

# Radial Moore Graphs for Every Diameter

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The *degree* of a vertex is the number of its adjacent edges; the *diameter* of a graph is the largest distance between any two vertices. The *degree/diameter problem* asks, for given maximum degree and given diameter, what is the largest number of vertices that a graph can have?

A natural upper bound for the degree/diameter problem is the so-called Moore bound.

A *radial Moore graph* is a graph of maximum degree  $d$ , radius  $k$  and diameter at most  $k+1$ , while the number of vertices is equal to the Moore bound  $M(d,k)$ .

It has been an open problem for more than a decade to find if a radial Moore graph exists for every value of  $k$ . In this talk we will present some new results concerning radial Moore graphs for any given radius. The talk will conclude with some further open problems.