# Optimization problems and parabolic equations on lower dimensional structures

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I will discuss the problem of finding an optimal conductivity tensor field minimizing thermal compliance for a given balanced distribution of heat sources and sinks. The heat sources are expressed as objects more general than Radon measures. The solutions to the optimization problem are quite explicitly expressed in terms of the data. The work is based on a foundation made by Bouchitté and Buttazzo. I will also discuss the related problems concerning solving the heat equation on lower dimensional structures in $\mathbb{R}^3$ which are formed by a finite union of one and two dimensional components.

## References

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