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معهد الثقافات الشرقية
والعصر الكلاسيكي القديم

Institute for Oriental
and Classical Studies

Semitic Epigraphy in the Digital Age

بحث النقوش السامية في العصر الرقمي

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Scientific lab «Semitic Epigraphy in the Digital Age»

- Since 2024
- <https://iocs.hse.ru/semiticepigraphy/>
- Ancient Semitic inscriptions in Russian collections
- Phoenician, Punic, Palmyrene, Nabataean, South Arabian
- Lapidary inscriptions & «small epigraphy»



Research team

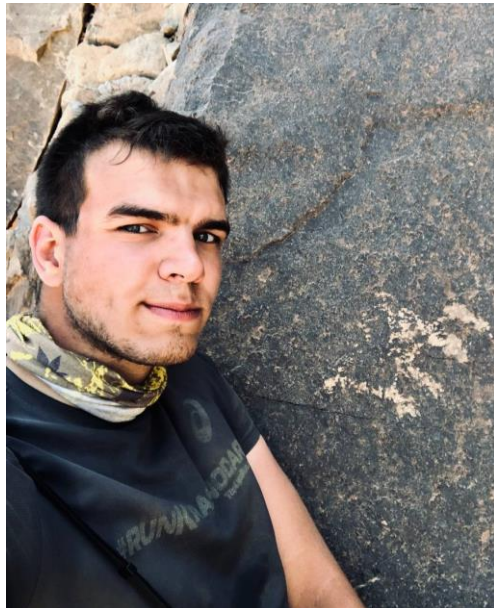
- Linguists
- Archeologists
- Technical assistant



Vladimir Timofeev



Alexey Lyavdansky



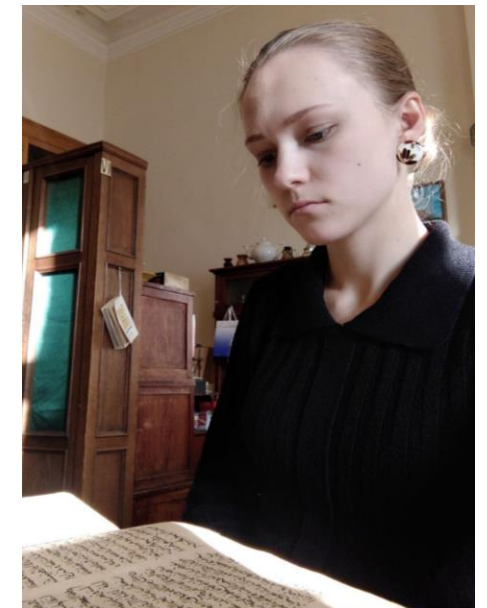
Yury Kondratyev



Maria Bodrova



Anton Svencis



Stanislava Khizhniakova

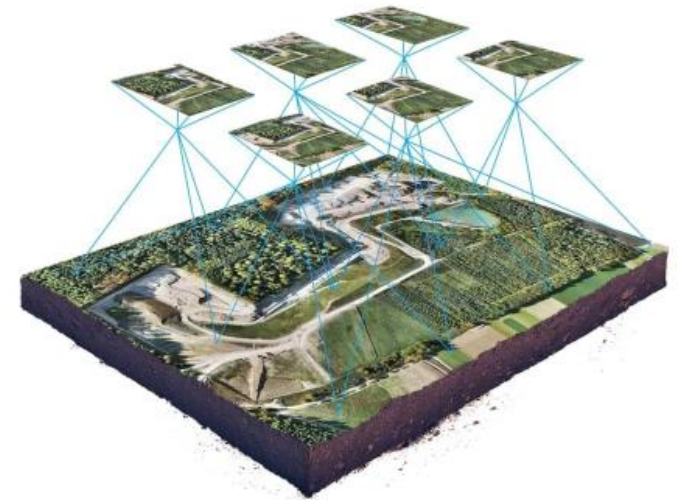
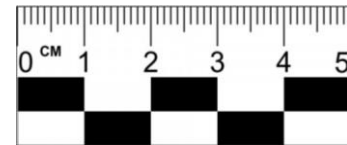
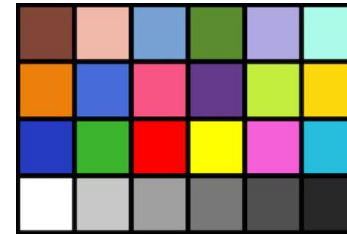


