



# IEEE International Joint Conference on Biometrics



## Pocket Program



IEEE IJCB 2023  
Ljubljana, Slovenia  
25-28 September 2023

IEEE Biometrics Council  
IAPR

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### Wednesday, 27.9.2023

8:00 - 9:00	Registration
9:00 - 10:00	Keynote 2 - IAPR YBIA 2023 Award winner
10:00 - 10:30	IEEE Biometrics Council Meritorious Service Award recipient address
10:30 - 11:00	Coffee break
11:00 - 12:30	Oral session 3 - Face Generation, Attribute and Presentation Attack Detection
12:30 - 13:15	Special Session 2 - Advances in detecting manipulation attacks on biometric systems
13:15 - 14:30	Lunch
14:30 - 15:45	Oral session 4 - Multi-modal and Multi-Spectral Biometrics
15:45 - 17:00	Poster session 3 + Coffee break
17:00 - 18:00	Poster session 4 + Demos + Journal Presentations
19:00 - 23:00	Gala dinner at the Castle of Ljubljana

### Thursday, 28.9.2023

8:00 - 9:00	Registration
9:00 - 10:00	Keynote 3 - Manoj Aggarwal (Amazon One)
10:00 - 10:30	Coffee break
10:30 - 11:45	Oral session 5 - DeepFakes and Digital Forensics
11:45 - 12:30	Special Session 3 - Synthetic data in Biometrics
12:30 - 1:15	Special Session 4 - 3D Biometrics with Monocular Vision
13:15 - 14:30	Lunch
14:30 - 15:45	Oral session 6 - Privacy, Demographic Biases & Fairness
15:45 - 17:00	Poster session 5 + Coffee break
17:00 - 17:15	Closing Session

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- 8:45 – 9:00: IJCB 2023 Opening session**  
**9:00 – 10:00: What can machines read from human faces? Speaker: Gouying Zhao**  
**10:00 – 10:30: Coffee Break**  
**10:30 – 11:45: Orals 1 – Face, Iris and Fingerprint**
- Dual Dense Uncertainty Embedding for Iris Recognition
  - Sclera-TransFuse: Fusing Swin Transformer and CNN for Accurate Sclera Segmentation
  - COLFIPAD: A Presentation Attack Detection Benchmark for Contactless Fingerprint Recognition
  - MRA-GNN: Minutiae Relation-Aware Model over Graph Neural Network for Fingerprint Embedding
  - CoNAN: Conditional Neural Aggregation Network For Unconstrained Face Feature Fusion
- 11:45 – 12:30: Biometric recognition and identification at altitude and range**
- Human Body Model based ID using Shape and Pose Parameters
  - DOERS: Distant Observation Enhancement and Recognition System
  - ATDetect: Face Detection and Keypoint Extraction at Range and Altitude
  - Novel Body Biometric for Long-Range Recognition Under Extreme Conditions
- 12:30 – 14:00: Lunch**  
**14:00 – 15:15: Orals 2 – Gait, Gesture and Action Recognition**
- PointGait: Boosting End-to-End 3D Gait Recognition with Point Clouds via Spatiotemporal Modeling
  - GaitRef: Gait Recognition with Refined Sequential Skeletons
  - A Multi-Stage Adaptive Feature Fusion Neural Network for Multimodal Gait Recognition
  - BehaveFormer: A Framework with Spatio-Temporal Dual Attention Transformers for IMU-enhanced Keystroke Dynamics
  - GaitMorph: Transforming Gait by Optimally Transporting Discrete Codes
- 15:15 – 16:30: Posters 1: Main conference + Special session on Long-range Biometrics**
- Age-constrained Ear Recognition: The EICZA Dataset and SASE Baseline Model
  - GaitRef: Gait Recognition with Refined Sequential Skeletons
  - Lifespan Face Age Progression using 3D-Aware Generative Adversarial Networks
  - A Large-Scale Re-identification Analysis in Sporting Scenarios: the Betrayal of Reaching a Critical Point
  - Adaptive Adversarial Patch Attack on Face Recognition Models
  - BehaveFormer: A Framework with Spatio-Temporal Dual Attention Transformers for IMU-enhanced Keystroke Dynamics
  - Recognizing People by Body Shape Using Deep Networks of Images and Words
  - Enhancing 3D-Air Signature by Pen Tip Tail Trajectory Awareness: Dataset and Featuring by Novel Spatio-temporal CNN
  - GaitMorph: Transforming Gait by Optimally Transporting Discrete Codes
  - Template Recovery Attack on Homomorp. Encrypted Biometric Recognition Systems with Unprotected Threshold Comparison
  - KinfaceNet: A New Deep Transfer Learning based Kinship Feature Extraction Framework
  - iWarpGAN: Disentangling Identity and Style to Generate Synthetic Iris Images
  - Vocal Style Factorization for Effective Speaker Recognition in Affective Scenarios
  - Analysis of fNIRS as a Biometric Modality

