# Min-Max vs. Min-Sum Vehicle Routing: A Worst-Case Analysis 

## Luca Bertazzi

Department of Economics and Management, University of Brescia, 25122 Brescia, Italy Bruce Golden
R. H. Smith School of Business, University of Maryland, College Park, Maryland 20742, U.S.A. (email: bgolden@rhsmith.umd.edu)

## Xingyin Wang

Department of Mathematics, University of Maryland, College Park, Maryland 20742, U.S.A.


#### Abstract

Route 2014 Both minimizing the sum of lengths of all routes and minimizing the length of the longest route are important objectives for Vehicle Routing Problems. We perform a worst-case study to show that the optimal solution with respect to one objective can be very poor in terms of the other one.


Keywords: Vehicle Routing Problem, Min-Sum, Min-Max, Worst-case Analysis.

