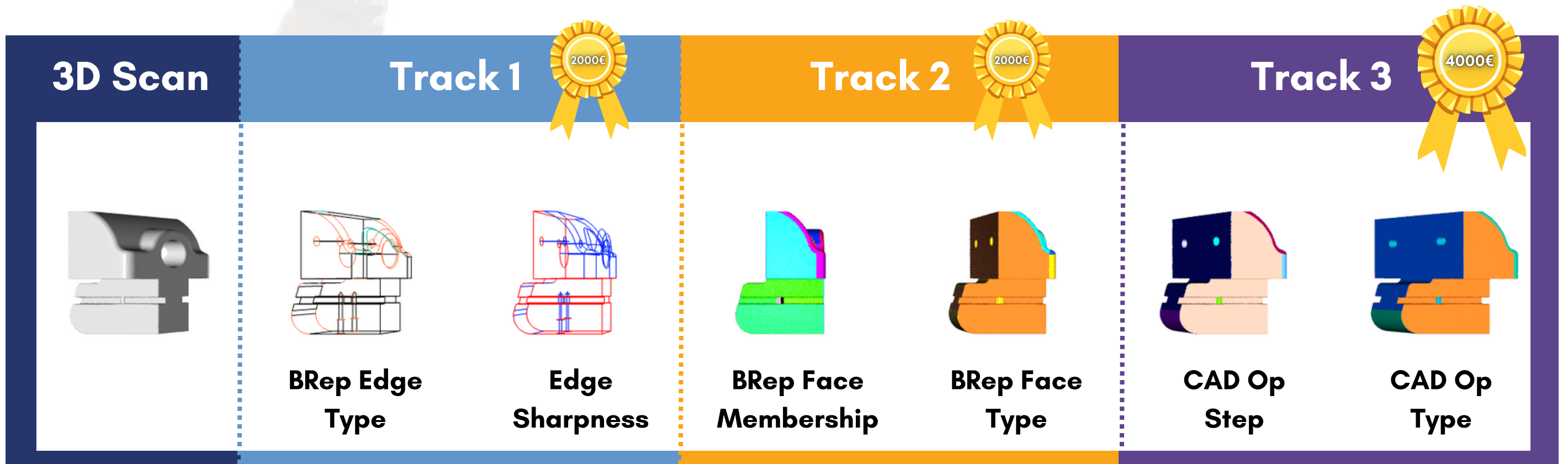


# SHARP CHALLENGE



Submission Deadline: **Sep 20th, 2023**

The 4th edition of the **SHARP (Solving CAD History and pArameters Recovery from Point clouds and 3D scans) Challenge** is organized in conjunction with the ICCV 2023 and the SHARP Workshop. The 3-Track SHARP Challenge promotes a competition to encourage the development of new methods for recovering the history and parameters of Computer-Aided Design (CAD) models from 3D scanned data. Each Challenge track employs a different version of the CC3D dataset. The CC3D dataset is derived from open CAD repositories such as 3D Content Central and contains over 50k pairs of CAD models and their corresponding 3D scans.



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- **Track 1: Parametric sharp edge inference**
  - Task: Simultaneously detect edges (as parametric curves or straight line-set) & binarily classify detected edges as either sharp or not.
  - Dataset: CC3D-PSE (includes Boundary-Representation (B-Rep) edges, degree of sharpness annotations & and binary edge labels)
- **Track 2: Segmenting scans into Boundary-Representation (B-Rep) face memberships**
  - Task: Segment & assign vertices of 3D scan into CAD surface primitives (equivalent to B-Rep faces)
  - Dataset: CC3D-Brep (includes 3D scans and B-Rep face annotations)
- **Track 3: Segmenting scans into CAD operations types and ordered steps**
  - Task: Segment scan vertices into ordered steps of CAD modeling/design history & operation types associated with them
  - CC3D-ops (includes annotations on CAD operation types i.e., extrusion, revolution, chamfer, etc.)

**Sponsored by:**



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