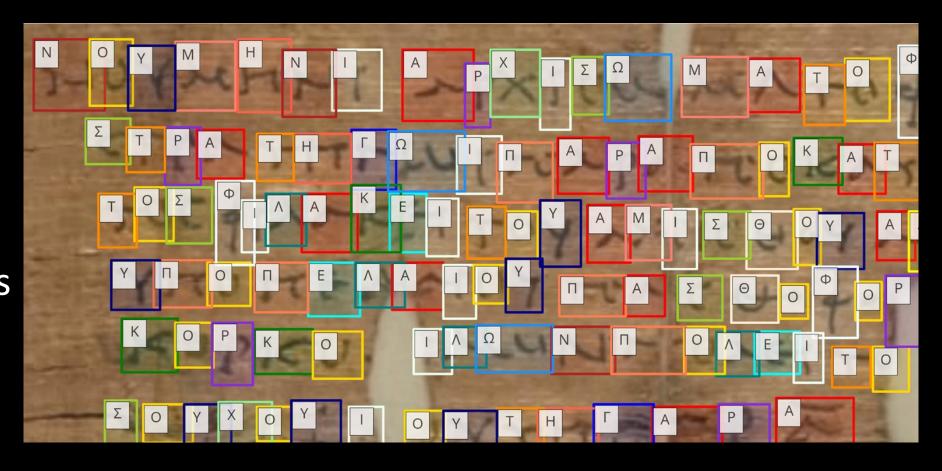
Isabelle Marthot-Santaniello

A variant to HTR:

Detection and recognition

of Greek characters
on papyri







A millennium of Greek in Egypt (end of 4th BCE - beginning of 8th CE)

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-> large diversity of content, scripts, writing skills

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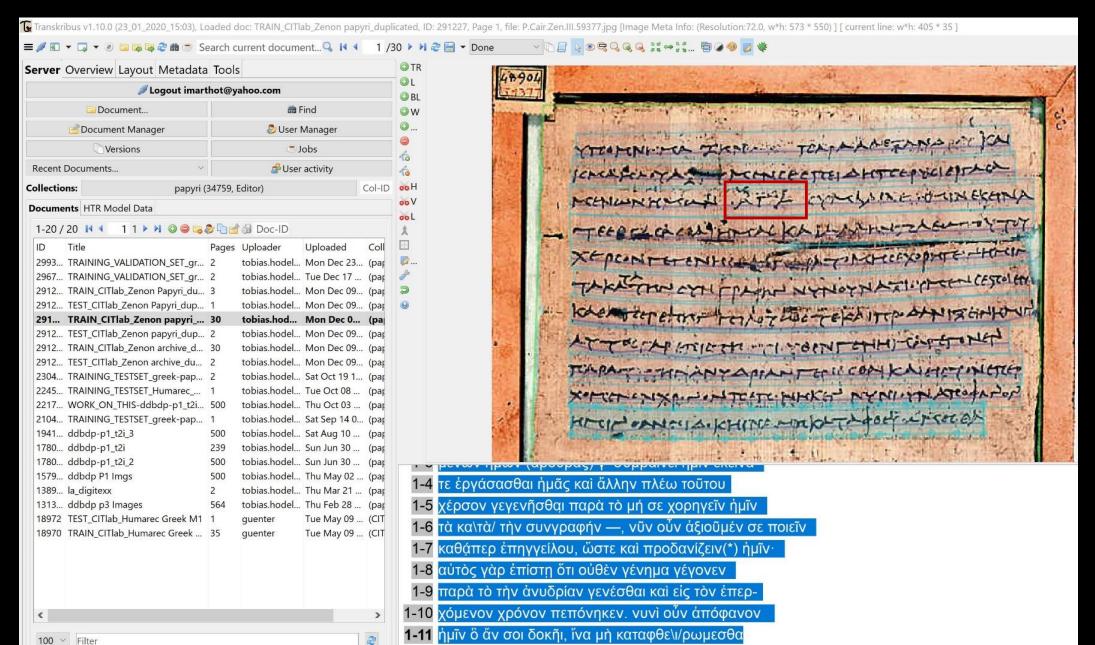
80,000 texts already published,
 no urge for HTR on unpublished pieces

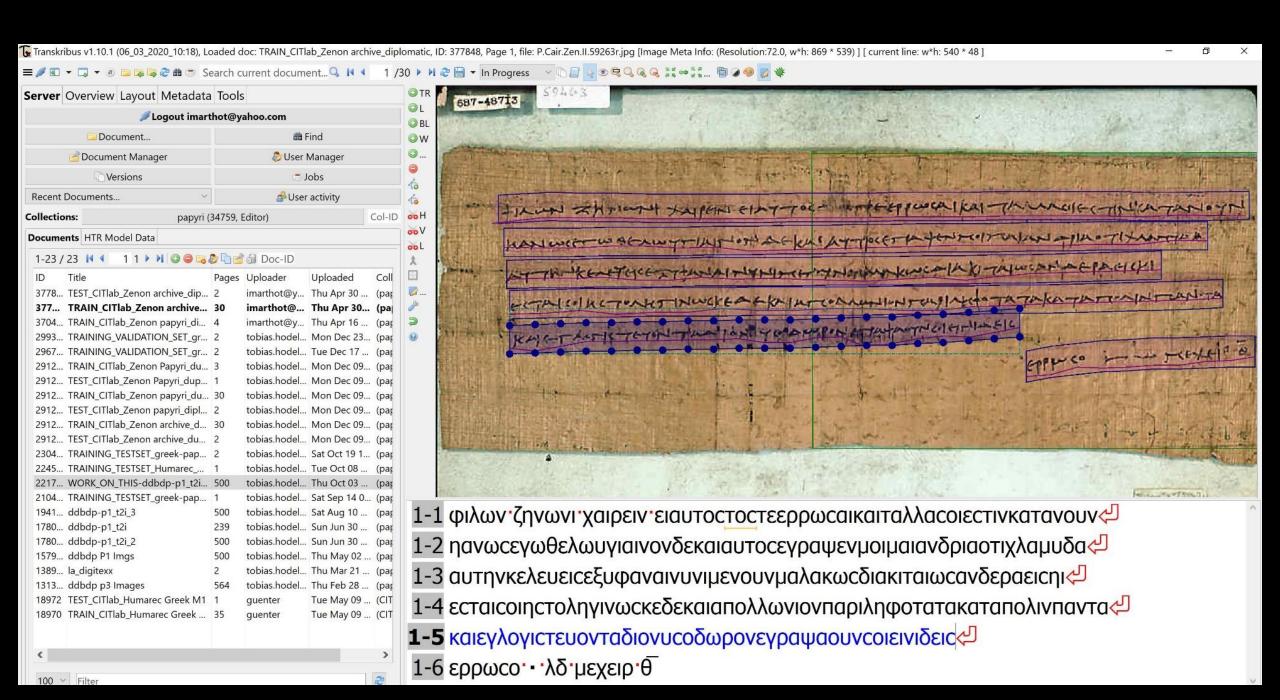
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-> Rather than automatic detection, search for similar handwritings (same document, same writer, same style)

