

1084-60-347

**Song Yao\*** (songyao@pitt.edu), Pittsburgh, PA 15260, and **Erhan Bayraktar**  
(erhan@umich.edu), Ann Arbor, MI 48109. *On Zero-Sum Stochastic Differential Games.*

We generalize the results on zero-sum stochastic differential games to the case when the controls are unbounded. We do this by proving a dynamic programming principle using a covering argument instead of relying on a discrete approximation. We define our pay-off through a backward stochastic differential equation. The value functions turn out to be the viscosity solutions of some fully non-linear PDEs. (Received September 04, 2012)