

CVPR 2023 Anti-UAV Workshop & Challenge

Jun, 2023, Virtual conference



Workshop Overview

Traditional computer vision research for UAV detection and tracking lacks a high-quality benchmark in dynamic environments. To mitigate this gap, we held the 1st International Workshop on Anti-UAV Challenge at CVPR 2020, releasing a dataset consisting of 160 video sequences (both RGB and infrared). The workshop attracted attention from researchers all over the world. Many submitted solutions outperform the baseline method, making great contributions to addressing the anti-UAV problem. The 2nd anti-UAV challenge extends the benchmark dataset to 250 high-quality, full HD thermal infrared video sequences, spanning multiple occurrences of multi-scale UAVs.

This workshop will bring together academic and industrial experts in the field of UAVs to discuss the techniques and applications of tracking UAVs. Participants are invited to submit their original contributions, surveys, and case studies that address the works of UAV's detection and tracking issues.

This year's challenge has two independent tracks:

Track1: Anti-UAV Tracking Given the bounding box of a drone target in the first frame, this challenge track requires algorithms to track the given target in each video frame by predicting its bounding box. When the target disappears, an invisible mark (no bounding box) needs to be given.

Track2: Anti-UAV Detection & Tracking Whether a drone target exists in the first frame is unknown. This challenge track requires algorithms to detect and track the drone target when it appears by predicting its bounding box. When the target does not exist or disappears, an invisible mark (no bounding box) needs to be given.

Paper Submission

We expect to receive 20 papers, one of which will be selected as the best paper for oral presentation. Submission Deadline:

- ❑ Paper Submission Deadline: **27th Mar**
- ❑ Paper Author Notification: 1st Apr
- ❑ Camera Ready : 8th Apr

Home Page: <https://anti-uav.github.io/>

Challenge Participation

- ❑ Training Dataset Release: 6th Feb
- ❑ Test Dataset Release: 6th Mar
- ❑ Results Submission Deadline: **13th Mar**



Award

- 🏆 **Best Paper:** Certificate + 500 USD
- 🥇 **1st-Place:** Certificate + 1500 USD
- 🥈 **2nd-Place:** Certificate + 1000 USD
- 🥉 **3rd-Place:** Certificate + 500 USD

Invited Speakers



Michael Felsberg
Linköping University (Confirmed)



Pascal Mettes
University of Amsterdam (Confirmed)

Advisory Committee



Baigui Sun
Alibaba DAMO Academy



Yandong Guo
IDEA Visiting Researcher



Shin'ichi Satoh
National Institute of Informatics and University of Tokyo.



Junliang Xing
Tsinghua University



Jane Shen Shengmei
Pensees Singapore

Program Schedule

08:30-08:40	Opening Remarks and Welcome
08:40-09:10	The 3rd Anti-UAV challenge introduction and results
09:10-09:20	Oral talk 1: 1st-Place Award of the 3rd Anti-UAV Challenge in track 1.
09:20-09:30	Oral talk 2: 1st-Place Award of the 3rd Anti-UAV Challenge in track 2.
09:30-10:00	Invited talk 1: TBD
10:00-10:10	Oral talk 3: 2nd-Place Award of the 3rd Anti-UAV Challenge in track 1.
10:10-10:20	Oral talk 4: 2nd-Place Award of the 3rd Anti-UAV Challenge in track 2.
10:20-10:50	Poster session and coffee break
10:50-11:20	Invited talk 2: TBD
11:20-11:30	Oral talk 5: 3rd-Place Award of the 3rd Anti-UAV Challenge in track 1.
11:30-11:40	Oral talk 6: 3rd-Place Award of the 3rd Anti-UAV Challenge in track 2.
11:40-11:50	Oral talk 7: Best Paper Award
11:50-12:10	Awards & Future Plans

Organizers



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National Defense Innovation Institute



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