Transkribus in 2020 (with T. Hodel and P. Koutroumpis)





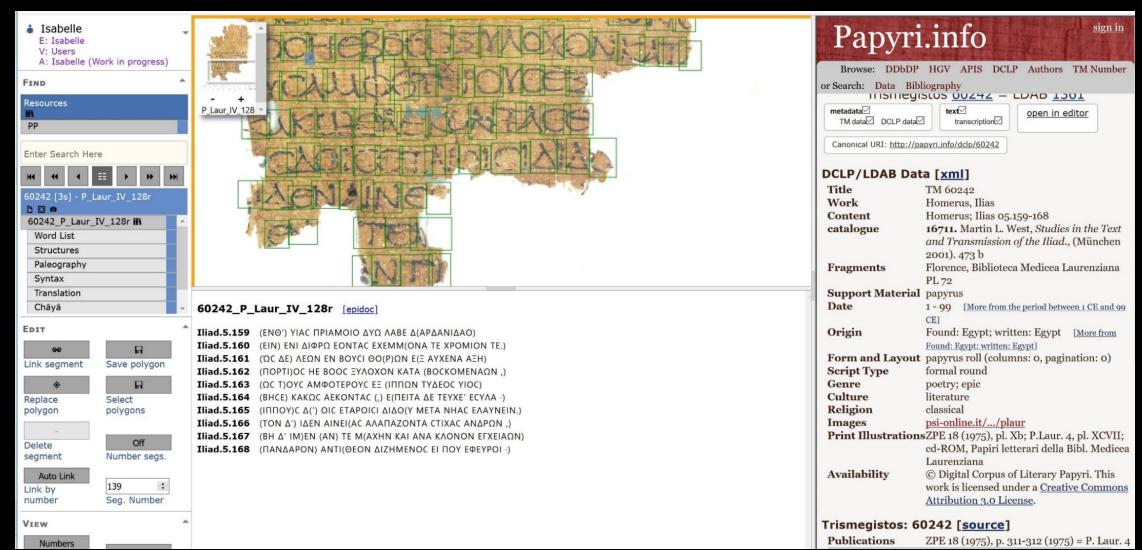
Isabelle Marthot-Santaniello and Tobias Hodel, "Papyri, Handwritten Text Recognition, and Text Processing. State of the Art and Outlook – Approaches to a digital paleography", Proceedings of the international workshop *In the Name of the Rose Searching for Unknown, Lost, and Forgotten Ancient Texts*, Rome, September 30-October 1, 2021 Forthcoming publication

Dataset "Ground-Truthed Data Set of Zenon Papyri for Handwritten Text Recognition" https://zenodo.org/records/6565706

EGRAPSA team

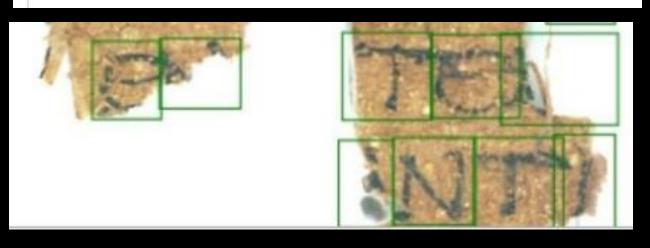
- Olga Serbaeva Saraogi (DH)
- Lavinia Ferretti (Papyrology)
- Giuseppe de Gregorio (Computer Science)
- Pedro Garcia-Baro (Papyrology)
- Dinh Dung Van (Computer Science)

READ: Research Environment for Ancient Documents (O. Serbaeva, S. White)



READ built on Turfan and not Leiden conventions

```
60242_P_Laur_IV_128r [epidoc]
Iliad.5.159
             (ΕΝΘ΄) ΥΙΑC ΠΡΙΑΜΟΙΟ ΔΥΩ ΛΑΒΕ Δ(ΑΡΔΑΝΙΔΑΟ)
Iliad.5.160
             (EIN) ENI ΔΙΦΡΩ EONTAC EXEMM(ONA TE XPOMION TE.)
Iliad.5.161
            (ΏC ΔΕ) ΛΕΩΝ ΕΝ ΒΟΥCΙ ΘΟ(Ρ)ΩΝ Ε(Ξ ΑΥΧΕΝΑ ΑΞΗ)
Iliad.5.162 (ΠΟΡΤΙ)ΟC HE BOOC ΞΥΛΟΧΟΝ ΚΑΤΑ (BOCKOMENAΩN ,)
             (ΩC Τ)ΟΥC ΑΜΦΟΤΕΡΟΥC ΕΞ (ΙΠΠΩΝ ΤΥΔΕΟC ΥΙΟC)
Iliad.5.163
Iliad.5.164
            (BHCE) KAKΩC AEKONTAC (,) E(ΠΕΙΤΑ ΔΕ ΤΕΥΧΕ' ΕCΥΛΑ ·)
Iliad.5.165
             (\Pi\Pi\PiOY)C \Delta(') OIC ETAPOICI \DeltaI\DeltaO(Y META NHAC EAAYNEIN.)
Iliad.5.166
            (TON \Delta') I\DeltaEN AINEI(AC A\LambdaA\PiAZONTA CTIXAC AN\DeltaP\OmegaN ,)
            (BH Δ' IM)EN (AN) TE M(AXHN KAI ANA KΛΟΝΟΝ ΕΓΧΕΙΑΩΝ)
Iliad.5.167
Iliad.5.168
            (ΠΑΝΔΑΡΟΝ) ANTI(ΘΕΟΝ ΔΙΖΗΜΕΝΟΣ ΕΙ ΠΟΥ ΕΦΕΥΡΟΙ ·)
```



