

CSAW'20 Hack3D

Registration Guidelines & Competition Rules

Hack3D Overview

The Hack3D competition serves to raise awareness and generate discussion in engineering and research communities about security in the additive manufacturing (AM) field.

In the 2020 Qualifying Round, participants are challenged to model a CAD design from curves of a stolen IGES file, employing skills in file forensics and reverse-engineering.

In the Final Round, finalist teams will participate in a virtual competition. Finalists will be presented with the AM security challenge file on Nov. 2 and will have 4 days to work as a team to develop a solution to the problem.

Competitors will have the opportunity to learn and use skills in graphics programming, file manipulation, and reverse engineering while gaining an understanding of the additive manufacturing supply-chain. Students who are interested in learning more about CAD, reverse-engineering, security, and additive manufacturing are encouraged to participate.

The competition occurs over two rounds: an online Qualifying Round in September and, for 2020, an online Final Round in November. Please see our [messaging regarding COVID-19](#) for additional details on why CSAW will run virtually in 2020.

Important Dates

Qualification Round: 15 September - 16 October 2020

Finalist Notification: 21 October 2020

Final Round: 2 - 8 November 2020

Competition Eligibility

This competition is open to students enrolled in undergraduate or graduate degree programs from around the world, as well as non-student teams.

Qualification Round Teams who are interested in competing must register prior to 16 October 2020.

Beginning on 15 September, registered teams will be provided with digital access to the qualification challenge, which involves reverse engineering a stolen IGES file. All participating teams will have until the 16 October deadline to submit their design file. Participants can model using any available CAD software of their choice (Recommended: SolidWorks, Inventor, Onshape). Submissions would need to include native CAD file format, neutral CAD format (IGES,STEP,PARASOLID) exported from the native CAD file, and a project documentation listing all observations and approaches.

Qualification Round Rules for Student Teams

- Registration is required and will remain open through 16 October 2020. Please register [here](#)
- Players can compete individually or on a team of up to 4 members.
- All student team members must be students enrolled in an accredited undergraduate or graduate degree program.
 - There is no country limitation and team members do not need to attend the same university/college.
- All players must compete under only 1 team name; playing for multiple teams is not permitted.
- Teams should work independently; sharing answers privately or publicly, or collaborating with another team to secure multiple spots at Finals constitutes cheating.
- Submissions are to be submitted via email to csaw-3D@nyu.edu by 16 October 2020 at 11:59 PM EST. Re-submissions are not permitted.

Qualification Round Rules for Non-Student Teams

- Registration is required and will remain open through 16 October 2020. Please register [here](#)
- Players can compete individually or on a team of up to 4 members.
- All players must compete under only 1 team name; playing for multiple teams is not permitted.
- Teams should work independently; sharing answers privately or publicly, or collaborating with another team to secure multiple spots at Finals constitutes cheating.
- Submissions are to be submitted via email to csaw-3D@nyu.edu by 16 October 2020 at 11:59 PM EST. Re-submissions are not permitted.

Qualifying for Finals & Finalist Notification

Once the submission deadline has passed, team submissions of the reconstructed CAD design file and accompanying process report will be assessed by NYU organizers.

Assessors will consider accuracy of dimensions and shape, but most importantly the thought process and techniques attempted in solving this challenge.

The top five (5) student teams who most accurately reconstruct the design, as well as provide an organized documentation of their process, will be notified of their Finalist status no later than 21 October 2020.

There is a possibility that the top three (3) non-student teams may also be invited to compete at Finals, but this will not include the opportunity to compete for prizes.

Final Round Eligibility

Student teams will be asked to verify their enrollment prior to being offered a spot at Finals.

Finals Format

Virtual participation in CSAW Finals is contingent upon finalists' ability to adhere to the remote presentation guidelines. These details will be provided to finalists at the point of finalist notification. Teams will be required to use softwares provided by their university or any open-source softwares available.

Prizes

Cash prizes of \$US1000, \$US750, and \$US500 will be awarded to the top three teams. Prizes will be distributed in late November 2020.

Use of Personal Data

Personal data (ie, name, school, email) that is collected through the registration process is accessible only by the competition organizers and is used for the following purposes:

- Reminding registrants of competition timelines, rules, and updates
- Sending occasional updates regarding future CSAW events
- Determining and contacting finalist teams and team members
- Examining multi-year participation of teams and individual player
- Determining and reporting total number of teams and total estimated individual participation
- Determining and reporting demographic trends related to participation, such as what countries have the highest number of teams participating

CSAW will not rent, sell, or share personal data with anyone other than the competition organizers.

Contact

Please direct your inquiries to csaw-3D@nyu.edu