Tasks

- Digital recording
- Digital visualization
- Digital documentation
- Statistics



Digital recording: equipment and method



Installation of
equipment

Camera & lights

Installation of item

Stand

Adjusting color
balance

Color focus
pattern

Scaling

Scale ruler

Plane survey

(Turntable)



Digital visualization

Modeling (photos => 3D model)

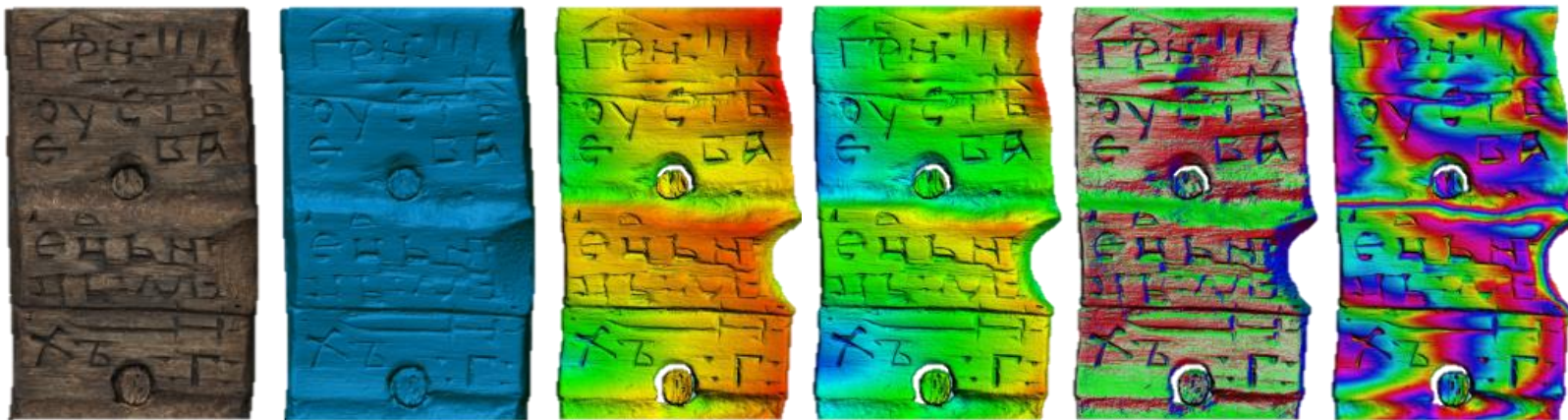
Post-modeling:

- Rasters
- With or without texture
- Visualization (coloring)



Digital visualization: coloring

- Digital elevation (surface) modeling (DEM)
- Multi-Scale Integral Invariant (MSII)



Digital visualization: 3D models



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Digital documentation: databases

- RIP (<http://rockinscriptions.huji.ac.il>)
- DASI (<https://dasi.cnr.it>)
- OCIANA (<https://ociana.osu.edu>)
- DiCoNab (<https://diconab.huma-num.fr>)



Digital documentation: parameters

Identification	Archaeology	Palaeography	Text and commentary	Supporting information
Number	Photo of base	Photo of inscription	Drawing of inscription	Year of discovery
Storage location	Material of base	Type of writing	Language	Year of acquisition
Inventory number	Type of base	Dimensions of inscription	Genre	Provenance
Concordance	Dimensions of base	Number of lines	Text	Integrity
	Place of discovery	Method of applying	Apparatus criticus	Bibliography
	Context of discovery	Palaeographical date	Translation	
	Archaeological date		Textual date	