DCLP transcription: 60242 [xml]

[ἔν] θ' υἶ(*)ας Πριάμοιο δύω λάβε Δ[αρδανίδαο] [εἰ] ν ἑνὶ δίφρωι ἐόντας Ἐχέμμο [νά τε Χρομίον τε]. [ὡς δ] ἐ λέων ἐν βουσὶ θορὼν ἐ[ξ αὐχένα ἄξηι] [πόρτ] ιος ἠὲ βοὸς ξύλοχον κάτα [βοσκομενάων],

5 [ὡς τ]οὺς ἀμφοτέρους ἐξ ἵ[ππων Τυδέος υἱὸς]
 [βῆσε] κακῶς ἀέκοντας, ἔ[πειτα δὲ τεύχε' ἐσύλα]:
 [ἵππο] ὑς δ' οἷς ἑτάροισι δίδο[υ μετὰ νῆας ἐλαύνειν].
 [τὸν] δ' ἴδεν Αἰνεί[ας ἀλαπάζοντα στίχας ἀνδρῶν],
 [βῆ δ' ἴ]μεν [ἄν] τε μ[άχην καὶ ἀνὰ κλόνον ἐγχειάων]

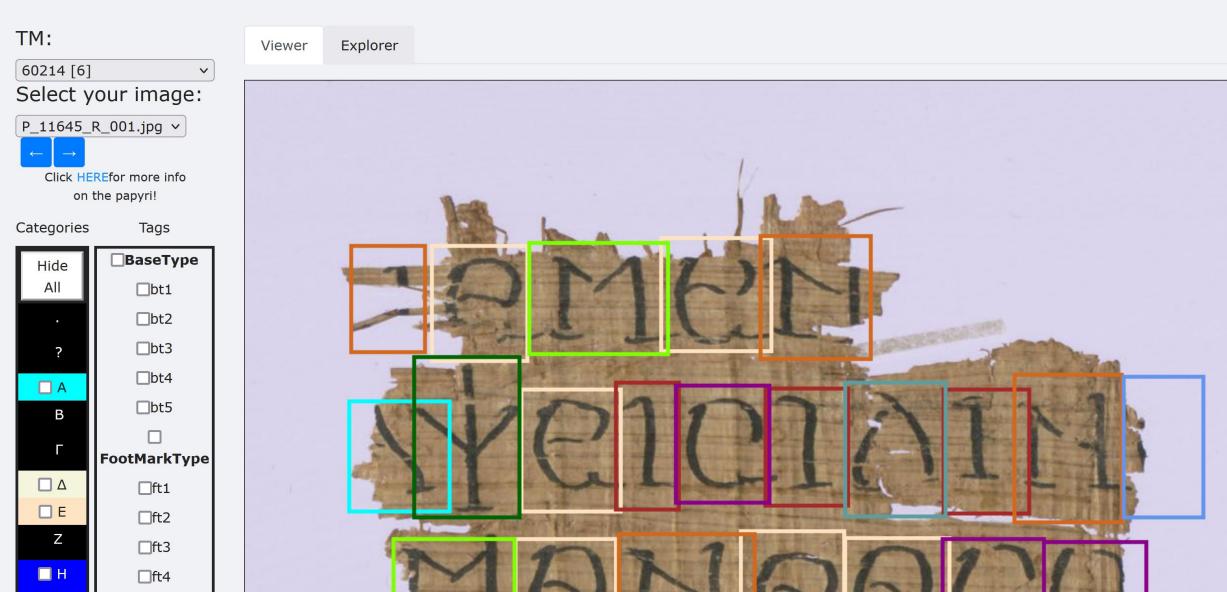
) [Πάνδαρον] ἀντί[θεον διζήμενος εἴ που ἐφεύροι]

