

MM896 - Tópicos de Sistemas Dinâmicos I (dividida com Douglas Novaes)

Nome: Introdução aos Sistemas de Filippov.

Ementa: Sistemas Dinâmicos Suaves Por Partes. Sistemas de Filippov. Estabilidade Estrutural. Teoria da Perturbação Singular. Teoria Qualitativa para Sistemas de Filippov.

Aulas: 6a 10h-12, 6a 14h-16h.

Referências:

1. M. Guardia, T. M. Seara, and M. A. Teixeira, Generic bifurcations of low codimension of planar Filippov systems, *Journal of Differential Equations*, v. 250, n. 4, p. 1967-2023, 2011.
2. A. F. Filippov, *Differential equations with discontinuous righthand sides*, volume 18 of *Mathematics and its Applications (Soviet Series)*. Kluwer Academic Publishers Group, Dordrecht, (1988). Translated from the Russian.
3. M. di Bernardo, C. J. Budd, Champneys, A.R., Kowalczyk, P.: *Piecewise-smooth dynamical systems: Theory and applications*. Applied Mathematical Sciences, vol. 163. Springer, London (2008)
4. M. R. Jeffrey, *Hidden Dynamics: The mathematics of switches, decisions & other discontinuous behavior*, Springer, 2018.
5. D. D. Novaes, *The Averaging Method - Lecture Notes*, <http://www.ime.unicamp.br/~ddnovaes/index.php/2021/08/09/the-averaging-method/>, 2021.