Scopes: CyberC promotes the research areas covered by the following tracks:

Track 1: AI Computing

- Machine Learning, Deep Learning, Autonomy, and Intelligence
- Supervised, Unsupervised, and Reinforcement Learning
- Deep Learning Architectures (CNNs, RNNs, Transformers, GANs)
- Explainable AI (XAI) and Trustworthy AI
- Meta-Learning, Few-Shot Learning, and Self-Supervised Learning
- AI Fairness, Ethics, and Bias Mitigation
- Large Language Models (LLMs) and Multimodal AI
- Text Generation, Summarization, and Machine Translation
- Sentiment Analysis and Opinion Mining
- Conversational AI and Chatbots
- Information Retrieval and Knowledge Graphs
- AI/ML for Robotics & Autonomous Systems
- AI/ML Applications in Science & Industry
- AI/ML for Data analytics, social media, and web mining
- AI for Web computing, intelligent and knowledge based systems

Track 2: Cyber Communications

- Next-Generation Wireless Networks (5G, 6G, and Beyond)
- Massive MIMO, Beamforming, and Millimeter-Wave Technologies
- AI/ML for Wireless Communication and Network Optimization
- Terahertz (THz) Communication and Free-Space Optics
- Sensor, IoT Connectivity and Communication Protocols
- Edge, Fog Computing, and Cloud Computing
- Low-Power Wide-Area Networks (LPWAN) and Ultra-Reliable Low-Latency Communication (URLLC)
- AI-Enabled Software/Cognitive Radio Networks
- Vehicular, UAV, and Satellite Communications
- Wireless Sensing, Localization, and Positioning
- Green & Sustainable Wireless Networks
- Quantum communications, and network computing resources
- Quantum Computing
- Spectrum sensing, fusion, decision-making and allocation
- Signaling process, PHY/link layer protocols and optimization

Track 3: Computer Vision

- Image Classification, Object Detection, and Segmentation
- 3D Reconstruction and Scene Understanding
- Video Analysis and Action Recognition
- Image and Video Synthesis (GANs, Diffusion Models)
- Multimodal Learning and Vision-Language Models
- Transformer Models for Vision (ViTs, Swin, DINO)
- Self-Supervised and Few-Shot Learning for Vision
- Explainable AI (XAI) for Vision Applications
- Adversarial Robustness in Deep Vision Models
- AI in Medical Imaging and Radiology
- Image-Guided Surgery and Diagnostics
- Remote Sensing and Geospatial Vision Applications
- Vision for Autonomous Vehicles and UAVs
- SLAM (Simultaneous Localization and Mapping)
- Human-Robot Interaction and Assistive Vision
- AI for Image Enhancement and Super-Resolution

- Deepfake Detection and Synthetic Media Analysis
- Computational Imaging and Light Field Processing
- Augmented reality and virtual reality
- Multispectral, and hyperspectral imaging

Track 4: Security and Privacy

- Network and System Security
- AI-Powered Cyber Threat Detection & Response
- Malware Analysis and Intrusion Detection
- Zero-Trust Architecture and Adaptive Security
- Differential Privacy and Federated Learning
- Secure Multi-Party Computation and Homomorphic Encryption
- Blockchain and Decentralized Privacy Models
- Data Anonymization and De-Identification
- Cryptographic Protocols and Key Management
- Secure Cloud Computing and Storage
- Secure Authentication and Access Control
- Adversarial Machine Learning and AI Robustness
- AI for Cyber Threat Intelligence and Incident Response
- Deepfake and Synthetic Media Detection
- AI Governance, Ethics, and Fairness in Security
- Quantum Security and Cryptanalysis
- Privacy in Metaverse and Extended Reality (XR)
- Secure AI and Privacy-Preserving Generative Models