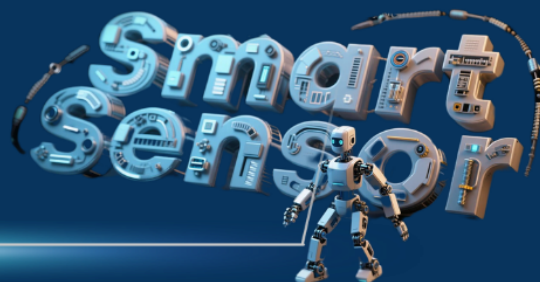


Smart Sensor Asia Robotics

2025.8.27-28

China · Shenzhen Kempinski Hotel



Forum Organizer

Tyche Emerge Exhibitions Ltd.
Guangdong Electronics and information industry Association

Timetable

Day 1

| | |
|-------------|--|
| 9:00-9:15 | Opening Ceremony |
| 9:20-10:00 | Welcome Speech by Leadership |
| 10:00-10:20 | Launch Ceremony of the Asian Smart Sensor Alliance |
| 10:20-10:40 | New Opportunities in Smart Sensor Industry Development Driven by Policy Guidance and Market Demand |
| 10:40-11:00 | Theoretical Innovations and Cutting-Edge Breakthroughs in Multi-Modal Joint Perception |
| 11:00-11:20 | Research progress on flexible sensors manufactured using 3D printing technology |
| 11:20-11:40 | Full-Body Perception Solutions for Humanoid Robot |
| 11:40-12:00 | Bio-Inspired Sensing vs. Traditional Sensing: Which Path is More Viable for Commercialization? |
| 12:00-13:00 | Coffee Break |

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13:00-13:20

RaaS Expansion: From Deterministic Industrial Tasks to Flexible Service Scenarios, Forming a "Technology-Scenario-Business" Closed Loop

13:20-13:40

Growth Potential Assessment of Smart Sensor Segments in the Humanoid Robot Boom

13:40-14:00

Global Market Share Forecast for 2025 (Optical vs. Magnetic vs. Capacitive Sensors)

14:00-14:20

Talent Mobility and Its Impact on Regional Industrial Development in the Smart Sensor Sector

14:20-14:40

Advances in MEMS-Based Miniature Displacement Sensors

14:40-15:00

When Robots "Run": The Limits and Breakthroughs in High-Dynamic Displacement Sensing

15:00-15:20

Fusion of Angle Sensors and IMUs for Optimized Posture Perception in Humanoid Robots

15:20-15:40

Integrated Navigation Technology for Humanoid Robots

15:40-16:00

Self-Calibration Techniques for Accelerometers to Ensure Long-Term Stability in Humanoid Robots

16:00-16:20

High-Resolution Vision Sensors: Precision Enhancement Strategies for Humanoid Robot Navigation in Complex Environments

16:20-16:40

Neuromorphic Vision Sensors: Merging Bio-Inspired Vision with Edge Computing

16:40-17:00

Sensor Fusion for Multi-Spectral/High Dynamic Range (HDR) Imaging

17:00-17:40

Panel Discussion: How Can Smart Sensing Break Through the "Perception Ceiling" of Robotic Autonomous Decision-Making?

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Day 2

9:00-9:20

Bio-Inspired Olfactory Sensors: Bio-Hybrid Sensors Based on Insect/Mammalian Olfactory Receptors

9:20-9:40

Trade-offs Between Power Consumption and Performance in Miniaturized Electronic Noses

9:40-10:00

Olfactory-Visual Multi-Modal Robots (e.g., Search-and-Rescue Robots for Fire Incidents)

10:00-10:20

Embedded Design for Multi-Modal Fusion (Odor + Temperature + Humidity)

10:20-10:40

Adaptive Filtering Technology for Noise Suppression in Humanoid Robot Auditory Sensors

10:40-11:00

Innovative Applications of Ultrasonic Auditory Sensors in Short-Range Detection and Obstacle Avoidance for Humanoid Robots

11:00-11:20

Fiber-Optic Acoustic Sensors: High-Precision Sound Pressure Measurement in Industrial Inspection

11:20-11:40

Torque Sensors: Technical Implementation for Joint Force Monitoring and Control in Humanoid Robots

11:40-13:00

Coffee Break

13:00-13:20

Repetitive Positioning Accuracy Optimization in Industrial Robots

13:20-13:40

Capacitive vs. Inductive vs. Photoelectric Sensors: Comparative Suitability for Different Industrial Scenarios

13:40-14:00

Anti-Interference and Reliability Enhancement: Algorithmic Compensation for Transparent/Reflective Object Detection

14:00-14:20

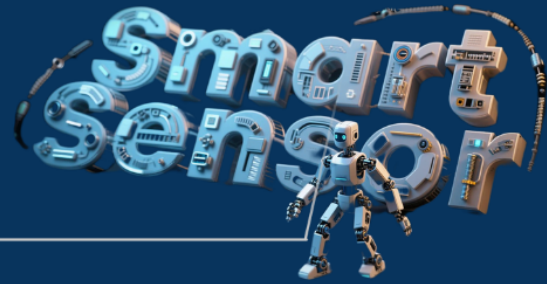
Proximity Threshold Setting for Collision Prevention in Collaborative Robots

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14:20-14:40

Optical Tactile Sensing: 3D Force Reconstruction Based on FBG Fibers and Microstructural Deformation

14:40-15:00

Large-Area Fabrication Processes for Stretchable Electronic Skin

15:00-15:20

Distributed Tactile Arrays vs. Localized High-Precision Sensing: The Optimal Approach for Humanoid Robots

15:20-15:40

Nanosensitive Materials: Adsorption Property Optimization in Graphene/MOFs

15:40-16:00

Ambient Energy Harvesting (Thermoelectric/RF Energy) Power Supply Systems

16:00-16:20

Low-Power and Self-Powered Technologies

16:20-17:00

Panel Discussion: The New Era of Human-Robot Collaboration—How Can Flexible Sensors Make Robots More "Understanding" of Humans?

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