TUESDAY, 26 SEPTEMBER

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### Monday, 25.9.2023

8:00 - 9:30	Registration
9:30 - 11:50	Tutorial 1: Alpha and Omega of Deepfakes
12:00 - 14:30	Tutorial 2: Face Recognition and Verification: Recent Trends and Threats
9:30 - 13:30	Tutorial 3: Power Papers: Some Practical Pointers
9:15 - 14:00	Doctoral Consortium
15:00 - 20:00	Trip to Postojna Cave

### Tuesday, 26.9.2023

7:30 - 8:45	Registration
8:45 - 9:00	IJCB 2023 Opening session
9:00 - 10:00	Keynote 1 - Guoying Zhao (Oulu)
10:00 - 10:30	Coffee break
10:30 - 11:45	Oral session 1 - Face, Iris and Fingerprint
11:45 - 12:30	Special Session 1 - Biometric recognition and identification at altitude and range
12:30 - 14:00	Lunch
14:00 - 15:15	Oral session 2 - Gait, Gesture and Action Recognition
15:15 - 16:30	Poster session 1 + Coffee break
16:30 - 17:45	Poster session 2
18:00 - 19:00	Guided Ljubljana City Tour
19:30 - 21:30	IJCB 2023 Reception

## Conference Booklet



MONDAY, 25 SEPTEMBER

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#### Tutorial 1: Alpha and Omega of Deepfakes

- 9:30 – 10:30: Tutorial 1: Alpha and Omega of Deepfakes – Part 1
- 10:30 – 10:50: Coffee Break
- 10:50 – 11:50: Tutorial 1: Alpha and Omega of Deepfakes – Part 2
- 11:50 – 12:00: Break

#### Tutorial 2: Face Recognition and Verification: Recent Trends and Threats

- 12:00 – 13:30: Tutorial 2: Face Recognition and Verification: Recent Trends and Threats – Part 1
- 13:30 – 13:50: Coffee Break
- 13:50 – 14:30: Tutorial 2: Face Recognition and Verification: Recent Trends and Threats – Part 2
- 15:00 – 20:00: Trip to Postojna Cave

#### Tutorial 3: Power Papers: Some Practical Pointers

- 9:30 – 10:30: Tutorial 3: Power Papers: Some Practical Pointers – Part 1
- 10:30 – 10:50: Coffee Break
- 10:50 – 11:50: Tutorial 3: Power Papers: Some Practical Pointers – Part 2
- 11:50 – 12:00: Break
- 12:00 – 13:30: Tutorial 3: Power Papers: Some Practical Pointers – Part 3
- 13:30 – 13:50: Coffee Break

#### Doctoral Consortium

- 9:15 – 9:30: Opening Remarks
- 9:30 – 9:50: Mentor/mentee Meet & Greet
- 9:50 – 10:40: Lightning Talks Session 1
- 10:40 – 11:00: Coffee Break
- 11:00 – 11:50: Lightning Talks Session 2
- 11:50 – 12:50: One-on-one mentoring session
- 12:50 – 14:00: Group lunch with all mentors



## IEEE International Joint Conference on Biometrics

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TUESDAY, 26 SEPTEMBER

#### Special session 1 Posters - Long-range Biometrics

- Human Body Model based ID using Shape and Pose Parameters
- Gait Recognition with Mask-based Regularization
- DOERS: Distant Observation Enhancement and Recognition System
- ATDetect: Face Detection and Keypoint Extraction at Range and Altitude
- Challenges in Off-angle to Frontal Iris Image Conversion using Pix2Pix Generative Adversarial Networks
- Novel Body Biometric for Long-Range Recognition Under Extreme Conditions
- UG-LDFace: Unified and Generalized Framework for Long-Range Disguised Face Recognition
- (Un)fair Exposure in Deep Face Rankings at a Distance

