4ᵗʰ Advances in Image Manipulation

Workshop and 8 Associated Challenges

23.10.2022, Tel Aviv, Israel / Virtual
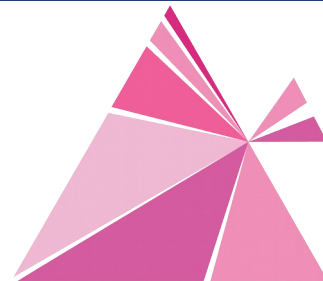https://data.vision.ee.ethz.ch/cvl/aim22/

Follow ECCV guidelines and use AIM landing page for virtual attendance:
https://eccv2022.ecva.net/

Use AIM 2022 page for schedule, info, updates:
https://data.vision.ee.ethz.ch/cvl/aim22/
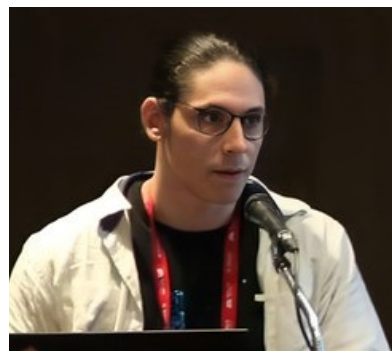
AIM 2022 Main Organizers

Radu Timofte
University of Wurzburg
& ETH Zurich
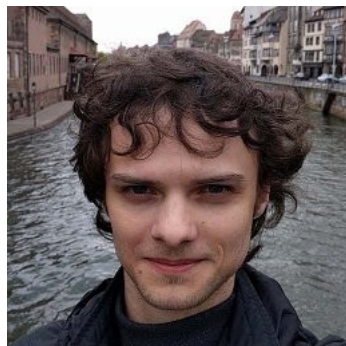
Andrey Ignatov
ETH Zurich &
AI Witchlabs

Ren Yang
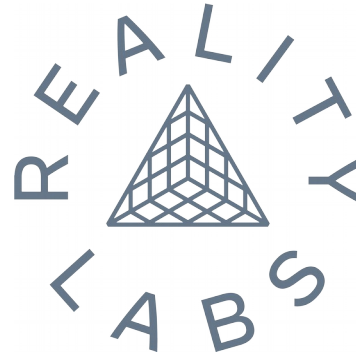ETH Zurich

Marcos V. Conde
University of Wurzburg

Furkan Kınlı
Özyeğin University

AIM 2022 in numbers:

4th	Edition
5	Main organizers
76	PC Members
283	Reviews
45	Accepted Papers
45	Oral Presentations
8	Associated Challenges
1000+	Registered Participants in Challenges
25	Award Certificates
6	Invited Talks
9	Sponsors

AIM 2022 Sponsors

Many thanks!

AIM 2022 & Mobile AI 2022 Associated Challenges

- Real-Time Image Super-Resolution (with Mobile AI 2022)
- Real-Time Video Super-Resolution (with Mobile AI 2022)
- Single Image Depth Estimation (with Mobile AI 2022)
- Learned Smartphone ISP (with Mobile AI 2022)
- Real-Time Rendering Realistic Bokeh (with Mobile AI 2022)
- Compressed Input Super-Resolution – Track 1 Image
- Compressed Input Super-Resolution – Track 2 Video
- Reversed ISP – Track 1 S7
- Reversed ISP – Track 2 P20
- Instagram Filter Removal

- 10 competitions (9 on *CodaLab platform*)
- 1000+ participants, 100+ teams competed in the final test phase

https://data.vision.ee.ethz.ch/cvl/aim22/
https://ai-benchmark.com/workshops/mai/2022/
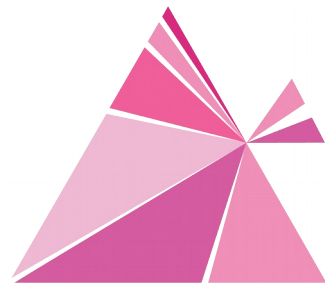
# AIM & Mobile AI 2022 Associated Challenges:
reproducibility!

