Abstract:

The talk will be about two classical problems in the theory of Carleman classes of smooth functions. The first one is to describe the image of a Carleman class under the Borel map (which maps a smooth function to its jet of Taylor coefficients at a given point). The second one concerns possible ways to construct a function in a given Carleman class with prescribed Taylor coefficients. I will present solutions to both problems. If time permits, I will also discuss related problems which originate in the singularity theory of Carleman classes.