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Li-Sheng Tseng* (lstseng@math.uci.edu) and **Lihan Wang**. *Analysis of symplectic differential operators.*

On symplectic manifolds, there are two first-order linear differential operators (∂_+, ∂_-) that are intrinsically symplectic and have good properties. The operators were identified and used by Tseng-Yau to define novel symplectic invariants based on cohomology of differential forms. These operators can be thought of as the natural building blocks for constructing symplectic elliptic operators and differential systems. This talk will present some of recent results on the analysis of these operators and show how they can lead to some new invariants for symplectic manifolds with boundary. (Received January 18, 2016)