

Errata

Publication II

In this article on page 307 the inequality (2.5) is incorrect. From the inequality preceding (2.5), we obtain that

$$\int_{u(r,t)}^{u(0,t)} (u(0,t_i) - z)^{-1/2} dz \leq 2e^{u(0,t_i)/2} r,$$

for every large i , and so

$$-2\sqrt{u(0,t_i) - u(0,t)} + 2\sqrt{u(0,t_i) - u(r,t)} \leq 2e^{u(0,t_i)/2} r.$$

This implies

$$u(0,t_i) - u(r,t) \leq 4(e^{u(0,t_i)} r^2 + u(0,t_i) - u(0,t)) \leq 4(e^{u(0,t_i)} r^2 + e^{u(0,t_i)}(t_i - t)),$$

where we used the estimate

$$u(0,t_i) - u(0,t) \leq \int_t^{t_i} u_t(0,\tau) d\tau \leq e^{u(0,t_i)}(t_i - t).$$

Therefore, $w_i(\rho, \tau)$ is bounded for $(\rho, \tau) \in [0, C_1] \times [-C_2, 0]$ for every $C_1, C_2 > 0$. The rest of the proof of Theorem 1.1 proceeds as in Publication II.

Also, on page 322 the definition of the energy should be

$$E[w](s) = \int_{|y| \leq R_1 e^{s/2}} \left(\frac{1}{2} |\nabla w|^2 - e^w + w \right) e^{-|y|^2/4} dy.$$

Publication IV

In Theorem 3 it should be noted that the constant $c^\#$ is the constant from Proposition 2.1. Therefore, it can be considered as given, and the case $C_\alpha = c^\#$ can not be excluded just by increasing $c^\#$.