-- -- -- -- -- -- -- --

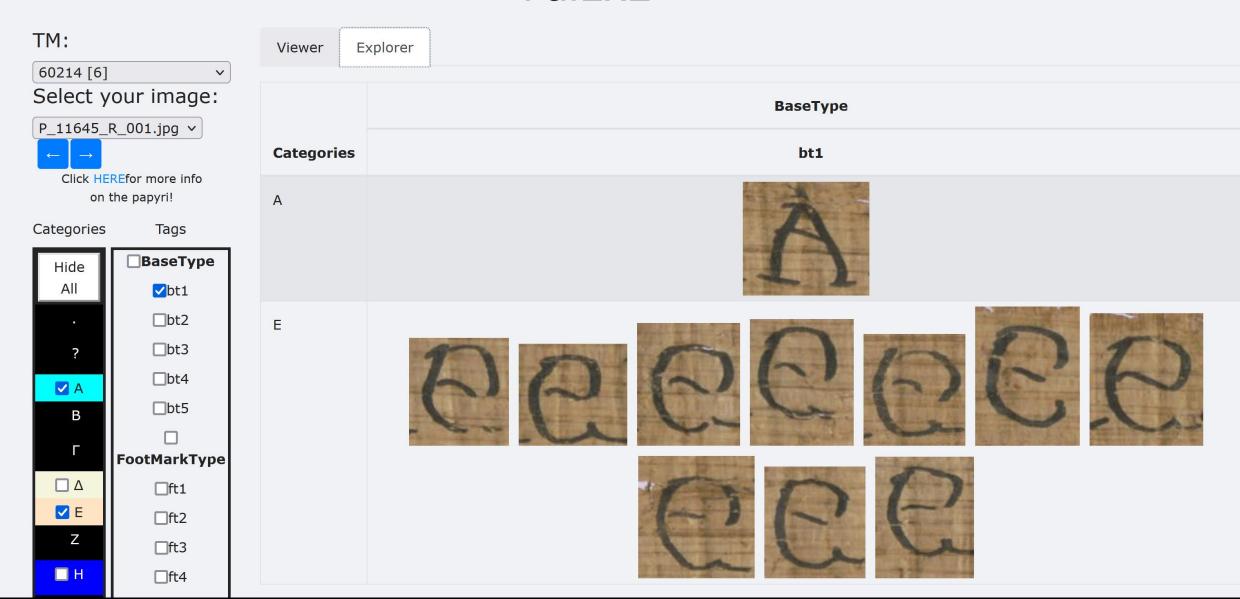
Apparatus

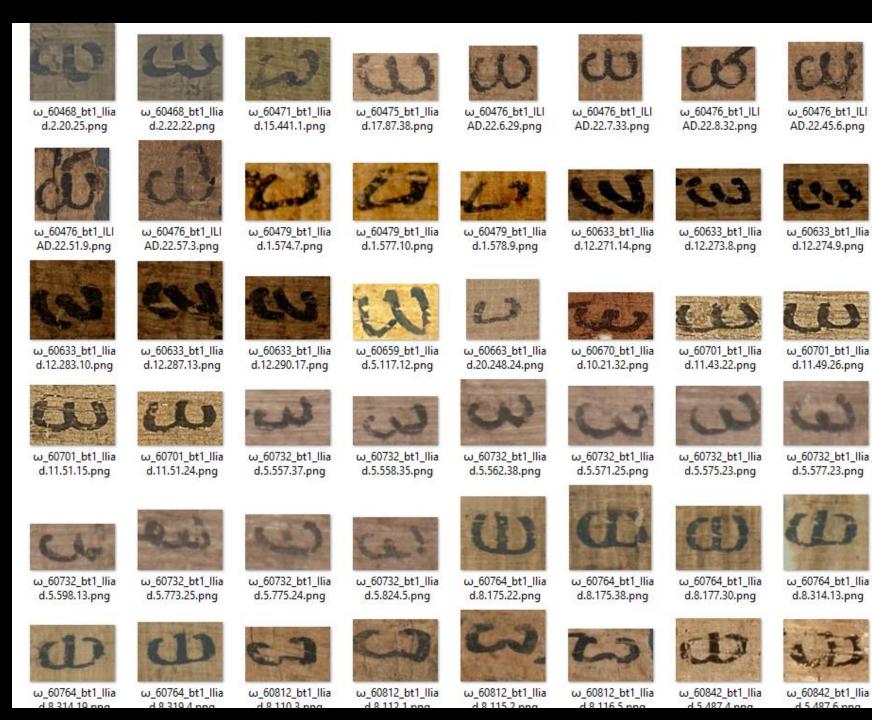
 \triangle 1. υϊασ papyrus

PalEx2



PalEx2







Overview ▼ Team ▼ Research ▼ Teaching ▼ Lab ▼

Home /

ICDAR2023 Competition on Detection and Recognition of Greek Letters on Papyri





185 images from 136 different manuscripts of Homer's *Iliad*, covering the millennium between the 3rd c. BCE and the 7th c. CE

Published September 22, 2024 | Version Competition Dataset with Answers





"ICDAR2023 Competition on Detection and Recognition of Greek Letters on Papyri" Dataset

```
Marthot-Santaniello, Isabelle (Project leader)¹ (D); Serbaeva, Olga (Data manager)² (D);

White, Stephen (Researcher)³ (L); Agolli, Selaudin (Other)² (L); Seuret, Mathias (Researcher)⁴ (D);

Carrière, Guillaume (Researcher) (Researcher) (Researcher)⁴ (L);

Christlein, Vincent (Researcher)⁴ (D)

Show affiliations
```

Dataset description of the "ICDAR2023 Competition on Detection and Recognition of Greek Letters on Papyri"

Prof. Dr. Isabelle Marthot-Santaniello, Dr. Olga Serbaeva



GlyFix is a powerful tool designed to simplify and streamline the management of Al-generated annotations.

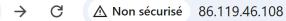
You can test GliFix:

http://86.119.46.108/

You can download some annotated papyri:

