2010 International Conference on

Robotic Welding, Intelligence and Automation

(RWIA'2010)

&

The 8th Chinese Conference on

Robotic Welding (CCRW'2010)

CONFERENCE PROGRAM

October 14-16, 2010

Shanghai，China

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1. Introduction

With the development of advanced manufacturing technology, robotic welding and intelligentized welding technologies have attracted a significant attention. Nearly half of the industrial robots in the world are used in welding manufacturing at present, however, the current teaching play-back robot cannot meet the requirements of the development of advanced manufacturing and high quality welding products due to the uncertainty in assembled error of the work-piece, welding condition changes, complexity of welding dynamics, welding distortion and etc. Therefore, it is necessary and exigent to develop some intelligentized technologies for robotic welding, welding robot systems and relevant fields.

In this background, the 2010 International Conference on Robotic Welding, Intelligent and Automation (RWIA'2010) and the 8th Chinese Conference on Robotic Welding (CCRW'2010) are organized by Shanghai Jiao Tong University. RWIA'2010 will be held in Shanghai, China, Oct. 14-16, which also is a serial conferences on Robotic Welding, Intelligent and Automation (RWIA) in each quadrennium, i.e. RWIA'2010 is the third conference of RWIA, and the first and second conference, RWIA'2002 and RWIA'2006 respectively, also held in Shanghai, China. RWIA'2010 will serve as an international forum for researchers and technicians interested in the field of robotics and advanced manufacturing, especially in automatic and intelligentized welding.

RWIA'2010 has received a wide attention and support from scientists, engineers and technicians in automatic and robotic welding field all over the world. The Organizations of RWIA'2010 and CCRW'2010 would warmly welcome and sincerely appreciate the presence of all the scholars and representatives from all over the world..

2. Conference Organizations (name sorted alphabetically)

Organizers:

- Shanghai Jiao Tong University

Sponsors:

- Robotics and Automation Committee of CWS
- Automobile Committee of CWA
- Matel Structure (former Constr. .Mach . & Equ.) Committee of CWA
- Production & Application Committee of CWS
- Pressure Welding Committee of CWS
- Chinese Welding Society(CWS)
- **Co-**Organisors:
- Committee of National Natural Science Foundation of China
- Chinese Mechanical Engineering Society (CMES)
- Chinese Welding Association (CWA)
- Shanghai Welding Society (SWS)
- Shanghai Welding Association (SWA)
- Beijing Institute of Petrochemical Technology (BIPT)
- Shanghai Key Laboratory of MLMM

Co-Sponsors:

- KUKA Automation Equipment (Shanghai) Co.,Ltd; KUKA flexible Manuf. Syst. (Shanghai),Co., Ltd
- Shougang Motoman Robot Co., Ltd.
- ABB (Shanghai) Co., Ltd.

- Tangshan Panasonic Welding Systems Co., Ltd.
- Kemppi, Trading(Beijing) Company Ltd.

Honorary Chairs:

J. L. Pan China
Zhong-qin LIN China

Honorary Advisors:

He-gao CAI China
Chun-bo FENG China
Shang-yang LIN China
Ji-luan PAN China
Jian-sheng PAN China
Tian-ran WANG China
Bin-shi XU China
Shu-zi YANG China
Bo ZHANG China

General Chairs:

Tzyh Jong TARN USA
Lin WU China

Steering Committee:

Chair:
Tian-hu SONG China
Co-Chairs:
Ping SHAN China
Yi-xiong WU China
Members:
Qiang CHEN China
Jian-hong CHEN China
Ji-cai FENG China
Qiang HUANG China
Bao-cheng LIU China
Ming LI China
Min TAN China
Guo-biao WANG China
Tian-miao WANG China
Yu-geng XI China
Yan-min ZHANG China
Xi-hua ZHAO China

Int. Adv. Committee:

