CITeR

NSF

PROGRAM REVIEW
FALL 2024 - PHASE II

Tuesday, October 29, Niagara Falls, NY

CITeR Program Review - Niagara Falls Convention Center

Please Note: All meeting times are local time

Maid of the Mist, Monday, October 28th - if joining, meet in the Sheraton lobby (300 3rd Street, Niagara Falls, NY) at 4pm for the 10 min walk to the boat entrance. If meeting us at boat entrance (1 Prospect St, Niagara Falls), arrive no later than 4:30pm. Self pay event, cash/credit accepted.

Day 1, Tuesday, October 29th, 2024

Time	Event
09:00 - 09:10	**Welcome - Per Stromhaug** Senior Associate Vice President for Economic Development University at Buffalo
09:10 - 09:40	STATE OF CITER - DR. STEPHANIE SCHUCKERS
09:40 - 10:30	**Patrick Grother** **Scientist, National Institute of Standards and Technology** BIOMETRIC RECOGNITION, A SOLVED PROBLEM, AND WHAT WOULD THAT MEAN?
10:30 - 11:00	BREAK
11:00 - 13:00	PHASE II FINAL REPORT PRESENTATIONS & DISCUSSION
13:00 - 14:30	LUNCH & NETWORKING
12:30 - 14:30	STEM EVENT FOR SMALL GROUP OF STUDENTS & MEMBERS including travel time Grand Island Middle School 1100 Ransom Road - Grand Island NY 14072
14:30 - 16:00	PHASE II FINAL REPORT PRESENTATIONS & DISCUSSION
16:00 - 16:30	BREAK
16:30 - 17:00	PRESENTATION OF NEW PROJECTS (PHASEII) VOTED OFF-LINE WRAP & TRANSITION TO POSTER SESSION
17:00 - 19:30	PHASE II PROGRESS REPORT POSTER SESSION

11:00

PHASE II FINAL REPORTS - 15 MINUTE PRESENTATIONS, 5 MINUTES Q&A
Additional time built in to facilitate Technology Transition discussion

EXPANDING AUDIO-BASED VEHICLE UNDERSTANDING USING MULTIMODAL & MULTI-LOCATION SIGNALS
23F-01B, Srirangaraj Setlur (UB), Venu Govindaraju (UB), Dennis Fedorishin (UB)

IMPROVING PERFORMANCE OF FACIAL RECOGNITION VIA MULTI-MODEL ALGORITHMIC ENSEMBLE
23F-02W, Prashnna Gyawali (WVU), Nima Karimian (WVU)

EVALUATING & PROGRESSING THE STATE-OF-THE-ART IN DEEP FAKE AUDIO GENERATION & DETECTION
23F-03C, Sandip Purnapatra (CU), Masudul Imtiaz (CU), Stephanie Schuckers (CU)

TOWARDS THE CREATION OF A LARGE DATASET OF HIGH-QUALITY FACE MORPHS - PHASE III (SP)
23f-01J-SP, Dawson (WVU), Nasrabadi (JHU), Liu (CU), Schuckers (CU), Doermann (UB), Setlur (UB), Lyu (UB)

note....STEM event departures begin, see schedule below

DEEPFAKE ATTACKS ON BIOMETRIC RECOGNITION: EVALUATION OF RESISTANCE TO PRESENTATION AND INJECTION ATTACKS (GATEWAY)
23S-02C-G, Masudul Imtiaz (CU), Daqing Hou (CU), Stephanie Schuckers (CU)

Discussion...

