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Sergey V Lototsky* (lototsky@usc.edu), Department of Mathematics, USC, 3620 S Vermont Ave, KAP 104, Los Angeles, CA 90089. *Can you feel the size of a lake?*

Is it possible to estimate the area of a lake by measuring its water temperature? Setting up the question as a statistical estimation problem for a stochastic heat equation leads to a positive answer — and lots of interesting math. (Received August 08, 2015)