- Reproducibility of results is key

- Winners checked for reproducibility

- All the ranked teams submitted both sources and factsheets

- Focus on real world scenarios

https://data.vision.ee.ethz.ch/cvl/aim22/
https://ai-benchmark.com/workshops/mai/2022/
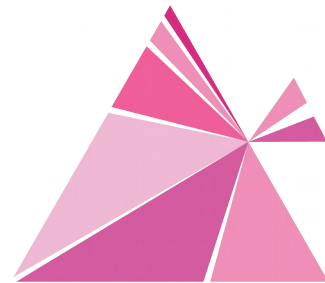
25 Award Certificates

- for top ranking teams in AIM 2022 Challenges

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

- certificates
     (will be posted on the AIM 2022 webpage)
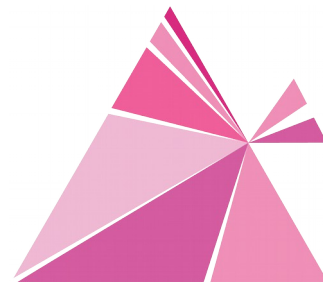
Congratulations!

AIM 2022 Workshop – 45 Accepted Papers

IDT (UTC+3)

09:10- 09:50   oral session for Bokeh Effect Rendering challenge, editing, GANs

10:30- 11:00   oral session for Efficient Depth Estimation challenge, enhancement, learning

11:30- 11:30   oral session for Learned ISP challenge, HDR

12:30- 13:05   oral session for Reversed ISP challenge

14:30- 15:30   oral session for Efficient SR challenge, image SR, restoration, deblurring

15:30- 16:00   oral session for Efficient Video SR challenge, light field SR, video deblurring

16:30- 16:55   oral session for Compressed Input SR challenge

17:30- 17:50   oral session for Instagram Filter Removal challenge, photo synthesis

AIM 2022 Invited Speakers
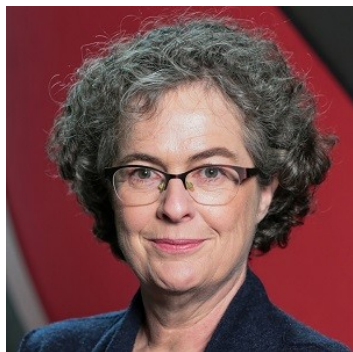
Sabine Süsstrunk (EPFL)

Björn Ommer (University of Munich)

Felix Heide (Princeton University, Algolux)

Pratul Srinivasan (Google Research)

Bo Zhu (Meta Reality Labs)

Gordon Wetzstein (Stanford University)

IDT/UTC

09:50/06:50   **Uncovering Local Semantics in CNNs and GANs**   (*Prof. Sabine Susstrunk*)

11:00/08:00   **Stable Diffusion++: Democratizing Visual Synthesis** (*Prof. Bjorn Ommer*)

12:00/09:00   **The Differentiable Camera: Designing Cameras to Detect the Invisible**   (*Prof. Felix Heide*)

14:00/11:00   **Neural Inverse Rendering**   (*Dr. Pratul Srinivasan*)

16:00/13:00   **Practical Considerations for On-Device Denoising**   (*Dr. Bo Zhu*)

16:55/13:55   **Efficient Neural Scene Representation, Rendering, and Generation**   (*Prof. Gordon Wetzstein*)

AIM 2022 Sponsors

Many thanks!

upcoming

New Trends in Image Restoration and Enhancement (NTIRE) workshop
Mobile AI (MAI) workshop

(planned @ CVPR 2023)

and associated **challenges** on topics such as:
- quality assessment, mapping
- super-resolution of (spectral) images, videos, light fields
- HDR
- deblurring, dehazing
- night photography rendering
- viewpoint synthesis

Tentative dates:
- December 20th, start of the challenges
- March 20th, end of the challenges
- March 30th, paper submission deadline
- April 14th, camera ready deadline

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 or radu.timofte@vision.ee.ethz.ch