

## Some remarks on functional differential equations in abstract spaces

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The aim of the poster is to present some remarks concerning the functional differential equation

$$v'(t) = G(v)(t) \tag{1}$$

in a Banach space  $X$ , where  $G: C([a, b]; X) \rightarrow B([a, b]; X)$  is a continuous operator and  $C([a, b]; X)$ , resp.  $B([a, b]; X)$ , denotes the Banach space of continuous, resp. Bochner integrable, functions.

We will show, in particular, that both initial value problems (Darboux and Cauchy) for the hyperbolic functional differential equation

$$\frac{\partial^2 u(t, x)}{\partial t \partial x} = F(u)(t, x)$$

with a Carathéodory right-hand side on the rectangle  $[a, b] \times [c, d]$  can be equivalently rewritten as initial value problems for abstract functional differential equation (1) with a suitable operator  $G$  and  $X = C([c, d]; \mathbb{R})$ .

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