



UCL Department of Computer Science  
CS M038/GZ06: Mobile and Cloud Computing  
2011–2012, Term 2  
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**One-pager: Rateless Spinal Codes (Perry, et al., 2011)**      **Due: Start of lecture, 6th March 2012**

Instructions: *in your own words*, answer the following questions as *succinctly* as possible (in 200–500 words total, 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 you were implementing Spinal Codes on a radio whose digital to analog converter provided 12 bits of resolution in each of the I and Q axes.<sup>1</sup> What values would you choose for  $c$  (the number of bits used in Spinal Codes' deterministic constellation mapping function)? What would be the effect of choosing  $c$  lower than this value? What would be the effect of choosing  $c$  higher than this value?

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<sup>1</sup>In other words, constellation points passed to the radio must be represented as a pair of 12-bit numbers.