STEM EVENT

1215	Graduate student departure for STEM event
1300	DEMO tables by graduate students
1300	Member & Director departure for STEM event
1330	Member panel for STEM event

1300   **LUNCH**

1430

ON THE ROBUSTNESS OF FACE PAD TO GENERATIVE AI-BASED PAI
23F-01i, Sebastien Marcel (Idiap), Sushil Bhattacharjee (Idiap)

PRIVACY-PRESERVING BIOMETRIC MATCHING OVER HOMOMORPHICALLY ENCRYPTED FEATURES
23S-01MB, Vishnu Boddeti, (MSU), Arun Ross (MSU), Nalini Ratha (UB)

EXPLAINABLE IMAGE QUALITY WITH TRANSFORMER-BASED MODELS
23F-05C, Chen Liu (CU), Zander Blasingame (CU)

SYNTHETIC LATENT FINGERPRINTS GENERATION USING STYLE TRANSFER NETWORK
23F-03W, Jeremy Dawson (WVU), Nasser Nasrabadi (JHU), Amol Joshi (WVU)

Discussion...followed by break 1600-1630

1630   PRESENTATION OF NEW PROPOSALS (PHASEII) VOTED OFF-LINE

AUTOMATED DETECTION OF CONTACTLESS FINGERPRINT IMAGES IN CONTACT FINGERPRINT DATABASES
24F-02W, Jeremy Dawson (WVU)

DEVELOPMENT OF EXTENDED-LENGTH AUDIO DATASET FOR ADVANCED DEEPFAKE SYNTHESIS & DETECTION
24F-02C, Rahul Vijaykumar(CU), Ajan Ahmed(CU), Masudul Imtiaz (CU)

1700   PHASE II PROGRESS REPORT POSTER SESSION

PHASE II PROGRESS REPORTS POSTER SESSION
NIAGARA FALLS CONVENTION CENTER

17:00

ADVANCING FACE RECOGNITION USING DNNS & TRANSFORMERS
24S-05MC-G, Arun Ross (MSU), Stephanie Schuckers (CU)

BIOMETRIC AGING IN CHILDREN: PHASE V
24S-03C, Stephanie Schuckers (CU), Masudul Imtiaz (CU), Laura Holsopple (CU)

EVALUATION OF EQUITY IN REMOTE IDENTITY PROOFING SOLUTIONS - PHASE II
24S-05C, Stephanie Schuckers (CU), Daqing Hou (CU), Michael Schuckers (SLU), Xiaofei Wang (CU)

A COMPREHENSIVE DATASET FOR DEEPFAKE AUDIO DETECTION
24S-01B, Siwei Lyu (UB), Srirangaraj (Ranga) Setlur (UB), Chengzhe Sun (UB), Shan Jia (UB)

DEEP-LEARNING-BASED GENERATION OF SYNTHETIC CONTACTLESS FINGERPHOTOS
24S-04W, Jeremy Dawson (WVU)

DEVELOPMENT OF PATTERNED AND CLEAR CONTACT LENS DETECTION IN IRIS RECOGNITION
24S-11C-G, Stephanie Schuckers (CU), Arun Ross (MSU)

A FACIAL IMAGE QUALITY TOOLBOX BASED ON ISO/IEC 29794-5 SPECIFICATION
24S-01W, Nima Najafzadeh (WVU), Nasser Nasrabadi (JHU)

FRAMEWORK FOR INDEPENDENT EVALUATION OF BEHAVIORAL BIOMETRICS
24S-09C-G, Daqing Hou (CU), Sichao Li (CU), Stephanie Schuckers (CU)

IMPACT OF GROWTH ON FACE RECOGNITION IN JUVENILES
23F-07C-G, Stephanie Schuckers (CU), Arun Ross (MSU)

INVESTIGATING MOLECULAR FINGERPRINTS OF HUMAN TISSUE USING MULTI-SPECTRAL PHOTOACOUSTIC IMAGING
24S-04B, Jun Xia (UB) and Srirangaraj Setlur (UB), Chuqin Huang (UB)

OPEN-IRISADVANCING OPEN SOURCE IRIS RECOGNITION TOWARD STATE-OF-THE-ART
24S-04M-G, Arun Ross (MSU)

SCENARIO EVALUATION OF NOVEL POLARIMETRIC FACE PRESENTATION ATTACK DETECTION SYSTEM
24S-10C-G, Stephanie Schuckers (CU), Lambert Igene (CU)

