

## On Hybrid and Nonsmooth Control Systems

We will present a brief account of control systems where there are discontinuities in the dynamics at discrete times in the planning horizon. In general, the instants at which the discontinuities occur need not be known perfectly, and uncertainty and nonsmoothness in all or some of the constituent components of the problem are inevitable consequences. We will consider both deterministic and nondeterministic problems.

The analysis of such problems may require recasting the problems in more general mathematical framework, which at times, is not appealing from applications point of view.

We will present some examples from different areas of applications.