15 April 2015 CAAM 654 Paul E. Hand hand@rice.edu

Day 21 — Reading and Questions

Read: arXiv paper 1407.1065, "Phase Retrieval via Wirtinger Flow: Theory and Algorithm" by Candes, Li, and Soltanolkotabi. http://arxiv.org/abs/1407.1065

- 1. What algorithm is proposed for phase retrieval?
- 2. What are its strengths and weaknesses compared to PhaseLift?
- 3. What is Wirtinger Flow? How would you explain it to someone who hadn't seen it before?
- 4. What is/are the important technical reason(s) for which the recovery result is true.
- 5. What are your thoughts on how good the algorithm and recovery guarantee is? Does it easily inspire algorithms for other problems too?