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## Robust Synchronization and Model Reduction of Multi-Agent Systems

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## LIST OF SYMBOLS

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$\mathbf{1}$	vector of ones	9
$\mathbb{C}$	field of complex numbers	8
$\text{diag}(a_1, a_2, \dots, a_p)$	(block) diagonal matrix with $a_1, a_2, \dots, a_p$ on the diagonal	10
$\mathcal{E}$	edges in the network graph	16
$\mathcal{H}_\infty$	$\mathcal{H}_\infty$ -norm	3
$\mathcal{H}_2$	$\mathcal{H}_2$ -norm	6
$\text{im}(B)$	image of a matrix	24
$A \otimes B$	Kronecker product of A and B	10
$\lambda_{\max}(A)$	largest eigenvalue of a positive semi-definite matrix	9
$\mathcal{N}$	set of neighboring agents	16
$B^\perp$	left annihilator of B	9
$\mathbb{R}$	field of real numbers	8
$\text{Re}(\alpha)$	real part of $\alpha \in \mathbb{C}$	14
$\mathcal{RH}_\infty$	set of all proper and stable real rational matrices	14
$\rho(A)$	spectral radius of a square matrix	9
$\sigma_1(A)$	largest singular value of a matrix	9
$\sigma_{\min}(A)$	smallest singular value of a matrix	74
$\mathcal{V}$	nodes in the network graph	16

