

# AN APPLICATION OF THE SERIATION PROBLEM TO THE DOMUS DE JANAS

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Seriation is an ordering problem which consists in determine the best ordering of a set of correlated units, whose relationship is defined by a bipartite graph. It has several applications in different fields, like genetics, antropology, archaeology and psychology. Our application consists in ordering archaeological sites based on the characteristics of parietal engravings found in them, using the Matlab package in [1]. During the application we considered two matrices, which gave us information about the similarity among the data. We observed that the method (due to its formulation) in some cases extract a solution in which some data seem not be in the correct position. So we determined an indicator to select the best order among different ones and apply it to order the *Domus the Janas* sites, for determining a chronological sequence of them.

## References

- [1] A. Concas, C. Fenu, G. Rodriguez, *PQser: a Matlab package for spectral seriation*, Numerical Algorithms, 80 (2019), pp. 879–902.