Chair:
Tzyh Jong TARN (Professor, USA)
Co-Chairs:
Ren. C. LUO (Professor, TW)
Toshio FUKUDA (Professor, JP)
Members:
A.B. Rad (SFU，CAN)
Peter Gmeiner (KUKA，GEM)
Bruce MADIGAN(USA)
Chang-jiu ZHOU (SP，SG)
Chris SMALLBONE (AUS)
Chun-yuan GU (ABB,SW)
Don HONG (MTU，USA)
D. T. Pham（UK）
Feng LIN (WSU,USA)
Francisco SANDOVAL(UMA,SP)
George CHRYSSOLOURIS (UP,GR)
Gamini DISSANAYAKE (UTS, AUS)
George E. COOK (USA)
GU Fang (UWS，AUS)
Hara Masaaki，（YASKAWA，JP）
Hee-Seok Chang (MJU,KR)
Huijun Li（UW，AUS）
Hui Zhang (ABB, SW)
Ingo FRISCHKORN (GEM)
Jyrki LATOKARTANO (TUT, FL)
Kai CHENG (LMU,UK)
Ming-jun ZHANG (UT，USA)
MURAKAMI KISAKU（Panasonic,JP）
Ngai M. KWOK (UNSW, AUS)
Oscar CASTILLO (Mexico)
Peter SEYFFARTHY (UR，GEM)
Ren C. LUO (NTU,TW)
Suck-Joo Na （KAIST,KR）
Shigeru NAKAYAMA (KHI，JP)
Toshio FUKUDA (NU,JP)
Tzyh Jong TARN (WU in SL，USA)
Ulrich Hoepfel，（KEMPPI）
Wen-jian CAI (NTU, SG)
Wei ZHOU (NTU，SG)
Xiao-qi CHEN (UC, NL)
Yoshinori HIRATA (OU,JP)
Yeng-chai SOH (NTU，SG)
Yu-ming ZHANG (UK，USA)
Zhili Feng （USA）
（to be continued）

Organization Committee:

Chair:

Tian-miao WANG China

Co-Chairs:

Zhi-fu WANG China

Jin-ning DONG China

Xian-zheng LI China

Members:

L. Cao, J. Cheng, S.C. Chen, Y. Cui, J.S. Dai, H. Du, X.P.Gong, X.M.Huang, G.R.Ji, X.Z. Li, Y.J. Li, E.B. Liu, Y. Lin, F. Liu, G.S. Liu, R. Liu, S.S. Lu, J. Ma, Q.G Pan, Z. Qin, D.K. Qu, Y. Tang, D.M. Wang, M. Wang, W. Wang, Z.F. Wang, S. Wang, M.H. Wu, B. Xiao, D. Xu, L. Xue, F.G. Yang, H.X. Yang, Y. Yang, L. You, Z. You, K.G. Zeng，P. Zhang，X.F. Zhang，Y.Q. Zheng，P.C. Zhu，X.F. Zhu，Z.Y. Zhu，T. Zou

（To be continued）

Program Committee:

Chair:

Shan-Ben Chen China

Co-Chairs:

Ding FAN China

Xiang-dong JIAO China

Min WANG[2] China

Members:

S.B. Chen, W.D. Chen, X.Z. Chen, X.L. Ding, D. Fan, H.M. Gao, L.J. Guo, Z.Q. Guo, Y. Huang, S.S. Hu, Z.G. Hou, X.D. Jiao, J.L. Li, J.Q. Li, L.P. Li, W. Li, W.H. Li, T. Lin, J.C. Liu, G.H. Ma, Z.X.Pan, B.J. Qi, Y. Shi, F.H. Shi, J.X. Xue, M. Wang[2], J.J. Wang, Y.S. Wang, L.H. Yan, X.Q. Yang, E.P. Zhang, H. Zhang, G.J. Zhang, Y. Zhang, W.Y. Zhang, W.Zeng Zhang, W.Zhi ZHhang，D.B. Zhao，Y.Z. Zhao，L. Zhou

Secretariat:

General Secretary:

Lin-shu WANG China

Vice-General Secretaries:

Tao LIN China

Feng XU China

3. Conference Procedure

General Information:

Oct. 13: 8:00-20:00: Registration in the hall of Shanghai Qing-Qing Hotel

20:00: The meeting of Steering Committee, Organization Committee and Program Committee of RWIA'2010

Oct. 14: 8：30- 12：00：Plenary Report

12:00 Lunch

13:30-17:00： Plenary Report

18:00: Banquet

19:30: Cruise the amusement park of the Qing-Qing Hotel

Oct. 15: 8：30- 12：00 ：Plenary Report

12:00 Lunch

13:30-17:00：Technical Sessions

18:00: Banquet

20:00: Specialized committee meeting and excellent paper recommendation

Oct. 16: 7:30-17:00: Visiting the EXPO

18:00: Supper

Oct. 17:

Tour of ancient township – Nan Xun(modifiable). Only free for RWIA'2010.

18:00: Supper

Oct. 18:

End of the meeting.

