

1096-90-2020

Christiane Tammer* (christiane.tammer@mathematik.uni-halle.de), Institute of Mathematics, 06099 Halle, Germany, and **Kathrin Klamroth, Elisabeth Koebis** and **Anita Schoebel**. *A unified approach for different concepts of robustness and stochastic programming via nonlinear scalarizing functionals.*

We show that many different concepts of robustness and of stochastic programming can be described as special cases of a general nonlinear scalarization method by choosing the involved parameters and sets appropriately. This leads to a unifying concept which can be used to handle robust and stochastic optimization problems. Furthermore, we introduce multiple objective (deterministic) counterparts for uncertain optimization problems and discuss their relations to well-known scalar robust optimization problems by using the nonlinear scalarization concept. (Received September 17, 2013)