Statistics: Palmyrene and Punic datasets

Palmyrene

- ~ 3000 items
- 12 parameters

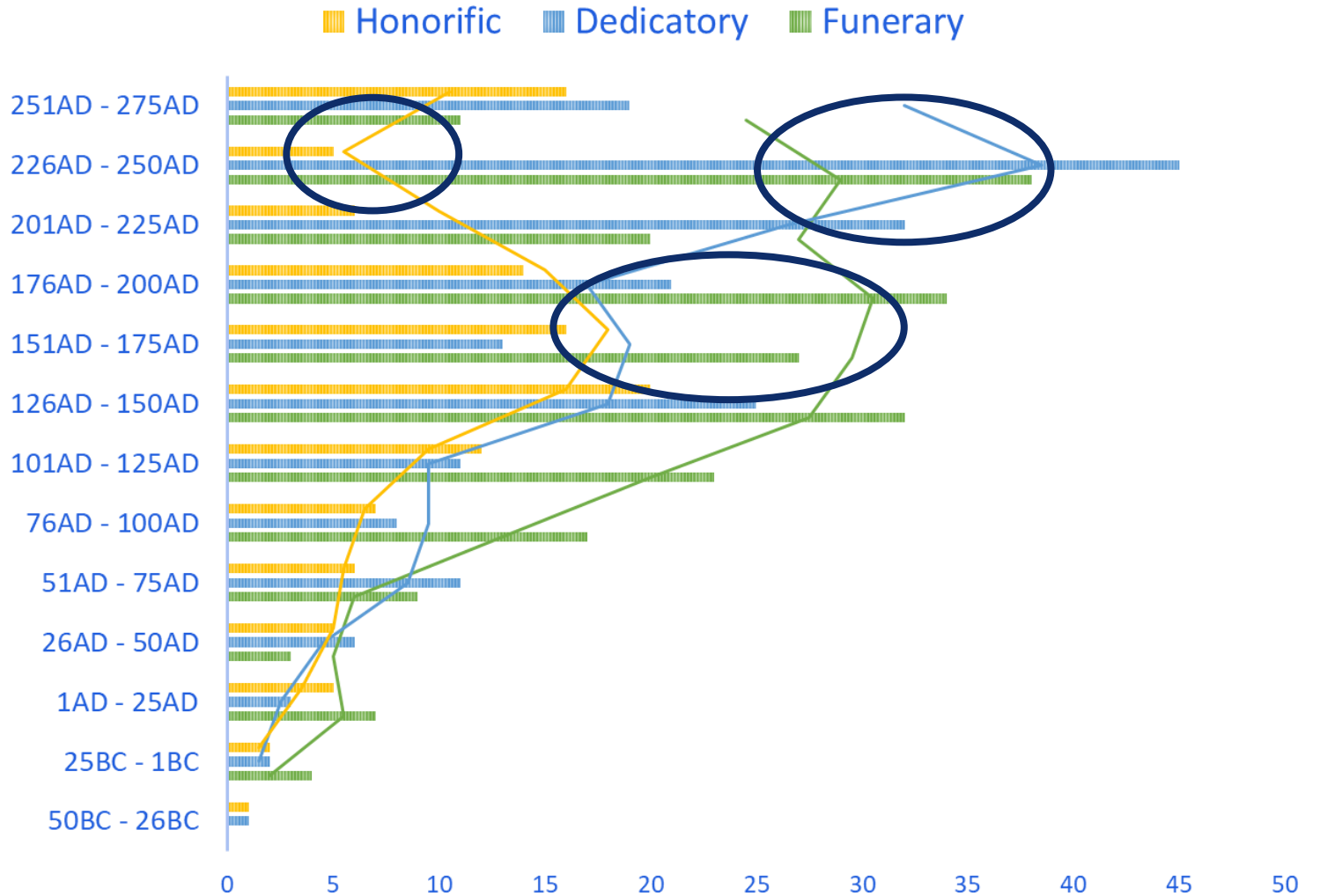
Punic

- ~ 600 items
- 20 parameters

Number	Letter	Language	Type	Place	Based	Year	Month	Day
1			Funerary		On relief	65		
2			Funerary	Foundation	On door lintel	106		
3			Funerary		On wall, fresco			
4			Funerary		On wall, fresco			
5			Funerary		On fragmentary relief	148	June	29
6			Funerary		On relief			
7			Funerary		On relief			
8			Dedicatory		On relief			
9			Dedicatory		On statue base	146	April	
10			Funerary		On relief	160	January	27
11			Funerary		On relief			
12			Funerary		On relief			
13			Funerary		On relief			
14			Funerary		On relief			
15			Funerary		On relief			
16			Funerary		On stone slab	174	June	
17		+Greek	Dedicatory		On stone block			
18			Funerary		On relief			
19			Funerary		On relief	236		
20			Funerary		On relief			
21			Funerary		On relief			
22			Funerary		On relief	154		
23		+Greek	Funerary	Foundation	On stone tablet set in wall	98	October	
24			Funerary	Foundation	On door lintel	229	April	
25			Funerary		On sarcophagus, with relief			
26			Funerary	Foundation	On door lintel	109	April	
27			Funerary	Cession	On door lintel	193	March	
28			Funerary	Cession	On door lintel	215	May	
29			Funerary	Cession	On door lintel	223		
30			Funerary		On sarcophagus			