Daily Schedule

Breakfase time: 7:00-8:00 place:Shanghai Qing-Qing Hotel
Lunch time: 12:00-13:00 place:Shanghai Qing-Qing Hotel
Supper time:18:00-19:30 place: Shanghai Qing-Qing Hotel

Conference Bus:

Oct. 14 and Oct 15:

7:00 a.m.:

From:The building A of SMSE*, Minhang campus of Jiao Tong University,

To: Shanghai Qing-Qing Hotel

17:10 p.m.:

From:Shanghai Qing-Qing Hotel

To:The building A of SMSE, Minhang campus of Jiao Tong University,

Conference Secretariat:

Dr. Tao Lin or Ms. Ding Mingyan, Ms. Lv Na
Jiao Tong University: Tel: +86-021-34202740-803 Fax: +86-021-34202740
Shanghai Qing-Qing Hotel: Tel: +86-021-85589070 Fax: +86-021-85589070

Conference Venue:

Shanghai Qing-Qing Hotel located on 388 Chenhua Road in Sungjiang district, close to the Shanghai Sheshan national tourist resort and the Shanghai-Hangzhou freeway. The transportation is so convenient. Please see the map below.

Tel: +86-021-85589070 Fax: +86-021-85589070

Traffics:

1) **Shanghai Pudong International Airport à Shanghai Qing-Qing Hotel**
   Airport Line 7 (Shanghai Pudong International Airport Station à Shanghai South Railway Station),and then transfer to Metro Line 3(Shanghai South Railway Station à Yi Shan Road Station), and then transfer to Metro Line 9(Yi Shan Road. Station à Song Jiang college town Station),then transfer to Bus Song Xin b (Mei Jiabing Road-Lu Jiasong Road Station à Chen Hua Road)(or you can take a taxi which only cost your $12,7minutes,4.1kilometres)
2) **Hongqiao Airport à Shanghai Qing Qing Hotel**
   Take taxi($25)(Hongqian Airport Station à Metro Line 9--Xing Zhong Road. Station), and then transfer to Metro Line 9(Xing Zhong Road Station à Song Jiang college town Station) then transfer to Bus Song Xin b (Mei Jiabing Road-Lu Jiasong Road Station à Chen Hua Road) (or you can take a taxi which only cost your $12,7minutes,4.1kilometres)
3) **Shanghai Railway Station à Shanghai Qing-Qing Hotel**

Metro Line 3(Shanghai Railway Station à Yi Shan Road Station), and then

：SMSE: School of Materials Sciences and Engineering

a) transfer to Metro Line 9(Yi Shan Road. Station à Song Jiang college town Station),then transfer to Bus Song Xin b (Mei Jiabing Road-Lu Jiasong Road Station à Chen Hua Road)(or you can take a taxi which only cost your $12,7minutes,4.1kilometres)

4) Shanghai Qing-Qing Hotel à EXPO

a) Bus Song Xin b(Shanghai Qing-Qing Hotel à Song Jiang college town Station),and then transfer to Metro Line 9(Song Jiang college town Station à Ma Dang Road),and then transfer to Metro Line 13(start at 09:00)

5) Jiao Tong University(Minghang Campus) à Shanghai Qing-Qing Hotel

a) Metro Line 5 (Shanghai Jiao Tong University à Xin Zhuang. Station), and then transfer to Bus Song Xin b (Mei Jiabing Road-Lu Jiasong Road Station à Chen Hua Road) (or you can take a taxi which only cost your $12,7minutes,4.1kilometres)

6) Jiao Tong University(Minhang Campus)[Conference Bus] à Shanghai Qing-Qing Hotel

Ps. The address of Shanghai Jiaotong University: Shanghai Minhang Dongchuan Road #800.

