



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2014_BJMCS_13998
Title of the Manuscript:	Stable recovery of sparse signal in Compressed Sensing via the RIP of order less than s
Type of the Article	Original Research Article

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Lemma 2.3 is a direct result of the fact: $\pi(1) > \pi(\rho) = \rho > 1 = \sigma$ for $\rho = 1; 2; \dots; \sigma$. It is unnecessary for one to prove it in one page. On page 805, a statement that $\pi(1) > 1 = \sigma$ implies $\pi(\rho) > 1 = \sigma$, $2 < \rho < \sigma$ should be proved. The author claims that there is an integer ρ_χ satisfying (2.9) for any $\chi > 1$. The claim needs to be revised and proved since $2\sigma = \chi$ must be an integer. Without the proof of the claim, the proof of Theorem 2.1 is incomplete. The fonts in Figure 3 are too small and light to be read. In the examples at the end of Section 2.2 the author gave sufficient assumptions. For example, in the case of $\pi(\sigma=4) > 2=3$ and $\pm_{3\sigma=4} < 0.414$, it is not clear how to choose values of χ, ρ_χ and $\pi(\rho_\chi)$ so that the condition (2.9) is satisfied. It cannot be understood that a lower bound of $\pi(\sigma=4)$ but an upper bound of $\pi(\sigma=5)$ are used as sufficient conditions. The referee is most concerned about the significance of the main result. The sufficient conditions for the recovery of sparse signals in the manuscript include an bound of $\pi(\rho_\chi)$, whose value is unknown until both the exact and recovered signals are available. This significantly affects the impact and applications of the main result of the manuscript.	



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Minor REVISION comments	The readability of the proof of Theorem 2.1 needs to be improved.	
Optional/General comments	The author investigates sufficient conditions on the function $\pi(\rho)$ and the restricted isometry property (RIP) under which sparse signals can be recovered by solving λ_1 minimization problem (1.2).	

Reviewer Details:

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