



Julian Hutchins

Davis Award
Mathematics Major
Second Year ARCS Scholar

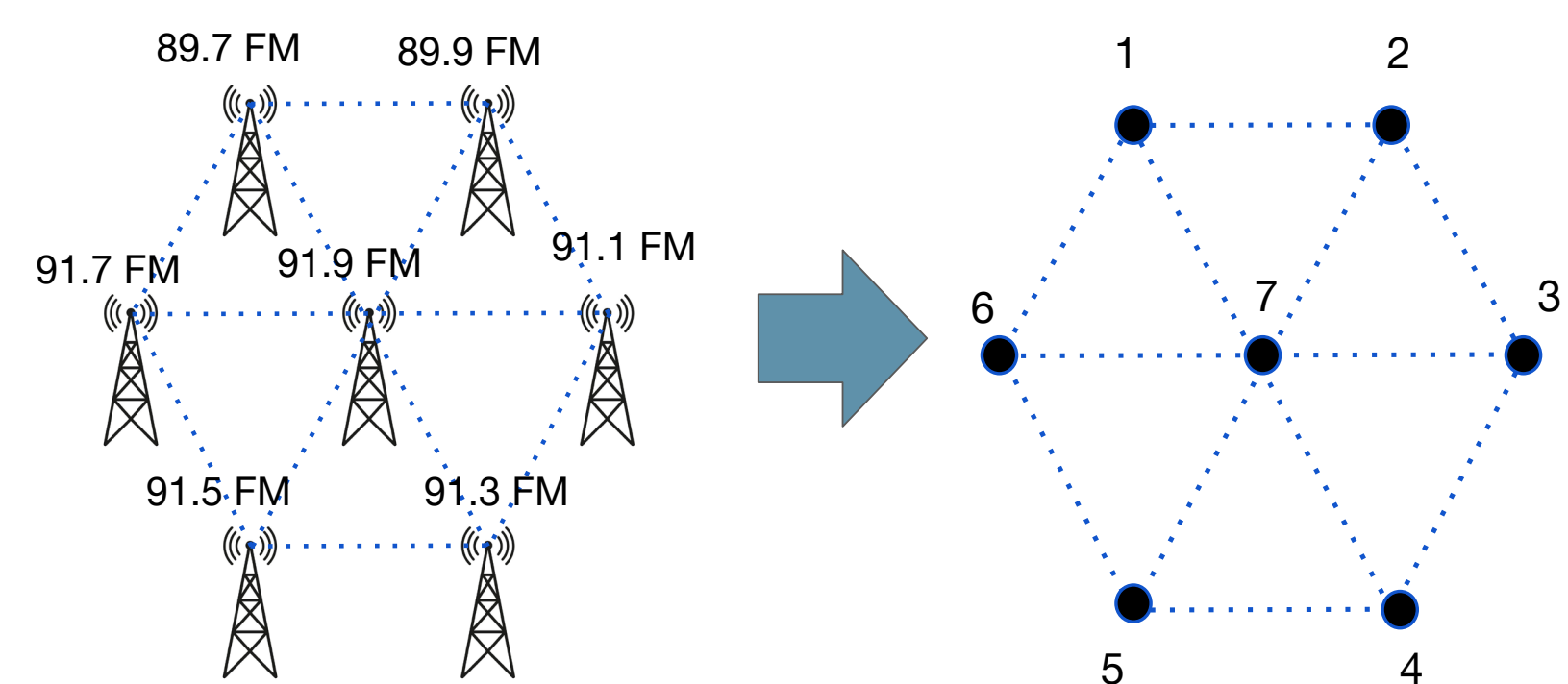
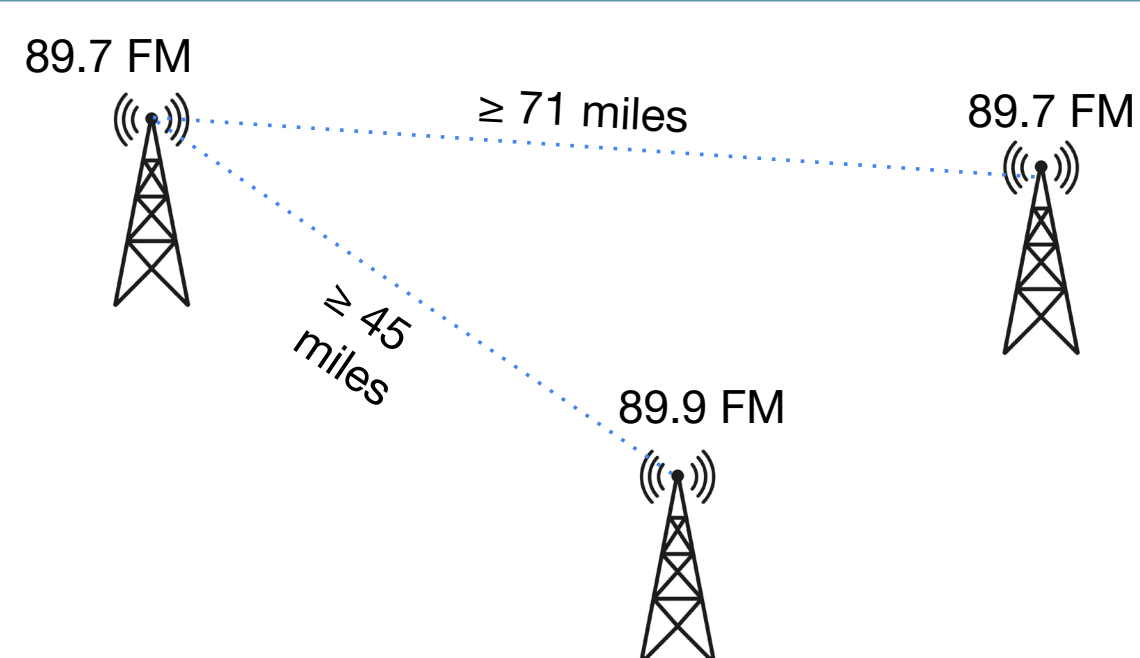


MOREHOUSE
COLLEGE

Radio Labelings and the Moore Bound

The problem of assigning channels to radio towers can be efficiently reduced to assigning labels to graphs. My group's research analyzes the potential existence of effective labelings for various families of graphs.

Question: How do we assign channels to radio towers while minimizing interference and bandwidth?



The more distinct the labels $f(u)$ and $f(v)$...

$$|f(u) - f(v)| + d(u, v) \geq \text{diam}(G) + 1$$

...the closer u and v may be

Moore Bound related graphs

