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Markus Grasmair* (markus.grasmair@uibk.ac.at), Department of Computer Science,
University of Innsbruck, Technikerstr. 21a, A-6020 Innsbruck, Austria. *Dual settings for total
variation regularization.*

We present a characterization of solutions of total variation regularization strongly related to the notion of the G -norm. Using this characterization we show that total variation regularization is equivalent to a family of dual methods that can be viewed as generalizations of the onedimensional taut string algorithm to higher dimensions. As particular examples of these dual methods we obtain the taut string algorithm itself, and an algorithm proposed by Chambolle in 2004. The interesting point is that, contrary to the original problem, in the dual setting one has a lot of freedom in the choice of the regularization functional. In fact, every convex regularization function yields the same result. (Received September 26, 2006)