

# AVERAGE SPARSE APPROXIMATION FOR SIGNALS WITH NON-HOMOGENOUS SUPPORT DISTRIBUTION

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## **Abstract:**

I will first motivate why it is useful to look at signals whose supports follow a random model, where not every atom is included with the same probability, but some atoms are more likely. I will then introduce a simple model for non-uniform support selection and provide conditions on a frame or dictionary, which guarantee that a randomly chosen support leads to a well-conditioned sub-frame (sub-dictionary) with high probability. Depending on the interests of the audience I can then sketch the proof, show the crux of the proof in more detail, or derive average sparse approximation and compressed sensing results.

Joint work with Simon Ruetz.