1 Introduction
The DACORD functional system orients and draws archaeological pottery, based on 3D model geometry, using modern mathematical, graphical, optimization methods.

The orientation workflow combines existing approaches (normal vectors, horizontal/vertical sections, etc.) with new methods, to segment fragments (external and internal surfaces), and to erase parts that provide no information about the rotational axis (fractures, plastic decoration, etc.).

Archaeological illustrations adapted to most norms and standards of pottery drawings can then be produced from these correctly oriented models.

All pottery orientation and drawing methods are implemented in DACORD software, developed in R. The DACORD system thus represents a new optimized solution for archaeology.

2 General orientation and drawing workflow

3 Automatic orientation

4 Assisted drawing

5 Conclusion

DACORD advantages:
- intuitive, simple, no statistical knowledge required
- rapid (max. 5 min.), precise & reproducible
- simplifies routine archaeological illustration
- all types of pottery (handmade, wheel-turned)
- all sizes & types of fragments (rim, body, base)
- open, flexible, various formats for exportation
- fully automatic workflow, if required

DACORD pushes the boundaries:
- size no longer matters (if curves are present)
- thousands more artefacts can be documented
- the virtual corpus is virtually boundary
- results are easily catalogue, archived, classified & shared world-wide
- 3D printing cultural heritage & digital archaeology
- customizable, potential for automatic layouts, etc.