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## Impulsive and Hybrid Dynamical Systems

Stability, Dissipativity, and Control



Wassim M. Haddad, VijaySekhar Chellaboina, and Sergey G. Nersesov

## **Impulsive And Hybrid Dynamical Systems**

**Author**: Wassim M Haddad VijaySekhar Chellaboina Sergey G Nersesov / **Category**: Mathematics / **Total Pages**: 496 pages

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**Summary:** Free impulsive and hybrid dynamical systems pdf download - this book develops a general analysis and synthesis framework for impulsive and hybrid dynamical systems such a framework is imperative for modern complex engineering systems that involve interacting continuous-time and discretetime dynamics with multiple modes of operation that place stringent demands on controller design and require implementation of increasing complexity--whether advanced high-performance tactical fighter aircraft and space vehicles variable-cycle gas turbine engines or air and ground transportation systems impulsive and hybrid dynamical systems goes beyond similar treatments by developing invariant set stability theorems partial stability lagrange stability boundedness ultimate boundedness dissipativity theory vector dissipativity theory energy-based hybrid control optimal control disturbance rejection control and robust control for nonlinear impulsive and hybrid dynamical systems a major contribution to mathematical system theory and control system theory this book is written from a system-theoretic point of view with the highest standards of exposition and rigor it is intended for graduate students researchers and practitioners of engineering and applied mathematics as well as computer scientists physicists and other scientists who seek a fundamental understanding of the rich dynamical behavior of impulsive and hybrid dynamical systems

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