AUGUST 2019 - CAMBRIDGE, MASSACHUSETTS
ACS 2019 | WORKSHOP ON:

COGNITIVE VISION

INTEGRATED VISION AND AI FOR EMBODIED PERCEPTION AND INTERACTION

CoDesign Lab EU / www.codesign-lab.org/cogsys2019

ADVANCES IN COGNITIVE SYSTEMS (ACS)
FRIDAY AUGUST 2 2019

VENUE

RAY AND MARIA STATA CENTER, MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS, USA
MIT BUILDING 32 / LOCATED AT 32 VASSAR STREET
ROOM: 32D-463 / 09:00 AM ONWARDS

WORKSHOP CHAIRS

MEHUL BHATT (ÖREBRO UNIVERSITY, SE)
DANIEL LEVIN (VANDERBILT UNIVERSITY, US)
PARISA KORDJAMSHIDI (TULANE UNIVERSITY, US)

09:00 - 09:15 / WORKSHOP OPENING

Cognitive Vision and Perception
Mehul Bhatt, Daniel Levin, Parisa Kordjamshidi
Örebro University, SE - Vanderbilt University, US - Tulane University, US

09:15 - 10:15 / SESSION I

How Language and Perception Give Rise to Flexible Intelligence
Andrei Barbu
Massachusetts Institute of Technology, US

10:15 - 10:45 / COFFEE BREAK

10:45 - 12:00 / SESSION II

10:45 - 11:15
Balancing Flexibility and Integrity: Lessons from Research in
Visual Awareness, Learning and the Arts for the Process of Intelligent Seeing
Daniel Levin
Vanderbilt University, US

11:15 - 11:35
Visual Question Answering Through Strategic Perception
Andrew Lovett, Gordon Briggs, Brian McClimens, Will Bridewell and Paul Bello
U. S. Naval Research Laboratory, US

11:35 - 11:55
Non-monotonic Logical Reasoning Guiding Deep Learning for Scene Understanding on Robots
Tiago Mota, Mohan Sridharan
University of Auckland, NZ - University of Birmingham, UK

11:55 - 12:15
Deep Semantics for Commonsense Visuospatial Intelligence
Mehul Bhatt, Jakob Suchan, Srikrishna Varadarajan
Örebro University, SE - University of Bremen, DE - CoDesign Lab

12:15 - 13:30 / LUNCH

13:30 - 15:00 / SESSION III

13:30 - 14:00
Risk-Aware Design of AI-Based Road Vehicle Autopilots ? Is End-to-End Learning a Serious Option?
Rudolf Mester
Norwegian University of Science and Technology, NO

14:00 - 14:20
One-Object Decision-Making model: Fast and Frugal Heuristic for Human Activity Classification
Karan Sharma, Suchendra Bhandarkar
Keysight Technologies, US - University of Georgia, US

14:20 - 14:40
U-net Super-Neural Segmentation and Similarity Calculation
to Realize Vegetation Change Assessment in Satellite Imagery
Chunxue Wu, Bobo Ju, Naixue Xiong, Guisong Yang, Yan Wu, Hongming Yang, Jiaying Huang, Zhiyong Xu
University of Shanghai for Science and Technology, CN - Indiana University Bloomington, US - Tianjin University, CN

14:40 - 15:00
XMRs: Uniform Semantic Representations for Intermodular Communication in Cognitive Robots
Jesse English, Sergei Nirenberg
Rensselaer Polytechnic Institute, US

15:00 - 15:30 / COFFEE BREAK

15:30 - 17:30 / SESSION IV

15:30 - 15:50
To AIR is Human, or is it? The Role of High-Level Representations and
Conscious Awareness in Biological Motion Perception
Paul Hemeren
University of Skövde, SE

15:50 - 16:10
Newtonian Predictions are Utilised in the Perception of Colliding Objects
Abdul Deeb, Evan Cesanek and Fulvio Domini
Brown University, US - Columbia University, US

16:10 - 16:30
Multimodality for Intention in Human-Robot Interactions
Melanie Jouaiti, Patrick Hénaff, Mehul Bhatt, Jakob Suchan
Laboratoire LORIA, FR - Örebro University, SE - University of Bremen, DE

16:30 - 16:50
Multimodal Continuation-Style Architectures for Human-Robot Interaction
Nikhil Krishnaswamy, James Pustejovsky
Brandeis University, US

16:50 - 17:30
[OPEN DISCUSSIONS]

Approx. 17:30 / WORKSHOP CLOSURE