

Project Number: DH-8901

Computational Methods for the Nucleolus

A Major Qualifying Project Report

Submitted to the Faculty

of the

WORCESTER POLYTECHNIC INSTITUTE

in Partial Fulfillment of the requirements for the
Degree of Bachelor of Science

By



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Date: April 30, 1989

Approved:



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ACKNOWLEDGEMENTS

I would like to give thanks and gratitude to Professor David Housman for his support, patience, enthusiasm and continuous guidance throughout this project. The dedication he gives to his students goes beyond the "call of duty" and the many hours of energy devoted to this project are appreciated more than I can let him know.

I would also like to thank Kristina Szwaya for her guidance during the development of the initial Pascal implementation.

ABSTRACT

Two approaches for computing the nucleolus of a cooperative game are analyzed. The first is suggested by the definition of the nucleolus and involves the solution of successive linear programs. The second is suggested by the consistency of the nucleolus on reduced games and involves a recursive procedure. The second approach is shown to be untenable while the first approach is implemented in pascal and the complexity is determined theoretically and through numerical experimentation.