#### 16:30 – 17:45: Posters 2: Main conference + Competitions

- Dual Dense Uncertainty Embedding for Iris Recognition
- AdvGen: Physical Adversarial Attack on Face Presentation Attack Detection Systems
- PointGait: Boosting End-to-End 3D Gait Recognition with Point Clouds via Spatiotemporal Modeling
- Weakly Supervised Face and Whole Body Recognition in Turbulent Environments
- Vista-Morph – Unsupervised Image Registration of Visible-Thermal Facial Pairs
- Explaining Face Recognition Through SHAP-Based Pixel-Level Face Image Quality Assessment
- W2H-Net: Fast Prediction of Waist-to-Hip Ratio from Single Partial Dressed Body Scans in Arbitrary Postures via Deep Learning
- Sclera-TransFuse: Fusing Swin Transformer and CNN for Accurate Sclera Segmentation
- Improving Latent Fingerprint Orientation Field Estimation Using Inpainting Techniques
- CarVer: Setting the Standard for Face Verification with Caricatures
- Towards Generalizable Morph Attack Detection with Consistency Regularization
- Can personalised hygienic masks be used to attack face recognition systems?
- COLFIPAD: A Presentation Attack Detection Benchmark for Contactless Fingerprint Recognition
- MRA-GNN: Minutiae Relation-Aware Model over Graph Neural Network for Fingerprint Embedding
- How Colorful Should Faces Be? Harmonizing Color and Model Quantization for Resource-restricted Face Recognition
- CoNAN: Conditional Neural Aggregation Network For Unconstrained Face Feature Fusion
- Analyzing Bias in Diffusion-based Face Generation Models
- Iris Liveness Detection Competition (LivDet-Iris) – The 2023 Edition
- DFGC-VRA: DeepFake Game Competition on Visual Realism Assessment
- LivDet2023 – Fingerprint Liveness Detection Competition: Advancing Generalization
- SynFacePAD 2023: Competition on Face Presentation Attack Detection Based on Privacy-aware Synthetic Training Data
- AG-ReID 2023: Aerial-Ground Person Re-identification Challenge Results
- Liveness Detection Competition – Noncontact-based Fingerprint Algorithms and Systems (LivDet-2023 Noncontact Fingerprint)
- EfAR 2023: Efficient Face Recognition Competition
- Human Identification at a Distance: Challenges, Methods and Results on HID 2023
- Sclera Segmentation and Joint Recognition Benchmarking Competition: SSRBC 2023
- The Unconstrained Ear Recognition Challenge 2023: Maximizing Performance and Minimizing Bias

- 9:00 – 10:00: Keynote 2 – IAPR YBIA 2023 Award winner Keynote Talk**  
**10:00 – 10:30: IEEE Biometrics Council Meritorious Service Award recipient address**  
**10:30 – 11:00: Coffee break**  
**11:00 – 12:30: Orals 3 – Face Generation, Attribute and Presentation Attack Detection**
- Detecting Morphing Attacks via Continual Incremental Training
  - FedSIS: Federated Split Learning with Intermediate Representation Sampling for Privacy-preserving Generalized Face Presentation Attack Detection
  - StyleAU: StyleGAN based Facial Action Unit Manipulation for Expression Editing
  - ExFaceGAN: Exploring Identity Directions in GAN's Learned Latent Space for Synthetic Identity Generation
  - DiffIQA: Face Image Quality Assessment Using Denoising Diffusion Probabilistic Models
- 12:30 – 13:15: Special Session 2 – Recent Advances in Detecting Manipulation Attacks**
- SDeMorph: Towards Better Facial De-morphing from Single Morph
  - A Dual Domain Attention Mechanism for Face Forgery Detection
  - On Self-Supervised Learning and Prompt Tuning of Vision Transformers for Cross-sensor Fingerprint Presentation Attack Detection
- 13:15 – 14:30: Lunch**  
**14:30 – 15:45: Orals 4 – Multi-modal and Multi-Spectral Biometrics**
- Explaining, Analyzing, and Probing Representations of Self-Supervised Learning Models for Sensor-based Human Activity Recognition
  - Bridging the Gap: Heterogeneous Face Recognition with Conditional Adaptive Instance Modulation
  - Adapt-FuseNet: Context-aware Multimodal Adaptive Fusion of Face and Gait Features using Attention Techniques for Human Identification
  - TriGait: Aligning and Fusing Skeleton and Silhouette Gait Data via a Tri-Branch Network
  - Sweat Gland Enhancement Method for Fingerprint OCT Images Based on Generative Adversarial Network
- 15:45 – 17:00: Posters 3: Main Conference + Special session 2: Attacks**
- Detecting Morphing Attacks via Continual Incremental Training
  - A Multi-Stage Adaptive Feature Fusion Neural Network for Multimodal Gait Recognition
  - FedSIS: Federated Split Learning with Intermediate Representation Sampling for Privacy-preserving Generalized Face Presentation Attack Detection
  - StyleAU: StyleGAN based Facial Action Unit Manipulation for Expression Editing
  - ExFaceGAN: Exploring Identity Directions in GAN's Learned Latent Space for Synthetic Identity Generation
  - FingerSTR: Weak Supervised Transformer for Latent Fingerprint Segmentation
  - DiffIQA: Face Image Quality Assessment Using Denoising Diffusion Probabilistic Models
  - Optimal-Landmark-Guided Image Blending for Face Morphing Attacks
  - SV-DeIT: Speaker Verification with DeITCap Spoofing Detection
  - VIT Unified: Joint Fingerprint Recognition and Presentation Attack Detection
  - Deep Boosting Multi-Modal Ensemble Face Recognition with Sample-Level Weighting