Statistics: results

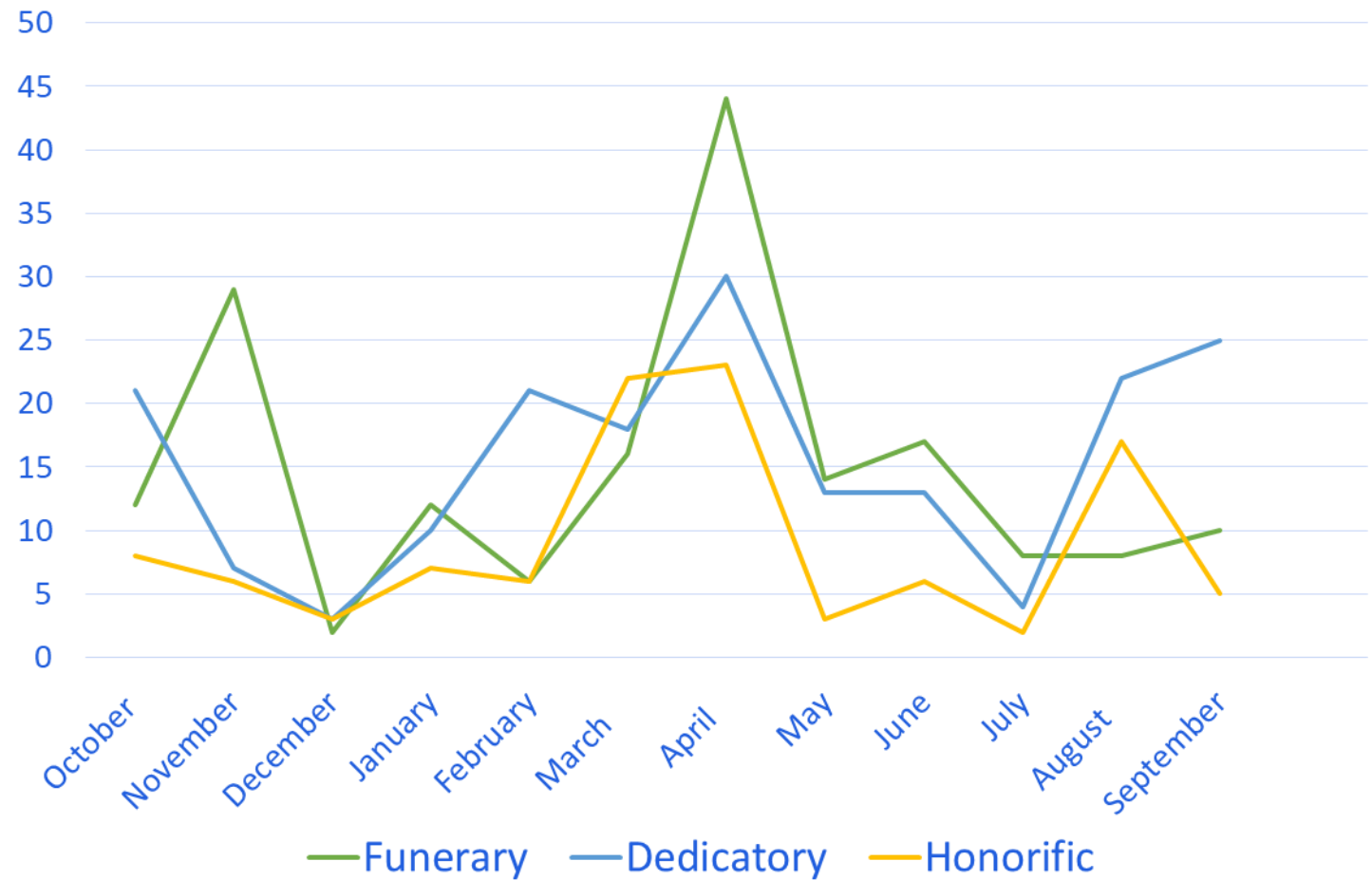
Genres of inscription by quarters of a century





