: Prof. Hong Chen, North University of China, China Prof. Ai-Qin Zhang, Beijing Institute of Technology, China

B07-01, CASoN-2010-IS18-01

Applied Research on the Integration of Innovative Approaches and

Decision-making Method Based on Engineering Technical Innovation Process

Ai-Qin Zhang, Guang-Ming Hou, Zhao-Hua Wang

Beijing Institute of Technology, China

B07-02, CASoN-2010-IS18-03

Research on the Relationships between Knowledge Potential Difference and Knowledge Transfer Based on the Knowledge Network of Enterprise, University and Research Institute

Yan-Hua Li and Hong Chen North University of China, China

B07-03, CASoN-2010-IS18-04

Organization Construction of the Knowledge Innovation Network involving Industry-Academia-Research

Xiang-Mei Zhu and Hong Chen North University of China, China

B07-04, CASoN-2010-0517

Remote Monitoring System for Gas-combustion Generator Units Based on PowerBuilder

Mu-Qin Tian and Mu-Ling Tian Taiyuan University of Technology, China

B07-05, CASoN-2010-0530

Computer Network System for Electrics and Electronics and Examination

Hui-Ying Chen and Mu-Qin Tian,

Taiyuan University of Technology, China

B07-06, CASoN-2010-0563

Close-loop Space Vector Control Scheme for Induction Motor Based on DSP Zeying Zhi, Rucheng Han, and Long Zuo

Taiyuan University of Science and Technology, China

B07-07, CASoN-2010-0592

### Fuzzy PID-type Iterative Learning Control for Electro-hydraulic Servo System

Shao-Juan Yu, Xu Ding, Lin Li, Feng Pan, Shi-Bo Xiong, and Yan-Hong Bai Taiyuan University of Science and Technology, China

B07-08, CASoN-2010-0608

# The Application of the Optimum of MDOD in Structure Design of Double Reels for Wrapped Hoist

Min-Jie Jin, Hua-Wei Li, Yan-Hua Xiong, and Jie Gao Taiyuan University of Science and Technology, China

B07-09, CASoN-2010-0642

#### Communication in BAS Network System in Subway Station

Zhi-Xin Chen, Jia Wang, Chang-Gen Zhou, and Xiao-Hui Wang Beijing University of Civil Engineering and Architecture, China

B07-10, CASoN-2010-0650

### Design of a Nonlinear Power System Stabilizer

Jin-Ling Yang, Ru-Cheng Han, Shao-Juan Yu, and Ying-Jun Zhang Taiyuan University of Science and Technology, China

Neural Networks and Connectionist Models

Session Chairs: Prof. Xiao-Long Feng, China University of Mining and Technology, China

Prof. Mei Song, Shanghai Jiaotong University, China

B08-01,CASoN-2010-0040

#### Study on Preview Control Theory for Trajectory Tracking Control

Xiao-Feng Liu, Mu-Qin Tian, Yong-Wei Lv, and Shu-Hua Wang Taiyuan University of Technology, China

B08-02, CASoN-2010-0125

### Wireless Mobile Monitoring System for Tram Rail Transport in Underground Coal Mine Based on WMN

Xiao-Long Feng, Jian-Sheng Qian, Zhen-Zhen Sun, and Xing Wang China University of Mining and Technology, China

B08-03,CASoN-2010-0202

#### Efficient Packet Video Delivery over Heterogeneous Networks

Hai-Dong Wang and Fan Zhao

Taiyuan University of Science and Technology, China

B08-04, CASoN-2010-0245

#### Construction and Adoption of Net-enabled Credit Analysis Supporting System

(NCASS) Using Social Information Networks

Mei Song, Yao-Wen Xue, Pang-Zhu Zhang, and Hai-Ying Yuan

Shanghai Jiaotong University, China

B08-05, CASoN-2010-0289

#### Power Reduction of Wireless Sensor Networks Using Ant Colony Optimization

Hong-Chi Shih, Shu-Chuan Chu, Mao-Hsiung Hung, John F. Roddick, and Jeng-Shyang Pan