https://drive.switch.ch/index.php/s/T0nW3MXnTT6mCwu













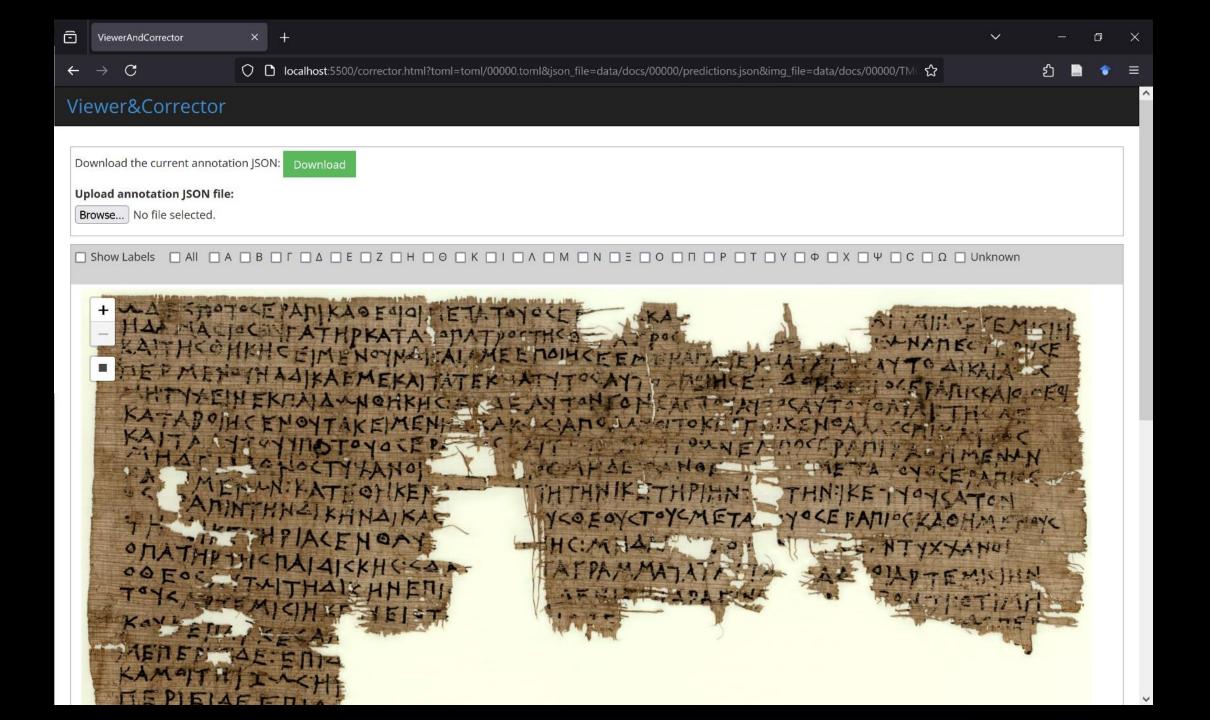


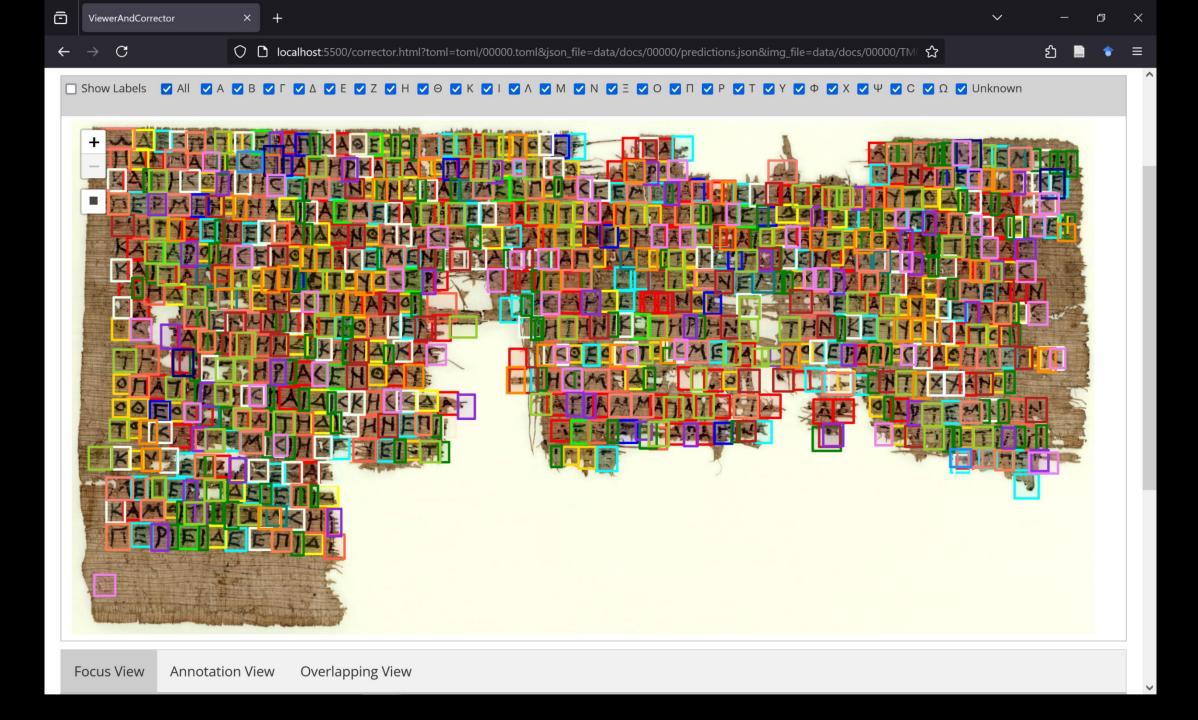
Create a New Project

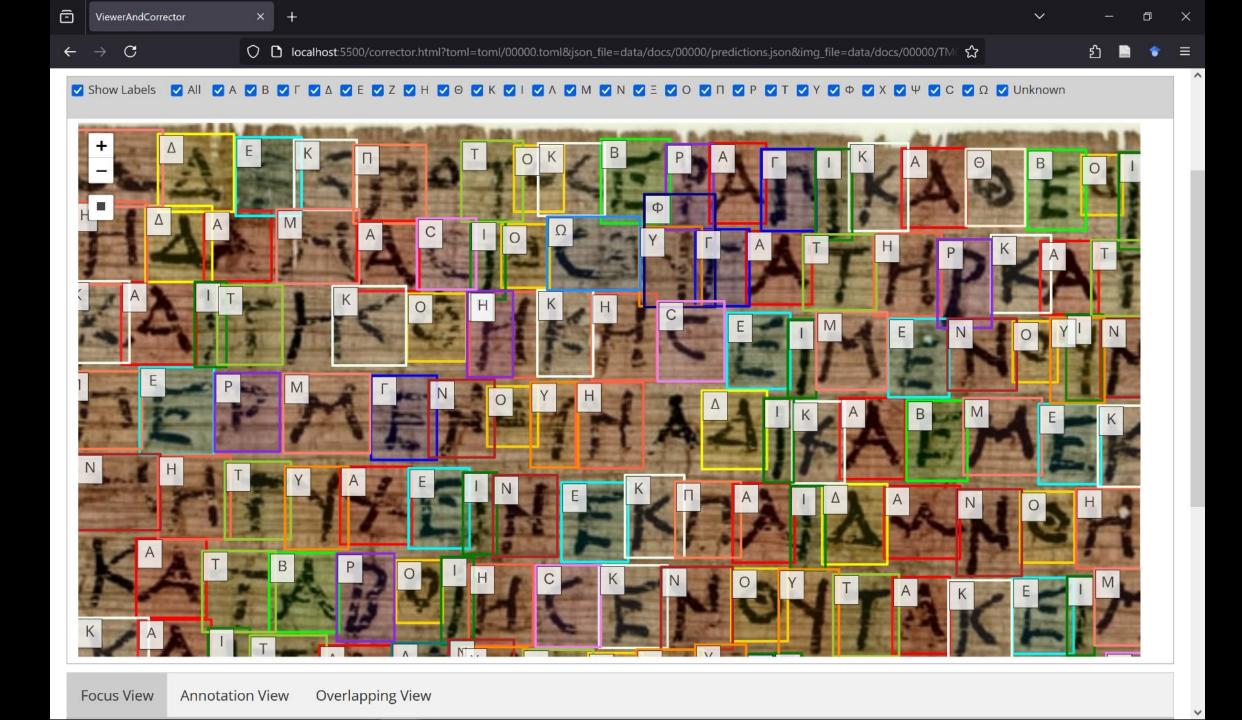
New Project

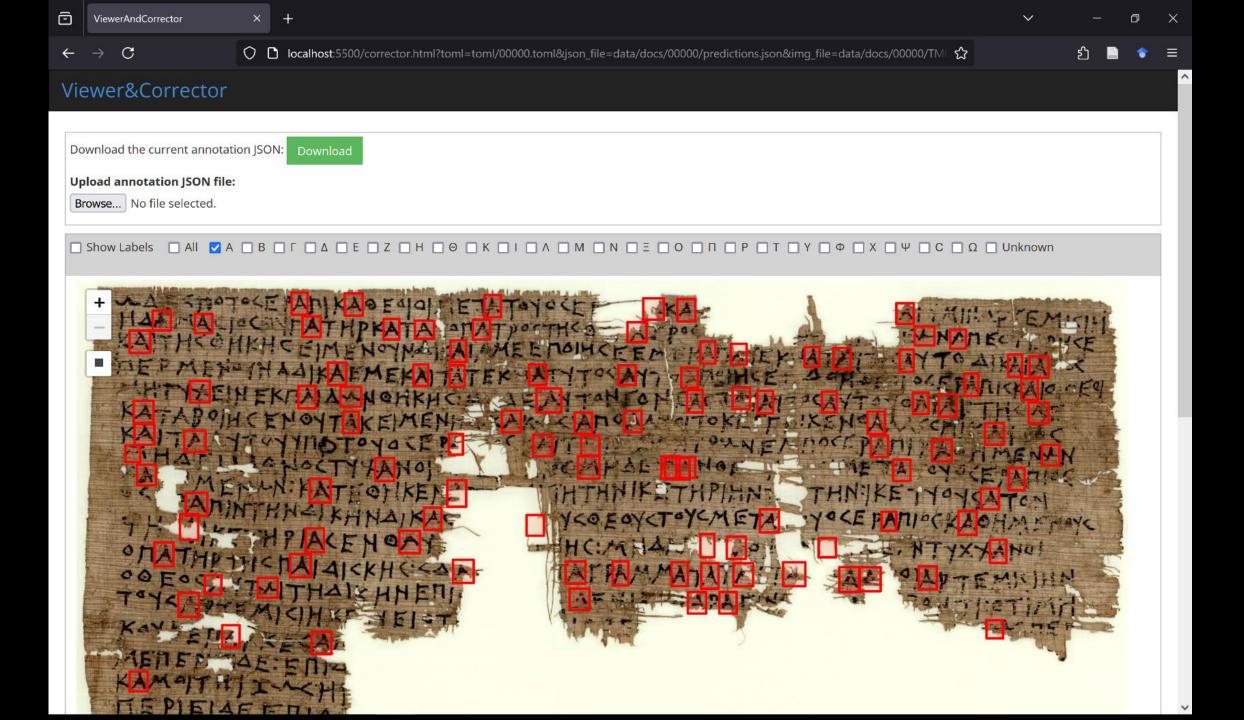
