



UCL Department of Computer Science  
CS M038/GZ06: Mobile and Cloud Computing  
Spring 2016  
Brad Karp

**One-pager: GPSR (Karp and Kung, 2000)**

**Due: Start of lecture, 20th January 2016**

*Instructions: in your own words, answer the following question as succinctly as possible (in 200–500 words, but shorter answers within this range are encouraged). Quoting figures or text from the assigned reading or from any other source is specifically prohibited.*

Suppose a wireless network includes one or more *unidirectional* links: links where connectivity exists in one direction, but not in the other direction. Suppose that in such a network, one or more paths exist between a source node  $S$  and a destination node  $D$ . Will GPSR always find one of these paths (*i.e.*, and route successfully from  $S$  to  $D$ )? If you answer affirmatively, explain why the GPSR algorithm will always succeed on such topologies. If your answer is no, give a counterexample topology.