Standard Relationship Inference
$O(N^2)$ **All-to-All Complexity**
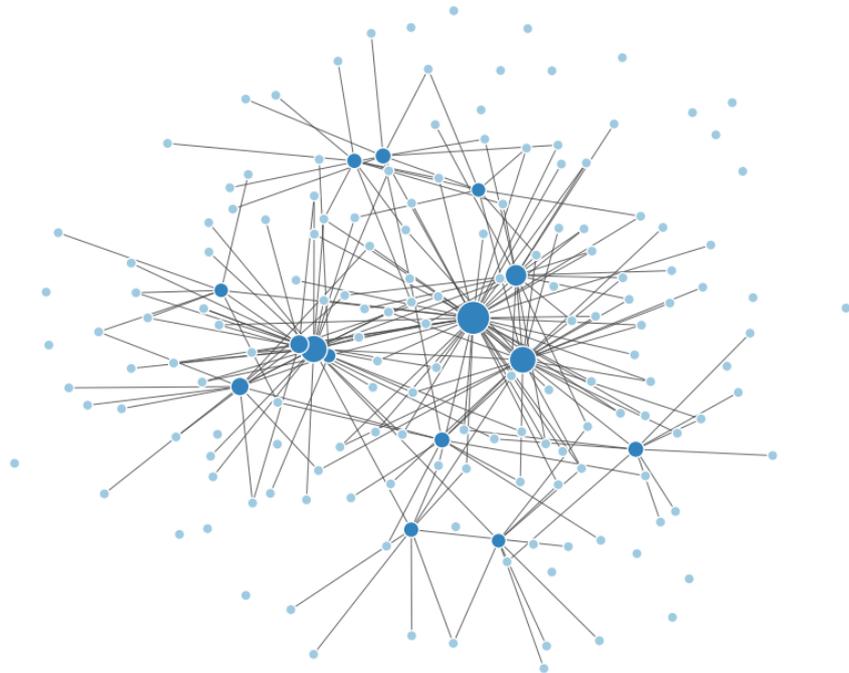
RIS Framework
$O(N)$ **Adaptive Sparsification**
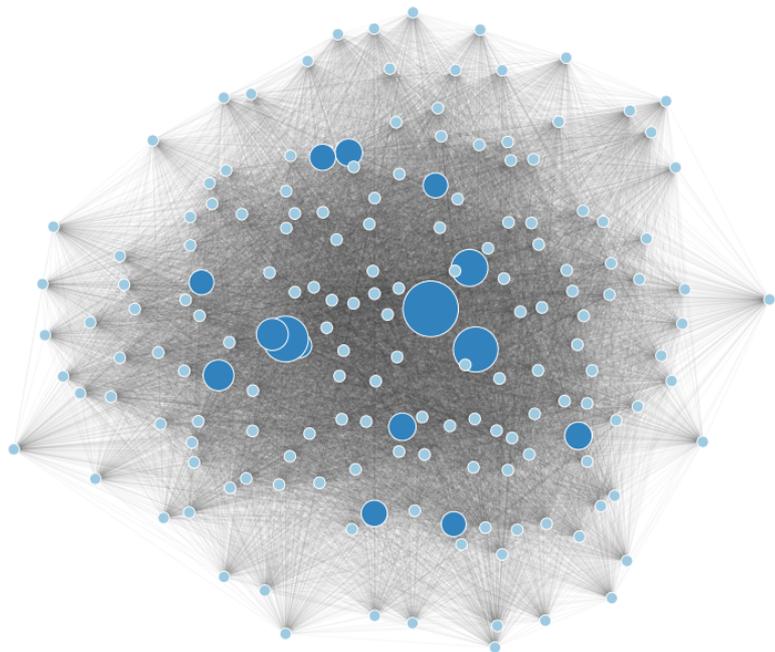
Redundancy in 170-node system
High Computational Barrier

Topological Preservation
99% Gain in Efficiency