Preloaded Projects

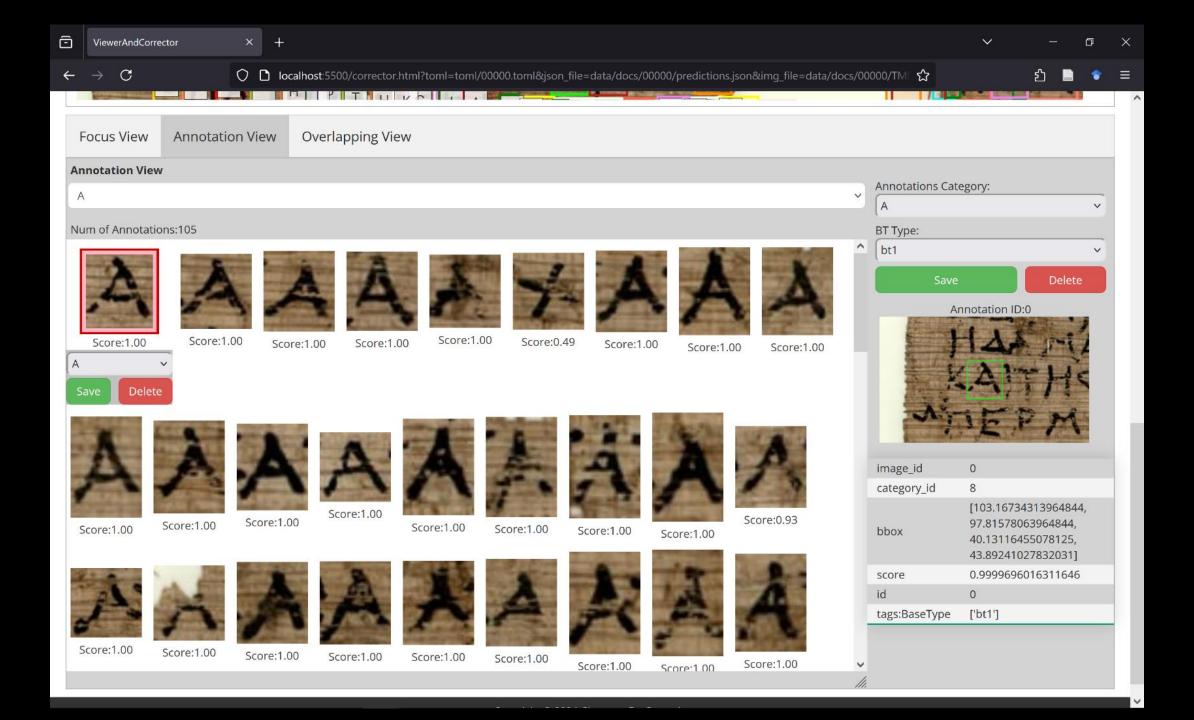
Project ID	Project Name		
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10006	latino_murale.pap	Load	Delete
10009	eng.pap	Load	Delete
00006	TM065795_Derveni_UNESCO_greece_derveni_papyrus_amth2.pap	Load	Delete