▽Arrive at Shanghai by airplane à Shanghai Jiaotong University

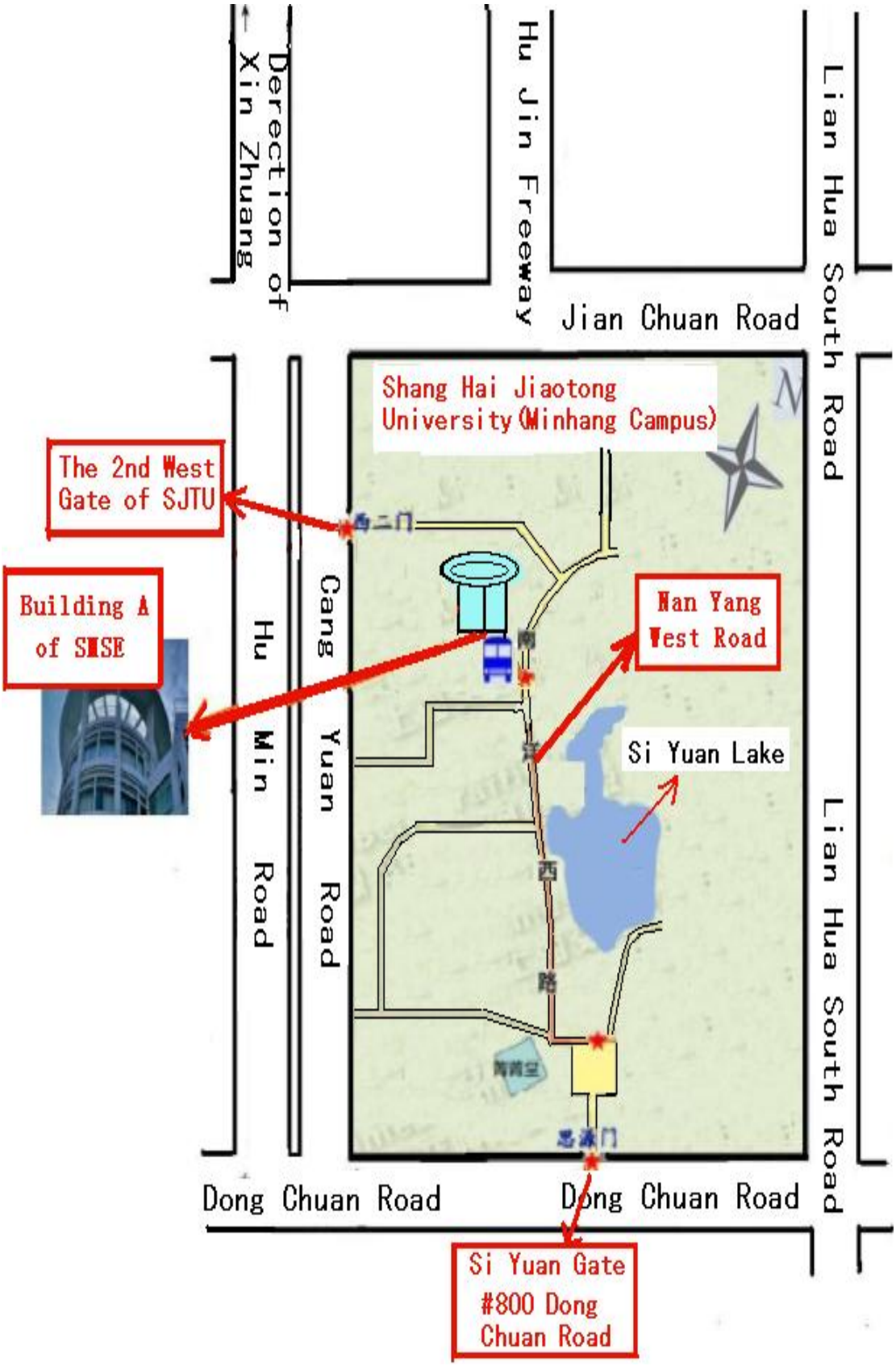
1) Pudong International Airport:Airport Line 3(Shanghai Pudong International Airport Station à South Wanping Road Station),and then transfer to Bus Xumin Line(Dong Chuan Road station),then you could get the South gate of Shanghai Jiaotong University.
2) Hongqiao International Airport:Bus No.806(Shanghai Hongqiao International Airport Station à Xu Jiahui Station) nd then transfer to Bus Xumin Line(Dong Chuan Road station),then you could get the South gate of Shanghai Jiaotong University.

