

## HEATING THE SPHERE

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Where would you allocate  $N$  sources of heat in the 2-dimensional sphere in order to maximize the steady state average temperature, assuming a constant cooling rate everywhere?

In this talk I will describe a theoretical solution to this facility location problem, relating it to other classical questions in potential theory, stability of polynomial zeros, eigenvalue computations and numerical integration. Novel results about some of these classical problems will be presented as a consequence of the analysis.

*Joint work with : Different coauthors in several parts of the talk will be credited in the slides.*