WEDNESDAY, 27 SEPTEMBER

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## IEEE International Joint Conference on Biometrics

**18th IEEE International Conference on Automatic Face and Gesture Recognition: Call for Papers**

Learn More <https://fg2024.ieee-biometrics.org>

Round One Paper Submission: 2 October 2023  
 Notification to Authors: 13 December 2023  
 Round Two Paper Submission: 22 January 2024  
 Notification to Authors: 28 February 2024

\*Awards given for best papers\*

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THURSDAY, 28 SEPTEMBER



- Identity-Preserving Aging of Face Images via Latent Diffusion Models;
  - Unconventional Biometrics: Exploring the Feasibility of a Cognitive Trait based on Visual Self-Recognition
  - DFP-Net: An explainable and trustworthy framework for detecting deepfakes using interpretable prototypes
  - HEBI: Homomorphically Encrypted Biometric Indexing
  - Zero-shot racially balanced dataset generation using an existing biased StyleGAN2
  - Assessing the Privacy Risk of Cross-Platform Identity Linkage using Eye Movement Biometrics
  - All about that BASE: Modeling Biometric Authentication Systems and their Evaluations to enable a more efficient Exchange of Research Results
- Special session 3 Posters: Synthetic Data**
- Synthetic Data for the Mitigation of Demographic Biases in Face Recognition
  - Inversion of Deep Facial Templates using Synthetic Data
  - SynthDistill: Face Recognition with Knowledge Distillation from Synthetic Data19. Sampling From Autoencoders' Latent Space via Quantization And Probability Mass Function Concepts
  - Meta-evaluation for 3D Face Reconstruction Via Synthetic Data
  - Synthetic Face Generation Through Eyes-to-Face Inpainting
  - Protocol Based Similarity Evaluation of Publicly Available Synthetic and Real Fingerprint Datasets
  - Leveraging Synthetic Data and Hard Pair Mining for Selfie vs ID Face Verification
  - Depth-guided Robust Face Morphing Attack Detection
- Special session 4 Posters: 3D Biometrics**
- Online Model-based Gait Age and Gender Estimation
  - NeutrEx: A 3D Quality Component Measure on Facial Expression Neutrality
  - Recent Advancement in 3D Biometrics using Monocular Camera
- 17:00 – 17:15: Closing Session**