▽Arrive at Shanghai by train à Shanghai Jiaotong University

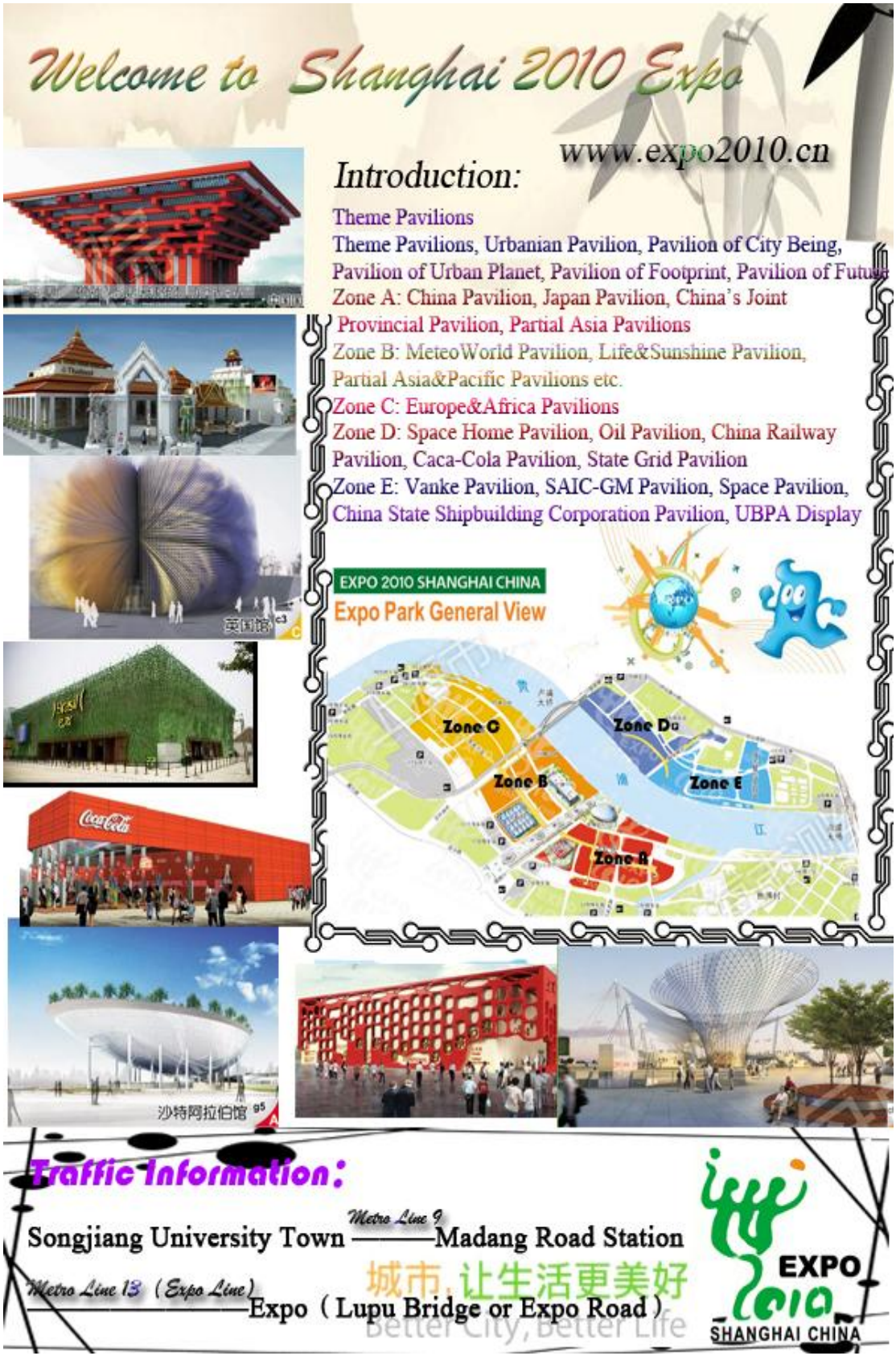
1) Shanghai Railway Station(South Railway Station):Metro Line 1(Shanghai Railway Station à Xin Zhuang Station),and then transfer to Metro Line 5 (Xin Zhuang station à Dong Chuan Road Station),then you could get the South gate of Shanghai Jiaotong University.
2) Shanghai Railway Station(South Railway Station): Metro Line 1(Shanghai Railway Station à Xin Zhuang Station),and then transfer to Bus Min Xin Line. then you could get the South gate of Shanghai Jiaotong University.
3) Shanghai South Railway Station:Bus Line Shang Cang, then you could get the South gate of Shanghai Jiaotong University.

Location of Shanghai Qing-Qing Hotel

Traffic Guide to Minhang Campus of SJTU



The introduction of Shanghai EXPO



4. RWIA'2010&CCRW'2010 Schedule

Time		Content	Speaker	Subject	Presiders	Place
Oct 13	8:00-20:00	Registration			Tao Lin	Main Hall
	19:30	The meeting of Advisor Committee, Organization Committee and Program Committee			Shan-Ben CHEN	Council Chamber
Oct 14	8:30-9:10	Opening Ceremony	Tzyh Jong Tarn; Jiluan Pan; Tianhu Song; Ren C Luo; Lin Wu; Zhongqin Lin	Chairman, advisor guests and amphitryon's address	Lin-Shu, WANG, Xiao-Qi, CHEN	Main Hall
	9:10-9:40	Keynote Speaking	Tzyh Jong TARN, USA	Technology and Information Acquisition		Main Hall
Oct 14	9:40-10:10	Keynote Speaking	Ji-Luan PAN China	Advanced Welding Technology for Manufacturing Nuclear Reactor		
	10:10-10:30	Coffee Break				
	10：30-11:00	Keynote Speaking	Ren C. LUO, Taiwan	Sensory Information Fusion for Automated Robot Welding	Yu-Ming ZHANG; Ding, FAN,	Main Hall
	11:00-11:30	Keynote Speaking	Suck -Joo Na，Korea	Application and Research of Arc Welding Automation in Korea		
	11:30-12:00	Keynote Speaking	Yoshinori HIRATA，Japan	Research on Arc Physics Promoting Development of High Quality and High Productivity Welding Processes		
	12:00-13:30	Lunch Time				
	13:30-14:05	Technology Report	Peter Gmeiner，KUKA	Speed-Remote Laser Robotics	Xiangdong JIAO, Xinhua TANG	Main Hall
	14:05-14:40	Technology Report	Hara Masaaki，YASKAWA	Motoman advanced welding application robot		

