Record Nr. UNINA9910783420503321 Autore Cruz Jorge **Titolo** Constraint reasoning for differential models [[electronic resource] /] / Jorge Cruz Amsterdam; ; Washington, D.C., : IOS Press, c2005 Pubbl/distr/stampa 1-280-24343-0 **ISBN** 9786610243433 1-4237-9924-0 1-60750-121-X 600-00-0376-5 1-60129-102-7 Descrizione fisica 1 online resource (244 p.) Collana Frontiers in artificial intelligence and applications;; v. 126 006.3 Disciplina Soggetti Constraints (Artificial intelligence) Differential equations Interval analysis (Mathematics) Biophysics - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di contenuto Title page; Table of Contents; Introduction; Interval Constraints; Constraint Satisfaction Problems; Interval Analysis; Constraint Propagation: Partial Consistencies: Global Hull-Consistency: Local Search; Experimental Results; Interval Constraints for Differential Equations; Ordinary Differential Equations; Constraint Satisfaction Differential Problems; Solving a CSDP; Biomedical Decision Support with ODEs; Conclusions and Future Work; References; Appendix A: Interval Analysis Theorems; Appendix B: Constraint Propagation Theorems Sommario/riassunto Focuses on the integration of ordinary differential equations within the interval constraints framework, which for this purpose is extended with the formalism of Constraint Satisfaction Differential Problems. Such a framework allows the specification of ordinary differential equations by means of constraints.