UNMASKING MOBILE BIOMETRICS (DELAYED FINAL REPORT)
23S-09C-G, Daqing Hou (CU), Stephanie Schuckers (CU), Mst Rumana Sumi (CU)

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PROGRAM REVIEW
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October 30th, Niagara Falls, NY

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Day 2, Wednesday, October 30th, 2024

08:30 - 08:50   **Welcome**
Phase III Goals, Vision & Center Capabilities

08:50 - 09:20   NSF Presentation, Dr. Mohan Kumar

09:20 - 10:10   PHASE III NEW PROJECT PROPOSAL PRESENTATIONS

10:10 - 10:40   BREAK

10:40 - 11:10   MEMBER SPOTLIGHT

Joel Brogan, Oak Ridge National Laboratory
Group Leader - Multimodal Sensor Analytics
Center for AI Security Research (CAISER)

John Schneider
Qualcomm VP of Biometric Technology (Former)

11:10 - 12:40   PHASE III NEW PROJECT PROPOSAL PRESENTATIONS

12:40 - 13:40   LUNCH AND NETWORKING

13:00 - 15:30   INDUSTRY ADVISORY BOARD

deepfake

NEW PROJECT PROPOSAL PRESENTATIONS - 10 MIN (7 MIN ORAL; 3 MIN Q&A)

9:20

AI SYNTHETIC VIDEO DETECTION USING MULTI-MODEL MANIPULATION, 24F-02B
Siwei Lyu (UB), Shan Jia (UB), Srirangaraj Seltur(UB)

THE ACCELERATED DEEPFAKE VIDEO DETECTION, 24F-06C
Afzal Hossain (CU), Rahul Vijaykumar (CU), Masudul Imtiaz (CU), Stephanie Schuckers (CU)

SURVEYING THE LANDSCAPE OF GENERATIVE AI AND DETECTION OF DEEPFAKES, 24F-06B-SP
Siwei Lyu (UB), Srirangaraj (Ranga) Setlur (UB), Chengzhe Sun (UB), Defang Chen (UB)

STUDY OF IDENTITY PRESERVATION IN DEEPFAKE FACE SWAPPING TOOLS & 3D MASK CREATION, 24F-07C-G
Stephanie Schuckers (CU/UNC-Charlotte), Srijan Das (UNC-Charlotte)

Discussion...followed by a break @ 10:10

10:40

MEMBER SPOTLIGHT

face, iris, voice

11:10

MACHINE UNLEARNING FOR FACIAL RECOGNITION SYSTEM, 24F-03WB
Prashnna Gyawali (WVU), Vishunu Lokhande (UB)

VISION LANGUAGE MODELS FOR FORENSIC BIOMETRICS (VLM4FORBIO), 24F-01I
Sebastien Marcel (Idiap)

MITIGATING THE IMPACT OF DILATION ON IRIS RECOGNITION, 24F-04W
Jeremy Dawson (WVU)

ERROR RATE EVALUATION OF MODERN SPEAKER RECOGNITION ALGORITHMS UNDER REAL-WORLD SCENARIOS, 24F-03C
Ajan Ahmed (CU), Masudul Imtiaz (CU)

Discussion...

12:00

privacy & security

FRAUD IDENTIFICATION BASED ON BEHAVIORAL CHARACTERISTICS IN AN ONLINE MARKETPLACE, 24F-04B
Srirangaraj Setlur (UB), Venu Govindaraju (UB)

INVESTIGATING PRIVATE-INFORMATION LEAKAGE FROM FACE TEMPLATES (GATEWAY), 24F-02M -G
Vishnu Boddeti (MSU) and Arun Ross (MSU)

BLACK-BOX DIGITAL ATTACKS: METHODS AND COUNTERMEASURES, 24F-01M
Karthik Nandakumar (MSU), Arun Ross (MSU)

Discussion...

12:40

Program Review Ends
Lunch @ 12:40 - 13:40

13:00

Industry Advisory Board (IAB) meeting