Statistics: results

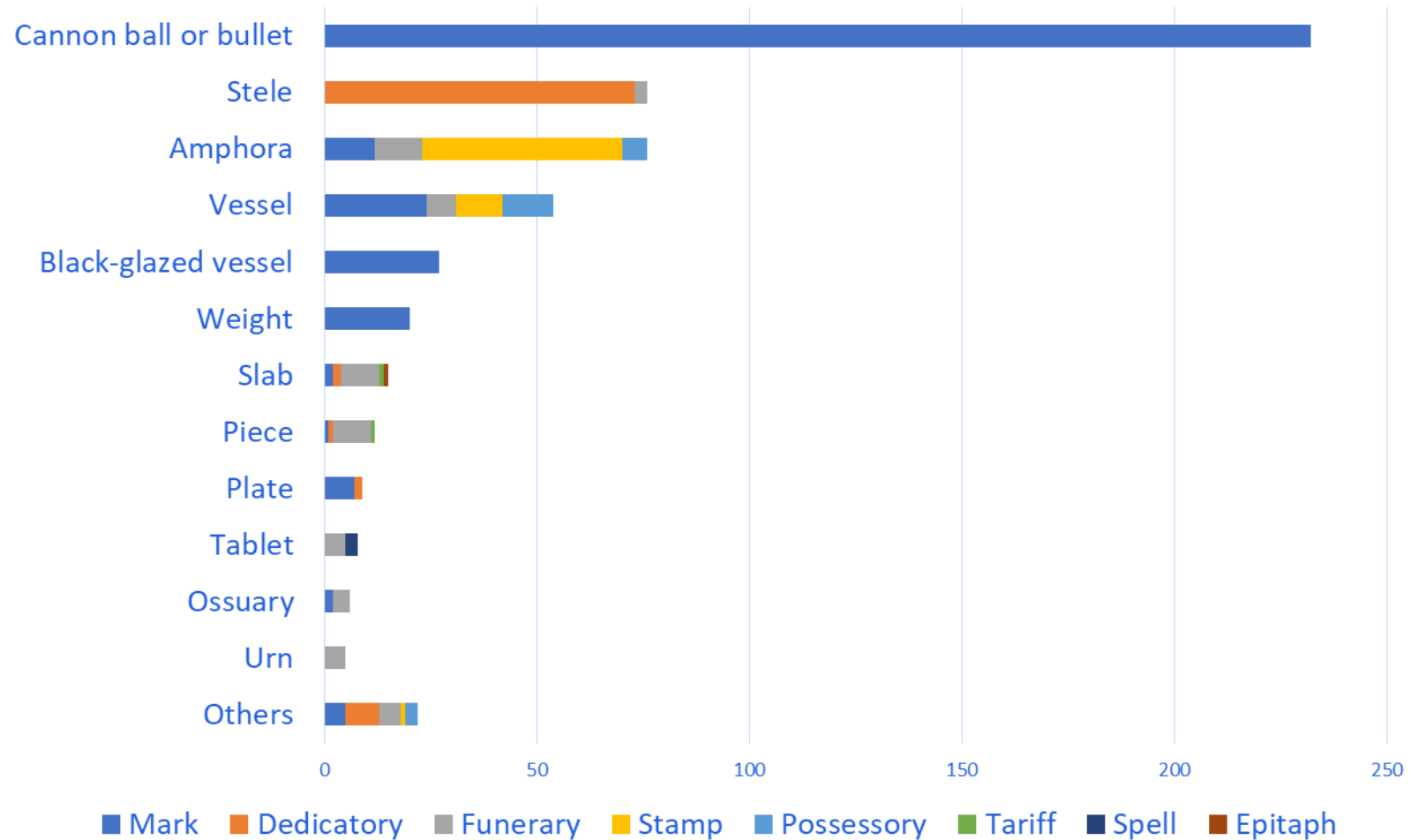
Genres of inscription by months





Statistics: results

Genres of inscriptions by types of base





Semitic inscriptions in Russian collections

- State Hermitage Museum
- Pushkin State Museum of Fine Arts
- State Historical Museum
- Institute of Oriental Manuscripts
- Other museums
- Private collections

Conclusion

Why are digital methods essential for studying Semitic epigraphy?

- Military conflicts => destruction of monuments
- Abjad (consonantary) writing => importance of each symbol
- Study of common epigraphic trends across languages and writings
- Corpus-based study of each epigraphic tradition