	14:40-15:15	Technology Report	Patric Hed ABB	User-friendly Robotics Arcwelding Configuration & Programming platform		
	15:15-15:30	Coffee Break				
	15:30-16:05	Technology Report	Junji Fujiwara，PANASONIC	New Robot fused with welding power source Active TAWERS realising extra-low spattering	Su WANG, Zeng-Xi PAN,	Main Hall
Oct 14	16:05-16:40	Technology Report	Ulrich Hoepfel，KEMPPI	Wise Arc in Robotics Application		
	17:00--	Conference break	Visiting the garden of Qing-Qing Hotel			
	18:00	Banquet				
Oct 15	8：30-9:00	Keynote Speaking	Xiao-Qi. Chen New Zealand	Intelligent autonomous robotic systems and their applications for welding	Gu FANG, Hao LU	Main Hall
	9:00-9:30	Keynote Speaking	Yu-Ming Zhang USA	Advanced Sensing and Control of Welding Processes		
	9:30-10:00	Keynote Speaking	Zhou Chang-Jiu Singapore	Human-Humanoid Interaction		
	10:00-10:20	Coffee Break				
	10:20-10:50	Keynote Speaking	Zeng-Xi PAN Australia	Research of welding automation at University of Wollongong	Chang-Jiu ZHOU, Yan-Zheng ZHAO	Main Hall
	10:50-11:20	Keynote Speaking	Xiang-Dong JIAO China	Research and development of offshore welding robot in china		

	11:20-11:50	Keynote Speaking	Shan-Ben CHEN China	Research Evolution on Intelligentized Technologies for Arc Robotic Welding at SJTU		
	12:00	Lunch Time				
	13:30-17:00	Oral sessions	RWIA 2010	S1:Gu FANG, Wen Li S2:Zeng-Xi PAN, Konggeng Zeng	G-3	
			CCRW 2010	S1:Min WANG, Liang-Yu LI S2:Shengsun Hu, GuangJun Zhang	G-4	
	18:00	Banquet				
	20:00					
Oct.16	7:30-17:00	Visiting the EXPO				
	18:00	Supper				
Oct.17	7:30-17:00	Tour of ancient township – Xi-Tang (modifiable). Only free for RWIA'2010.				
	18:00	Supper				

5. RWIA'2010 Oral Session & Posters in English

5.1 The Oral Sessions

Oral Session-1 in English					
Time		**Speaker**	**Subject**	**Presiders**	**Place**
Oct.15	13:30-13:45	Zengxi Pan	Offline Programming for a Complex Welding System using DELMIA Automation	Gu FANG, Wen Li	Qing-qing Hotel first floor, Room G-3
	13:45-14:00	Wenzeng Zhang	A Fast GPI Line Detection Method for Robot Seam Tracking		
	14:00-14:15	Minghui Wu	The mechanism design of a wheeled climbing welding robot with passing obstacles capability		
	14:15-14:30	Huabin Chen	Seam tracking and dynamic process control for high precision arc welding		
	14:30-14:45	Zengwen Xiao	Research On a Triline Laser Vision Sensor for Seam Tracking in Welding		
	14:45-15:00	Hongtang CHEN	Optimal Digital Filtering for Tremor Suppression in Master-Slave Remote Robot Welding System		
	15:00-15:20	Coffee Break			

Oral Session-2 in English					
Oct.15	15:20-15:35	Gu Fang	Automatic Seam Detection and Path Planning in Robotic Weldin	Zengxi PAN, Konggeng Zeng	Qing-qing Hotel first floor, Room G-3
	15:35-15:50	Huajun Zhang	Robot path planning in multi-pass weaving welding for thick plate		
	16:05-16:20	Wenyi Wang	Rough set based intelligentized control for GTAW dynamical process		
	16:20-16:35	ZhenYe	Feature Selection of Arc Acoustic Signals Used for Penetration monitoring		
	16:35-16:50	Ziqiang Yin	Framework of the Intelligent Remanufacturing System Based on Robotic Arc Welding		
	16:50-17:10	Huanwei Yu,Shanben Chen	A Study of Arc Length Influence on Pulse GTAW of Aluminium Alloys by Mean of Plasma Spectrum Optical Analysis		
Conference break & Banquet					

