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**TWI CHINA CONFERENCE 2023:
ADVANCED MANUFACTURING TECHNOLOGIES
AND STRUCTURAL INTEGRITY**



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TWI CHINA CONFERENCE 2023: ADVANCED MANUFACTURING TECHNOLOGIES AND STRUCTURAL INTEGRITY



SPONSOR: TWI Ltd & The Welding Institute

CO-ORGANISER: Jiangsu Industrial Technology Research Institute (JITRI)

LOCATION: JITRI, No.7 Huafu Road Jiangbei New Area Nanjing, Jiangsu Province 210031 China

DATE: 8-9 NOVEMBER 2023

The TWI China Conference 2023 on Advanced Manufacturing Technologies and Structural Integrity, hosted by TWI and co-organised by Jiangsu Industrial Technology Research Institute (JITRI), will take place in Nanjing on 8-9 November 2023. The conference aims to explore the theme of 'Innovation and Manufacturing' by showcasing recent technology developments at TWI. Delegates will have the opportunity to learn about the latest advancements and practical experiences in various fields, including friction stir welding (FSW), arc additive manufacturing, digital simulation, surface engineering, lightweighting in the automotive industry, marine structural integrity assessment, and hydrogen testing. At the event, delegates will have direct discussions with TWI experts on the challenges and emerging trends related to new technologies, digitalisation, training, and certification in industrial applications. By facilitating technical exchanges and generating collaborative relationships with companies in China, TWI aspires to address key technical issues for the collective advancement of industry.

TWI is the world's foremost independent research and technology organization, focusing on material, joining technologies and structural integrity, with expertise in solving problems that occur during design, manufacturing and service stages of a product. Based in Cambridge, UK, since 1946, and with 14 centers and offices around the world, TWI brings

together internationally renowned technical consultants, scientists and engineers to ensure expert teams provide high-quality technical services with professional knowledge and industrial experience. Today, they provide support to more than 800 industrial members in around 4,500 production bases across more than 80 countries.

TWI Executives, along with a team of experts specialising in welding, additive manufacturing, materials and coatings, structural integrity, and professional training and certification, will be in attendance at the seminar. We consider this event as an excellent opportunity to enhance collaboration with Chinese industry.

TWI Presenters & Organisers

Tat-Hean Gan

Director, Membership, Innovation & Global Development

Heather Claxton

Associate Director, Research & Innovation Global Operations

John O'Brien

Certification Manager

Jonathan Martin

Section Manager, South Yorkshire Friction, Friction & Forge Processes

Sullivan Smith

Consultant, Laser Department

Shiladitya Paul

Research & Product Development Programme Manager, Surface, Corrosion & Interface Engineering

Xing Sun

Team Leader, Fatigue Integrity Management

Lei Xu

Principal Project Leader, Arc-Processes & Welding Engineering

Shanshan Sun

Business Manager, TWI Beijing Office

Jian Wu

Business Manager, TWI Beijing Office

Makhzan Mirza

Country Manager, China

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Non-members & Members



Day 1: 8 November 2023 | **Location:** Nanjing, China

09:00-09:10	Welcome & Introduction	(Presenter) Lei Xu	
09:10-09:20	Welcome by JITRI	Qing Liu (JITRI)	
09:20-09:50	Introduction to TWI: What is New at TWI (overview of recent technical developments)	Tat-Hean Gan	(Interpreter) Lei Xu
09:50-10:10	TWI Membership Services (Industrial & Professional)	Jian Wu	
10:10-10:30	Break & Group Photo		
10:30-11:00	Challenges & New Developments in Automotive Joining Technologies	Sullivan Smith	Lei Xu
11:00-11:30	Welding Automation & Additive Manufacturing	Lei Xu	
11:30-12:00	Developments in Surfacing Engineering	Shiladitya Paul	Lei Xu
12:00-13:00	Lunch		
13:00-13:30	75 Years Investigating Hydrogen Effects on Pipeline Steels & Weldments	Xing Sun	
13:30-14:00	Developments in Joining Processes	Jonathan Martin	Xing Sun
14:00-14:30	TWI Certification Support & Services	John O'Brien	Jian Wu
14:30-15:00	TWI Training & Examination Support to Companies in China	Makhzan Mirza	Shanshan Sun
14:30-15:00	Q&A	Shanshan Sun	
15:00-17:30	1-2-1 Meetings Room/Area 1 Room/Area 2	Heather Claxton	
18:30	Dinner (Non-members & Members)	Jian Wu	

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Members Only



Day 2: 9 November 2023 | **Location:** Nanjing, China

09:00-09:10	Welcome & Introduction	(Presenter) Lei Xu	
09:10-09:40	Latest Development in Friction Welding & Processing (Including FSW of Steel & Coreflow)	Jonathan Martin	(Interpreter) Xing Sun
09:40-10:10	A Vision of Direct Energy Deposition ARC Additive Manufacture as a Digital Manufacturing Technology of Tomorrow	Lei Xu	
10:10-10:40	Materials Challenges in Carbon Capture and Storage (CCS) Environments	Shiladitya Paul	Lei Xu
10:40-11:10	Break & Group Photo		
11:40-12:10	Joining Automotive Materials: Aluminium Alloys, High Strength Steels & Dissimilar Materials	Sullivan Smith	Lei Xu
14:00-14:30	JITRI Presentation	JITRI	
12:10-13:30	Lunch		
13:30-14:00	Fatigue & Fracture Integrity Assessment for Critical Engineering Components	Xing Sun	
14:00-14:30	Q&A	Shanshan Sun	
14:30-17:30	1-2-1 Meetings (Technical) Room/Area 1 Room/Area 2	Heather Claxton	