

## Reply to Reviewer 1

Thank you very much for your precious time and valuable comments. The manuscript has been revised considering yours' and respected reviewers comments. Below we detail our reflections, point-by-point.

### Reviewer

This paper presents techniques for SUs selection and interference mitigation for CR networks. The presentation of this paper needs improvement. The paper is hard to read and understand with many grammatical mistakes and typos. There are few concerns listed:

#### *Response*

As per your request, a more thorough proof reading of the paper has been conducted to enhance its readability.

### Reviewer

1. Limited discussion on related researches and motivations. No discussion on competence of the proposed work with state-of-the-art.

#### *Response*

As per your request, we paid special attention in the revised manuscript to related works and performance comparison. In particular, more details about the techniques discussed in the introduction have been included in the revised paper. We also added a section containing most of the related techniques in the literature.

Furthermore, in addition to the Threshold Based Selection technique [33,34], we also compared the simulated outage performance of the proposed techniques to the Best Channel Selection (BCS) [15] technique and Threshold Best Channel Selection (TBCS) [16] with different interference power guarantee configurations.

### Reviewer

2. Section 1: More discussion and better organization is desirable.

### ***Response***

In the revised manuscript, more discussion has been added in Section 1. We also added a section containing most of the related techniques in the literature.

### **Reviewer**

3. Section 2 - 6: Shrink those sections. Avoid the repetitive equations with minor changes. Do not mention general equations, go with citations only.

### ***Response***

To improve the readability of the paper, we shrank Sections 2 to 6 and reduced the length of the manuscript (excluding appendices and bibliographies) from 39 to 32 pages by moving some of the mathematical analysis to the appendix, bypassing straightforward derivations and avoiding redundancy.

### **Reviewer**

Section 7: Proper analysis and remarks from the experimental results are missing.

### ***Response***

As per your request, we added more detailed analysis and remarks regarding the simulation results in Section 8.