5.2 The Poster Sessions

Poster Session-1 in English					
Time		**Authors**	**Subject**	**Organizer**	**Place**
Oct.14	8:30-12:00	Shanben Chen	Research Evolution on Intelligentized Technologies for Arc Robotic Welding at SJTU	Fanhuai SHI	Main Hall, Qing-qing Hotel
		Peter Seyffarth.	Image Processing for Automated Robotic Welding		
		Su Wang, Xingang Miao, Yuan Yang, Xingai Peng	Error Compensation and Calibration of Intersection Line Welding Robot Based on Wavelet Neural Network		
		Shan-Chun Wei, Meng Kong, Tao LIN, Shan-Ben Chen,	Autonomous Seam Acquisition and Tracking for Robotic Welding Based on Passive Vision		
		Bowen Li, Shengqi Tan, Wenzeng Zhang	A Fast GPI Line Detection Method for Robot Seam Tracking		
		Xinghua Tao, Hongwu Zhu, Lili Xu	Mechanism Design and Kinematics Modeling of Irregular Cross-section Pipeline Welding Robot		

		Huanming Chen, Yichen Meng, Xiaofeng Wang	Combined Planning between Welding Pose and Welding Parameters for Arc Welding Robot		
		ChenHuanming Meng Yichen Wang Xiaofeng	Combined Planning between Welding Pose and Welding Parameters for Arc Welding Robot		
		Huajun Zhang, Chunbo Cai, Guangjun Zhang, Daming Shen	Coordinated Motion of Different Weld Robots Based on User Coordinates		
		Hongbo WANG., G.H.MA etc.	The Research on Information Transmission of Welding Robot Based on Network		
		Chengdong Yang, Shanben Chen	Research States of Multi Agent Cooperation in Intelligentized Welding		
		Jiyong Zhong, Huabin Chen, Shanben Chen	Study on the Robotic Arc Welding of Five-Port Connector		
		Long Xue，Lili Xu，Yong Zou	A Method of Weld Tracking Regulation Based on Passive Vision		
		Laiping LI, Xueqin Yang, Fengyan Zhang, Hongbo Ma	Research on Surface Recover of Aluminum alloy PGTAW Pool Based on SFS		
		Wen Li,Guanghai Zheng,Bing Nie,Huimin Zhao,Ming Huang	A Construction Method of Rational Approximation Model for Fractional Calculus Operators in Frequency Domain		
		Xiumei LI, Wen LI, Yannan SUN, Guanghai ZHENG	Blind Source Separation of Vibration Signal of Electric Motor velocity modulation system		
Poster Session-2 in English					
Oct.14	13:30-17:00	Yanling Xu, XiangfengKong Shanben Chen	Mlti-purpose Vision Sensing System Optimal Design and Research on Welding Robot	Shan-Chun WEI	Main Hall, Qing-qing Hotel
		Xingang Miao,Su Wang, Xiaohui Li, Benting Wan	Research on Track Fitting of Big Frame Intersection Line Seam		

		Fanhuai Shi, Xixia Huang Ye Duan	A Hybrid Approach for Robust Corner Matching		
		G.H.Ma,J. Qin, F.R.Jiang,H.B. Wang	Depth Extraction by Simplified Binocular Vision		
		Xi-zhang Chen, Shan-ben Chen, Hou-lu Xue	Comparison of Calibration Methods for Image Center		
		Huabin Chen, Tao Lin, Shanben Chen	Seam Tracking and Dynamic Process Control for High Precision Arc Welding		
		Jifeng Wang，Houde Yu, Yaozhou Qian, Rongzun Yang	Arc Sound Recogniting Penetration State Using LPCC Features		
		Na Lv, Shanben Chen,	Investigation on Acoustic Signal for On-line Monitoring in Welding Process		
		Bo Chen, Shangben Chen	A Study on Application of Multi-sensor Information Fusion in Pulsed-GTAW		
		G.H.Ma	Research on Image Process and Tracing of Welding Robot		
		Zhijiang Wang, YuMing Zhang, Lin Wu	Predictive Control of Weld Penetration in Pulsed Gas Metal Arc Welding		
		Hongbo Ma,Shanben Chen	Study on the mixed logical dynamical modeling method of pulsed GTAW process for varied welding speed		
		Ding Fan, JiankangHuang, Lihui Lu, Yu Shi	Simulation of Decoupling Control of Pulsed MIG Welding for Aluminum Alloy		
		HuangJiankang, SHI Yu etc.	Modeling and decoupling control analysis for consumable DE-GMAW		
		Jianping Jia, Hongli Li	The Structure Design and Kinematics Simulation for Rotating Arc Sensor of TIG Welding Based on Pro/E 3D Design		
		Huimin Zhao, Mingyan Ding, Wu Deng, Xiumei Li, Wen Li	Knowledge Model Building about Motor Speed Regulation Fuzzy Control System		

