1019-35-66   **Giorgio Fusco*** (`fusco@univaq.it`), viale Parioli 2, 00197 Rome, Italy. *A possible approach to the dynamic of forward-backward parabolic equations.* Preliminary report.

We consider a non-convex $\phi : \mathbb{R} \to \mathbb{R}$ and the functional $F(u) := \int_{(a,b)} \phi(u_x)dx$ and focus on the problem of giving a meaning to the corresponding L^2-gradient system

$$u_t - \dot{\phi}(u_x))_x = 0, \qquad x \in (a,b) \tag{1}$$
$$+BC,$$

which is ill-posed. Our starting point is the observation that (**??**) has a well defined solution for each initial datum in a set U_ϕ dense in $C[a,b]$. (Received August 06, 2006)