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- Improving Face Recognition from Caption Supervision with Multi-Granular Contextual Feature Aggregation13. Multimodal Context-based Continuous Authentication; Lakshminarayan, Saandeeep
  - On the Biometric Capacity of Generative Face Models
  - Unmasking Deepfakes: Masked Autoencoding Spatiotemporal Transformers for Enhanced Video Forgery Detection
  - SDeMorph: Towards Better Facial De-morphing from Single Morph
  - Fingerprint Presentation Attack Detection with Supervised Contrastive Learning
  - Sound-Print: Generalised Face Presentation Attack Detection using Deep Representation of Sound Echoes
  - A Universal Anti-Spoofing Approach for Contactless Fingerprint Biometric Systems
  - A Dual Domain Attention Mechanism for Face Forgery Detection
  - On Self-Supervised Learning and Prompt Tuning of Vision Transformers for Cross-sensor Fingerprint Presentation Attack Detection
- 17:00 – 18:00: Posters 4: Main conference + Demos + Journals**
- Multi-Biometric Fuzzy Vault based on Face and Fingerprints
  - Explaining, Analyzing, and Probing Representations of Self-Supervised Learning Models for Sensor-based Human Activity Recognition
  - Two-Dimensional Dynamic Fusion for Continuous Authentication; Attrapadung
  - Bridging the Gap: Heterogeneous Face Recognition with Conditional Adaptive Instance Modulation
  - Vulnerability of Automatic Identity Recognition to Audio-Visual Deepfakes
  - Modeling Spoof Noise by De-spoofing Diffusion and its Application in Face Anti-spoofing
  - Adapt-FuseNet: Context-aware Multimodal Adaptive Fusion of Face and Gait Features using Attention Techniques for Human Identification
  - On the Use of Cross- and Self-Module Attentive Statistics Pooling Techniques for Text-Independent Speaker Verification
  - CCFace: Classification Consistency for Low-Resolution Face recognition
  - TriGait: Aligning and Fusing Skeleton and Silhouette Gait Data via a Tri-Branch Network
  - Sweat Gland Enhancement Method for Fingerprint OCT Images Based on Generative Adversarial Network
- Journal Paper Posters**
- Leveraging Ensembles and Self-Supervised Learning for Fully-Unsupervised Person Re-Identification and Text Authorship Attribution
  - Biometric Template Protection for Neural-Network-Based Face Recognition Systems: A Survey of Methods and Evaluation Techniques
  - PoseNormNet: Identity-preserved Posture Normalization of 3D Body Scans in Arbitrary Postures
  - PatientHandNet: 3D Open-palm HandReconstruction from Sparse Multi-view Depth Images
  - Parameter agnostic stacked wavelet transformer for detecting singularities

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THURSDAY, 28 SEPTEMBER

- 9:00 -10:00: Keynote 3 – Amazon One: A Peek under the Hood**  
**10:00 -10:30: Coffee break**  
**10:30 – 11:45: Orals 5 – DeepFakes and Digital Forensics**
- OSVConTramer: A Hybrid CNN and Transformer based Online Signature Verification
  - Identity-Preserving Aging of Face Images via Latent Diffusion Models; Banerjee
  - Optimal-Landmark-Guided Image Blending for Face Morphing Attacks
  - DFP-Net: An explainable and trustworthy framework for detecting deepfakes using interpretable prototypes
  - iWarpGAN: Disentangling Identity and Style to Generate Synthetic Iris Images
- 11:45 – 12:30: Special Session 3 – Synthetic data in Biometrics**
- Synthetic Data for the Mitigation of Demographic Biases in Face Recognition
  - Meta-evaluation for 3D Face Reconstruction Via Synthetic Data
  - SynthDistill: Face Recognition with Knowledge Distillation from Synthetic Data
  - Depth-guided Robust Face Morphing Attack Detection
- 12:30 – 13:15: Special Session 4 – 3D Biometrics with Monocular Vision**
- Online Model-based Gait Age and Gender Estimation
  - NeutrEx: A 3D Quality Component Measure on Facial Expression Neutrality
  - Recent Advancement in 3D Biometrics using Monocular Camera
- 14:00 – 15:15: Lunch**  
**14:30 – 15:45: Orals 6 – Privacy, Demographic Biases & Fairness**
- Benchmark Dataset Dynamics, Bias and Privacy Challenges in Voice Biometrics Research
  - Toward responsible face datasets: modeling the distribution of a disentangled latent space for sampling face images from demographic groups
  - HEBI: Homomorphically Encrypted Biometric Indexing
  - Zero-shot racially balanced dataset generation using an existing biased StyleGAN2
  - Assessing the Privacy Risk of Cross-Platform Identity Linkage using Eye Movement Biometrics
- 15:45 – 17:00: Posters 5 – Main Conference + Special Sessions: Synthetic data + 3D Biometrics**
- Benchmark Dataset Dynamics, Bias and Privacy Challenges in Voice Biometrics Research
  - OSVConTramer: A Hybrid CNN and Transformer based Online Signature Verification
  - De-identifying Face Image Datasets While Retaining Facial Expressions
  - HBRC-500: A Long Range Recognition Benchmark Dataset using Face and Whole-body Imagery
  - Toward responsible face datasets: modeling the distribution of a disentangled latent space for sampling face images from demographic groups
  - Approximating Optimal Morphing Attacks using Template Inversion
  - How Close Are Other Computer Vision Tasks to Deepfake Detection?

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## IEEE TRANSACTIONS ON BIOMETRICS, BEHAVIOR, AND IDENTITY SCIENCE