00002	TM062931_TimotheusPersae_crop2.pap	Load	Delete
00000	TM065797_The_Curse_of_Artemisia_Fragment_WDL4310.pap	Load	Delete
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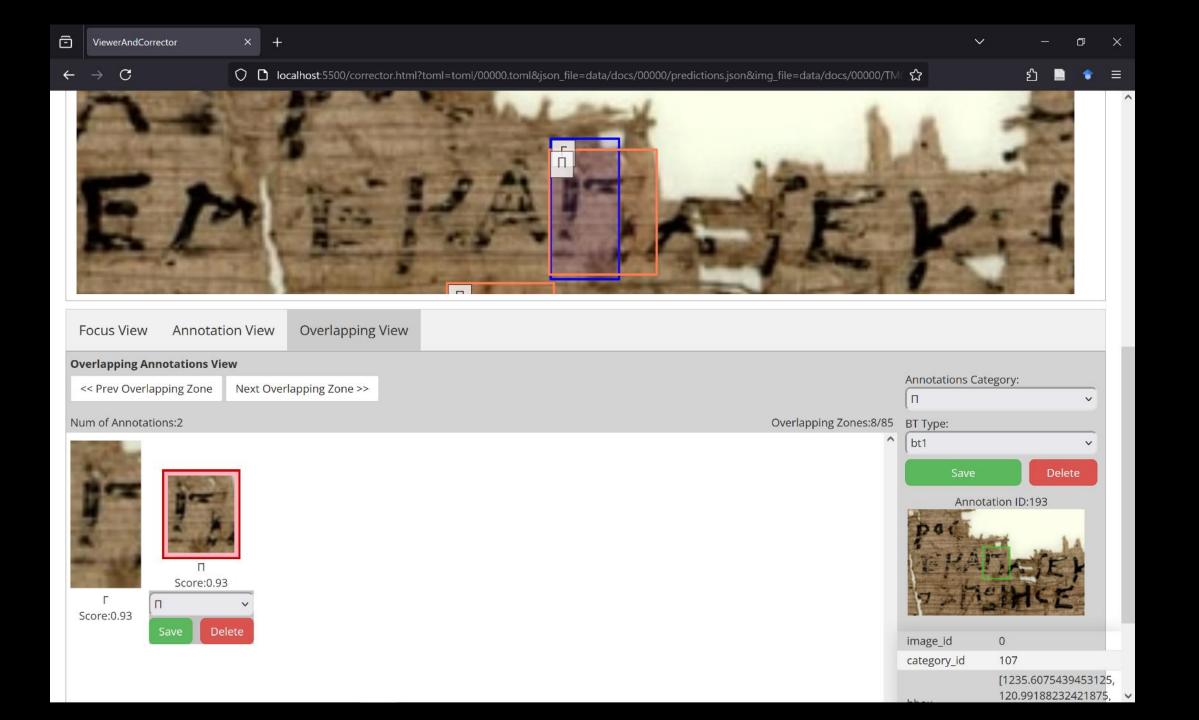