National Kaohsiung University of Applied Sciences, Taiwan

Neural Networks and Connectionist Models & Network based System Design

Session Chairs: Prof. Guo-Jun Liu, Peking University, China Prof. Tian-Wu Liu, University of Science and Technology Beijing, China

B09-01, CASoN-2010-0336

### Research on Predictive Functional Control in Flatness Feedback Control System of Hot Tandem Rolling

Tian-Wu Liu, Quan Yang, An-Rui He, Xiao-Zhong Du, Wen-Quan Sun, Xiao-Chen Wang, and Yun Zhang

University of Science and Technology Beijing, China

B09-02, CASoN-2010-0382

#### A Two-Degree-of-Freedom IMC Parameters Online Intelligent Tuning Method

Gao-Hua Chen, Jing-Gang Zhang, and Zhi-Cheng Zhao Taiyuan University of Science & Technology, China

B09-03, CASoN-2010-0386

#### Large-Scale Social Network Analysis Based on MapReduce

Guo-Jun Liu, Ming Zhang, and Fei Yan Peking University, China

B09-04, CASoN-2010-0166

# Application of Improved Empirical Mode Decomposition Based on Grey Prediction in Gear Transmission System

Tie-Mei Yang

Taiyuan university of science and technology, China

B09-05, CASoN-2010-0172

# Design of Wireless Sensor Networks Node applied to Acquisition and Transmission of Vibration Signals

Xiao-Yan Xiong, Zhao Wang, Bing Wu, and Dong-Bing Chen Taiyuan University of Technology, China

B09-06, CASoN-2010-0182

#### The Numerical Analysis and Tests of the Special Structures

Li-Ping Yang and Ying Wu

Taiyuan University of Technology, China

B09-07, CASoN-2010-0186

# Simulation of Supply Chain Network Based on Discrete-continuous Combined Modeling

Wen-Li Wang and Yao-Wen Xue Shanghai Jiaotong University, China

B09-08,CASoN-2010-0359

### Fault Diagnosis of Rolling Bearing Based on Wavelet Packet and Fourier Analysis

Yu-Feng Yin, Jian-Wei Yang, Guo-Qiang Cai, and De-Chen Yao Taiyuan University of Science and Technology, China

B09-09, CASoN-2010-0458

### Direct Torque Control of Brushless Direct Current Motor based on Position Detect Algorithm of Counter Electromotive Force

Feng Pan, Guang-Wei Li, Ru-Cheng Han, Ze-Ying Zhi, and Shao-Juan Yu Taiyuan University of Science and Technology, China

B09-10,CASoN-2010-0469

### A GPC Control Method and Stability Analysis of the NCS

Zhi-Yi Sun, Hong Li, and Feng Pan

Taiyuan University of Science and Technology, China

#### P<sub>0</sub>4

### Poster Session (04)

P04-01, CASoN-2010-IS12-01

#### A Prediction-Correction Method for Monotone Inverse Variational Inequalities

Zheng-Sheng Ding and Chao-Feng Shi

Xidian University, China

P04-02, CASoN-2010-IS17-09

#### Particle Swarm Optimization Programming

Xiao-Jun Wu, Ming Zhao, and Yao-Hong Qu Polytechnical University, China

P04-03, CASoN-2010-0588

### Language Identification Using Wavelet Transform and Artificial Neural Network

Shawki A. Al-Dubaee, Nesar Ahmad, Jan Martinovič, and Václav Snášel Aligarh Muslim University, India

P04-04, CASoN-2010-0620

#### Development of Parametric Drawing Program Based On AutoCAD VBA

Ruo-Hui Wang

Shanxi University, China

P04-05, CASoN-2010-0052

#### On-line Batch Process Monitoring Using SVM-Based MPLS

Zhi-Feng Wang

Shanghai Second Polytechnic University, China

P04-06, CASoN-2010-0083

#### A Design of Awakening Strategy for Wireless Sensor Network

Chun-Bo Chang, Xiao-Song Li, and Xiao-Fang Li

Taiyuan University of Science and Technology, China