		Bing Nie,Wen Li,Haibo Ma,Deguang Wang,Xu Liang	Research of Direct Discretization Method of Fractional Order Differentiator/integrator Based on Rational Function Approximation		

Poster Session-3 in English

Time		Authors	Subject	Organizer	Place
Oct.15	8:30-12:00	MingyanDing, HongboMa, Shanben Chen	Research on MPC Method in a GTAW Process Based MLD Modeling	Hua-Bin CHEN	Main Hall, Qing-qing Hotel
		ZhenyuXiong JieZhu,WenWan	Application of Fuzzy Edge Detection in Weld Seam Tracking System		
		Xiangdong Jiao，Hui Gao，Hongwei Zhan，Canfeng Zou，Jiaqing Chen，Yanqing Zhang	Influence of the Bar Shape on the Welding Quality of Friction Hydro Pillar Processing		
		Jifeng Wang, Houde Yu, Yaozhou Qian, Rongzun Yang	Interference Analysis of Infrared Temperature Measurement in Hybrid Welding		
		Zhengqiang Zhu, Yifu Zhang, Chun Zeng, Zhilin Xiong	Preliminary Investigation on Embedding FBG Fibre within AA6061 Matrices by Ultrasonic Welding		
		XU Jian-ning ZHANG Hua HU Rong-hua LI Yu-long	Thermal process analysis in welding prototyping of metal structures		
		Canfeng Zhou, Xiangdong Jiao, Long Xue, Jiaqing Chen, Xiaoming Fang	Study on Sub-sea Pipelines Hyperbaric Welding Repair under High Air Pressures		
		Lihui Lu, Ding Fan, Jiankang Huang, Jiawei Fan, Yu Shi	Wire Extension Control Based on Vision Sensing in Pulsed MIG Welding of Aluminum Alloy		
		D. Wang, N. M. Kwok, G. Fang and Q. P. Ha	Anytime Ant System for Manipulator Path Planning		
		Tao Zhang, S.B.Chen	Path planning and computer simulation of welding mobile robot		

		Xiaofei Gao, Minghui Wu, Z. Fu, Yanzheng Zhao and S.B. Chen	The Control System Design of Climbing Welding Robot Based on CAN Bus		
		Na Dong, Hai-chao Li, Hong-ming Gao, Lin Wu	An Implementation of Seamless Human Robot Interaction for Pipeline Welding Telerobotics		
		Bin Du,Jing Zhao,Yu Liu	Design and Experiment of a Novel Portable All-position Welding Robot		
		Xue-qin Lv, Rong-fu Qiu, Gang Liu, Yi-xiong Wu	The Power and Propulsion of Medical Microrobots		
		Z.Y.Chen,G.Z. Yan,Z.W.Wang, K.D.Wang	Mechanics Design and Analysis of an Articulated-Tracked Robot for Pipe Inspection		
		Rong-fu Qiu, Xue-qin Lv, Shu-guo Chen	A Survey on Artificial Intelligence Algorithm for Distribution Network Reconfiguration		

6. CCRW'2010 Session Reports in Chinese

(Qing-qing Hotel first floor, Room G-4; Please see the final Program Book in Chinese)

7. Contents of Chinese Proceedings in Special Issue of Journal of Shanghai Jiao Tong University

（Please see the final Program Book in Chinese）

8. Contents of English Proceeding Papers for the book published in Springer Verlag

Part Ⅰ:Intelligent Techniques for Robotic Welding

• Shanben Chen "Research Evolution on Intelligentized Technologies for Arc Robotic Welding at SJTU"

• Peter Seyffarth. "Image Processing for Automated Robotic Welding"

• Kevin Micallef, Gu Fang, and Mitchell Dinham "Automatic Seam Detection and Path Planning in Robotic Welding"

• Su Wang, Xingang Miao,Yuan Yang,Xingai Peng "Error Compensation and Calibration of Intersection Line Welding Robot Based on Wavelet Neural Network"

• Shan-Chun Wei, Meng Kong,Tao LIN, Shan-Ben Chen, "Autonomous Seam Acquisition

and Tracking for Robotic Welding Based on Passive Vision"

• Ziqiang Yin, Guangjun Zhang, Hongming Gao, Huihui Zhao, Lin Wu "Framework of Intelligent Remanufacturing System Based on Robotic Arc Welding"

• Bowen Li,Shengqi Tan,Wenzeng Zhang "A Fast GPI Line Detection Method for Robot Seam Tracking"

• Xinghua Tao, Hongwu Zhu, Lili Xu "Mechanism Design and Kinematics Modeling of Irregular Cross-section Pipeline Welding Robot"

• Huanming Chen, Yichen Meng, Xiaofeng Wang "Combined Planning between Welding Pose and Welding Parameters for Arc Welding Robot"

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