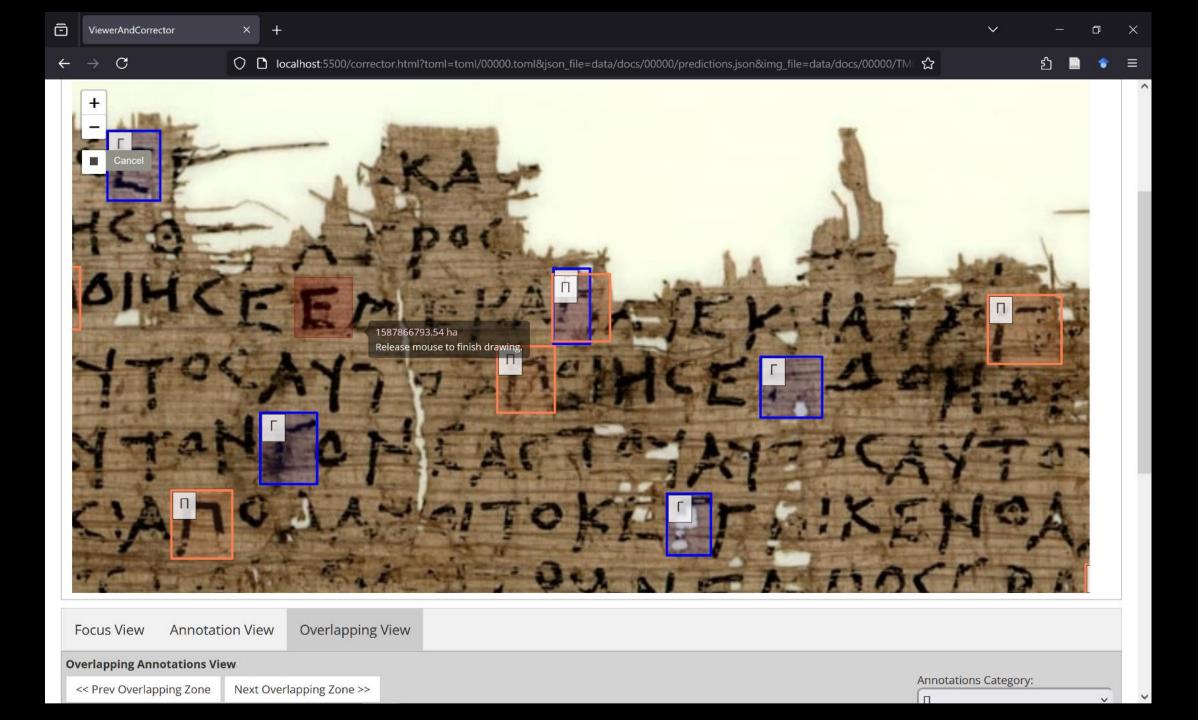












Q

Published March 25, 2025 | Version v1





Hell-Date. EGRAPSA Hellenistic Dated Papyri Dataset

Ferretti, Lavinia¹ (D); Serbaeva Saraogi, Olga¹ (D); De Gregorio, Giuseppe¹ (D);

Marthot-Santaniello, Isabelle 1 (b)

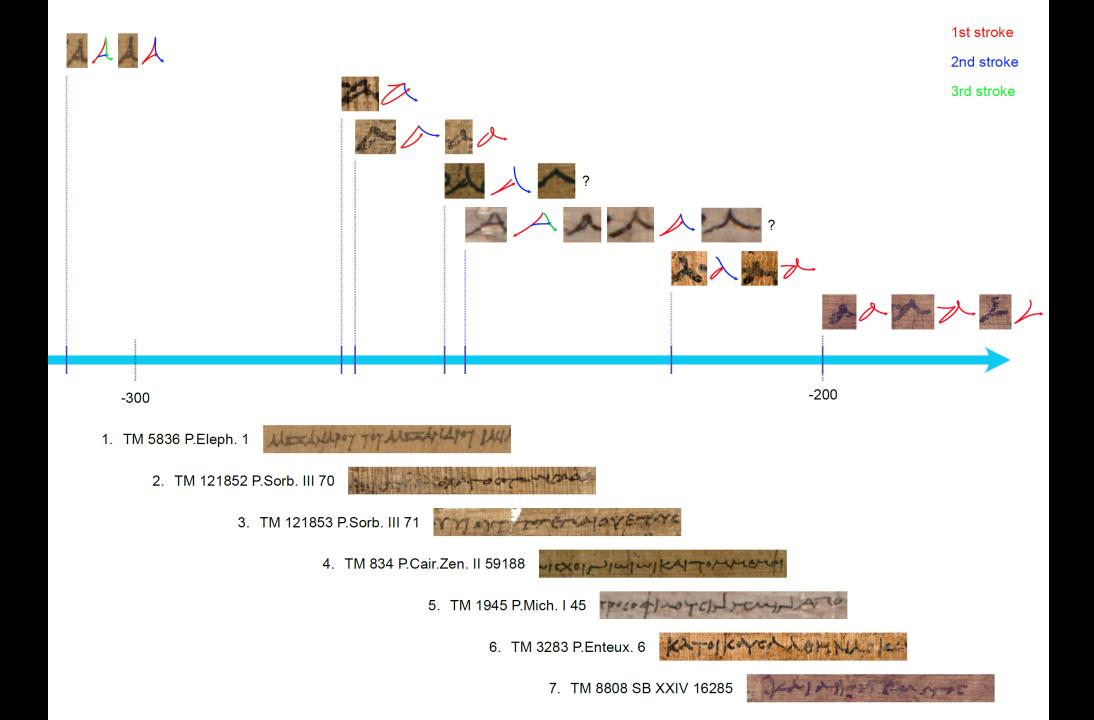
Show affiliations

Introduction

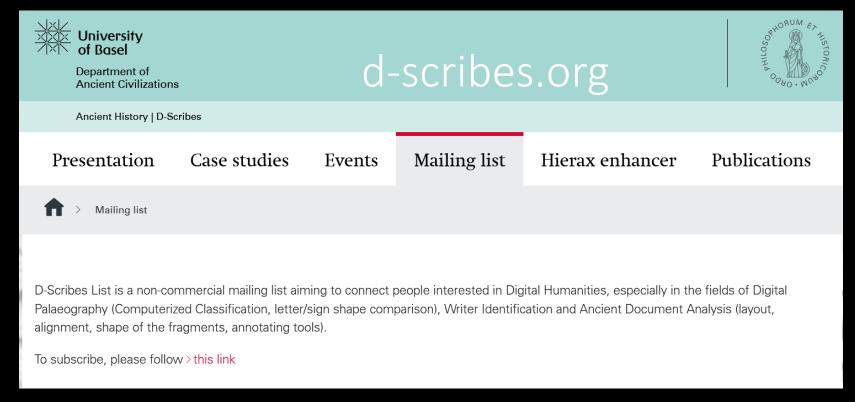
The present dataset stems from research pursued within the SNSF funded Starting Grant *EGRAPSA: Retracing the evolutions of handwritings in Graeco-Roman Egypt thanks to digital palaeography* (SNSF grant n° 211682). The aim is to provide solid ground truth for palaeographic dating, and detection and recognition of characters of cursive handwritten ancient Greek.

It is composed of **194 images of 157 papyri that are precisely dated** (within two years) from the Hellenistic period (3rd to 1st c. BCE, more precisely from -310 to -3). The chronological coverage is balanced around 50 papyri per century over the considered period (3rd to 1st c. BCE); only the earliest decades are not covered, and the decade 250s is overrepresented. Most documents come from Egypt, but there are a few outsiders from Near East. The dataset also includes the **annotation to the character level of these images**, every time the preservation of the original writing and the quality of the image allowed for an annotation. It is divided into two subsets, a training set comprising 176 images and a test set comprising 18 images, following the same division used in De Gregorio et al. 2024.





D-scribes mailing list



Aims at connecting people interested in Digital Humanities:

- Digital Palaeography (Computerized Classification, letter/sign shape comparison)
- Writer Identification
- Ancient Document Analysis (layout, alignment, shape of the fragments, annotating tools)