

LIST OF NOTATIONS

Symbols	Definition
s	Sparse Signal
x	Coefficient Sequence
Y	Vector Measurements
f	Sparse Vector $f \in R^n$
ψ	Coefficient Projections $N \times N$ Matrix with $\psi_1, \dots, \psi_n$ as Columns
θ	$m \times n$ Sensing Matrix
φ	Matrix Measuring
z	Noise
$y(n)$	Signal Received
$x(n)$	Primary Signal
$Z(n)$	Additive White Gaussian Noise (AWGN)
H_1	Primary Signal is Present
H_0	Primary Signal is Absence
Φ	Compressive Matrix
n	$1 \dots N$, N is The Number of Samples
$T(y)$	Test Statistic of Signal Energy
λ	Sensing Threshold
P_{fa}	Probability of False Alarm
P_d	Probability of Detection