8th New Trends in Image Restoration and Enhancement

Workshop and 14 Associated Challenges

18.06.2023, Vancouver, Canada / Hybrid
https://cvlai.net/ntire/2023/

JUNE 18-22, 2023
CVPR
VANCOUVER, CANADA

Use NTIRE 2023 page for schedule, info, updates:
https://cvlai.net/ntire/2023/

Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

NTIRE 2023 Organizers

Radu Timofte, University of Wurzburg

Marcos V. Conde, University of Wurzburg
Florin-Alexandru Vasluianu, University of Wurzburg
Yawei Li, ETH Zurich
Kai Zhang, ETH Zurich
Yulun Zhang, ETH Zurich
Shuhang Gu, UEST
Ming-Hsuan Yang, University of California, Merced & Google
Lei Zhang, Alibaba & Hong Kong Polytechnic University
Kyoung Mu Lee, Seoul National University
Eli Shechtman, Adobe Research
Yulan Guo, National University of Defense Technology

Codruta Ancuti, UPT
Cosmin Ancuti, UPT
Chao Dong, SIAT
Xintao Wang, Tencent
Sira Ferradans, DXOMARK
Tom Bishop, GLASS Imaging
Longguang Wang, NUDT
Yingqian Wang, NUDT
Fabio Tosi, University of Bologna
Pierluigi Zama Ramirez, University of Bol
Luigi Di Stefano, University of Bologna
Egor Ershov, IITP RAS
Ren Yang, Sensetime
Luc Van Gool, KU Leuven & ETH Zurich

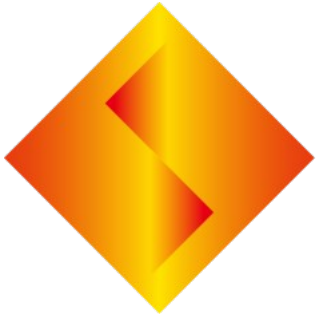
CVL Computer Vision Lab

NTIRE 2023 in numbers:

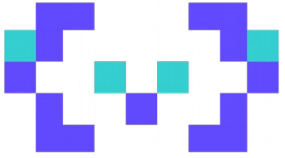
8th	Edition
26	Main organizers
85	PC Members
353	Reviews
77	Accepted Papers
43	Oral Presentations
14	Associated Challenges
1000+	Registered Participants in Challenges
50	Award Certificates
4	Invited Talks
9	Sponsors

Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

NTIRE 2023 Main Sponsors



Sony
Interactive
Entertainment



ModelScope

Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

CVL Computer Vision Lab

CVL Computer Vision Lab

Many thanks!

NTIRE 2023 Associated Challenges

HR Non-Homogeneous Dehazing
Night Photography Rendering
Real-Time Image Super-Resolution - Track 1
Real-Time Image Super-Resolution - Track 2
Bokeh Effect Transformation
360° Omnidirectional Super-Resolution (X4) - Track 1 Image
360° Omnidirectional Super-Resolution (X4) - Track 2 Video
Image Super-Resolution (X4) Bicubic
Light Field Image Super-Resolution Challenge
Image Denoising

Quality Assessment for Video Enhancement
Efficient Image Super-Resolution
Image Shadow Removal
Video Colorization - Track 1 FID Optimization
Video Colorization - Track 2 CDC Optimization
HR Depth from Specular and Transparent Surfaces - Track 1 Stereo
HR Depth from Specular and Transparent Surfaces - Track 2 Mono
Stereo Image Super-Resolution - Track 1 Fidelity & Bicubic
Stereo Image Super-Resolution - Track 2 Perceptual & Bicubic
Stereo Image Super-Resolution - Track 3 Fidelity & Realistic

20 competitions (12 on *CodaLab platform)*
1000+ participants, 100+ teams competed in the final test phase

https://cvlai.net/ntire/2023/

NTIRE 2023 Associated Challenges: reproducibility!

- Reproducibility of results is key
- Winners checked for reproducibility
- All the ranked teams submitted both sources and factsheets
- Focus on real world scenarios

https://cvlai.net/ntire/2023/

50 Award Certificates

- **for top ranking teams in NTIRE 2023 Challenges**

- **money or product prizes for**
  (some) winners, and (sometimes) runner-ups, 2nd and 3rd place awards
  (the teams will be contacted by email)

- **certificates**
  (will be posted on the NTIRE 2023 webpage)

Congratulations!

NTIRE 2023 Workshop – 77 Accepted Papers

PT (UTC+7)

All accepted papers have poster presentations
Two poster sessions:
Noon - 11:30-14:00
Evening - 17:30-19:00
The posters should be placed and removed in each poster session, using different poster panel #

All the challenge reports and papers describing top methods have, in addition, oral presentations.

A subset of regular papers have, in addition, oral presentations.

Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

NTIRE 2023 Invited Speakers

Fahad Khan
(MBZUAI &
Linköping University)

Ming-Hsuan Yang
(University of California,
Merced & Google)

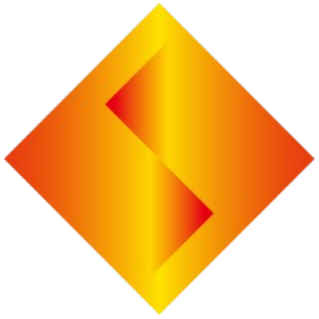
Rakesh Ranjan
(Meta Reality Labs)

Jon Barron
(Google Research)

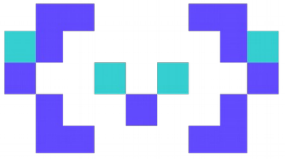
PT/UTC	
10:00/17:00	**Burst Image Restoration and Enhacement** (*Prof. Fahad Khan*)
14:15/21:15	**Computational Mixed Reality** *(Dr. Rakesh Ranjan)*
15:30/22:30	**Anti-Aliasing Neural Radiance Fields** (*Dr. Jon Barron*)
17:25/00:25^{+1}	**Learning to Synthesize Image and Video Contents** *(Prof. Ming-Hsuan Yang)*

CVL Computer Vision Lab

NTIRE 2023 Sponsors



Sony Interactive Entertainment



ModelScope

Julius-Maximilians-
UNIVERSITÄT WÜRZBURG

CVL Computer Vision Lab

Many thanks!

upcoming

9th New Trends in Image Restoration and Enhancement (NTIRE)
workshop and challenges

(planned @ CVPR 2024)

5th Mobile AI (MAI)
workshop and challenges

(planned @ CVPR 2024)

6th **Workshop and Challenge on Image Compression (CLIC)**

(planned @ DCC 2024)

5th **Advances in Image Manipulation (AIM)**
workshop and challenges

(planned @ ECCV 2024)

Open positions for PhD students and postdocs

on topics such as:

- *restoration, enhancement, manipulation*
- *computational photography*
- *learned compression*
- *image/video understanding*
- *learning paradigms*
- *augmented / mixed reality*
- *edge inference and mobile AI*

Send your queries and applications to ***Prof.Dr. Radu Timofte****:*

radu.timofte@uni-wuerzburg.de