1001-34-244   **Anton Zettl*** (`zettl@math.niu.edu`), Mathematics Department, Northern Illinois University, DeKalb, IL 60115. *Sturm-Liouville Problems: A Survey.* Preliminary report.

We discuss basic properties, recent results and some open problems in Sturm-Liouville theory. Regular and singular problems are considered, not only for the classical case with a positive weight function, but also for the case when the weight function changes sign. In this case the problem may be left-definite or indefinite. (Received August 27, 2004)