P. Quittner and Ph. Souplet: Superlinear parabolic problems

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Updates of references

[3] vol. **360** (2008), 3493-3539

[34] vol. **15** (2008), 69-90

[109] vol. **68** (2008), 1860-1867

[112] vol. **68** (2008), 862-874

[125] vol. **68** (2008), 621-628

[132] vol. **30** (2007), 251-275

[155] vol. **253** (2007), 241-272

[191] J. Math. Anal. Appl. **340** (2008), 401-409

[202] vol. **10** (2008), 105-132

[204] vol. **340** (2008), 477-496

[205] M. Fila, M. Winkler and E. Yanagida, *Convergence to self-similar solutions for a semilinear parabolic equation*, Discrete Contin. Dyn. Syst. **21** (2008), 703-716

[263] vol. **20** (2008), 927-937

[288] Comm. Appl. Anal. **8** (2009), 1351-1371

[423] *Asymptotic behavior of threshold and sub-threshold solutions of a semilinear heat equation*, Asympt. Anal. **57** (2008), 125-141

[424] pages 555-579

[443] vol. **21** (2008), 307-318

[444] P. Quittner, *Qualitative theory of semilinear parabolic equations and systems*, Topics on Partial Differential Equations, Lecture notes of the Jindřich Nečas Center for Mathematical Modeling, Vol. 2, eds. P. Kaplický and Š. Nečasová, Matfyzpress, Praha, 2007, pp. 159-199.

[492] pages 819-823

[493] vol. **11** (2009), 169-188

[537] vol. **68** (2008), 1844-1859

Errata

p. x, l. -9: Replace "omission.)" with "omission).".

p. 21, l. -4: Remove the word "stationary".

p. 29, l. 8-9 in Section 7: Replace $A_0 = (0, -2)$, $A_1 = (0, 2)$ with $A_1 = (0, -2)$, $A_2 = (0, 2)$.

p. 33, l. 20: Replace "$\nabla E(u) = u + \mathcal{F}_1(u)$" with "$\nabla E(u) = u - \mathcal{F}_1(u)$".

p. 34, l. -6: Replace q with $(q + 1)$.

p. 35, l. 1: Replace $C_6 = (4^p C_4)^{-1/(p-1)}$ with $C_6 = (4C_4)^{-2/(p-1)}/4$.

p. 44, (8.25): Replace the last inequality sign with the equality sign.

p. 44, lines -4 and -7: Insert C after the inequality signs.

p. 46, line 6: Replace "$\geq$" with "$\leq$".

p. 47, (8.29): Replace x with z.

p. 48, lines -14,-11,-9: Replace $B_{\bar\mu/2}$, $B_{\bar\mu/4}$ and $\bar\mu$ with $B_{|\bar\mu|/2}$, $B_{|\bar\mu|/4}$ and $|\bar\mu|$, respectively.

p. 53, last line: Add "An explicit proof of Theorem 9.1 can be found in [X. Wang, *On the Cauchy problem for reaction-diffusion equations*, Trans. Amer. Math. Soc. **337** (1993), 549-590].

p. 58, the proof of Corollary 10.3: The Leray-Schauder degree used in the proof should be taken with respect to the positive cone in X.

p. 63, l. 7: Replace v^p and v with u^p and u, respectively.

p. 66, l. 4: Replace $(p+1)/(p-1)$ with $-(p+1)/(p-1)$.

p. 69, l. -5: Replace ", we obtain" with "and denoting by $y(\eta)$ any point in $\partial\Omega$ such that $\nu(y(\eta)) = \eta$, we obtain"

p. 69, l. -1 and p. 70, l. 8: Replace $[0, \lambda_0]$ with $[0, \varepsilon]$.

p. 111, l. -4: Replace $v_\varepsilon(0,t)$ with $v_\varepsilon(0, t-t_0)$.

p. 113, line 5: Replace "$\|u_0\|_\infty \le \eta$" with "$\|u_0\|_\infty \le \overline{\eta}$".

p. 145, lines 8,9: Add the missing factor "p".

p. 154, line 1: Insert "*(ii)*" at the beginning of the line.

p. 158, the last line in the proof of Lemma 21.11: Replace "for $\varepsilon > 0$ small" with "for suitable $\varepsilon > 0$".

p. 159, lines 15 and 20: Replace $\mathbb{R}^n$ and $\mathbb{R}^{n+1}$ with $\mathbb{R}^n_+$ and $\mathbb{R}^{n+1}_+$, respectively.

p. 175, the last sentence in Remark 22.10(ii): Replace $n > 3$ with $n > 4$. (See Conjecture 1.1 in [M. Fila, J. King, *Grow up and slow decay in the critical Sobolev case*, Networks and Heteregeneous Media **7** (2012), 661-671].)

p. 190, line 6: Add "$x_k \to x$" in the definition of $B(u_0)$.

pp. 196–197: The proof of Theorem 25.3 should be modified as follows:

From l. 1 after (25.6) until the end of the proof, replace T with 1.

At l. 1 after (25.8), replace the definition of $\overline{v}$ with $\overline{v} = K(1-t)^{-2C\varepsilon^{2\alpha}}$.

Replace l. 2 after (25.8) with

$$\overline{v}_t = C\varepsilon^{2\alpha}(1-t)^{-1}\overline{v} + KC\varepsilon^{2\alpha}(1-t)^{-1-2C\varepsilon^{2\alpha}}.$$

In (25.9), replace C with $2C$.

p. 197, line -2: Replace "$w(\sqrt{2}x)$" with "$\nabla w(\sqrt{2}x)$".

p. 291, l. -3: Replace dx with $dx\,dt$.

p. 313, l. 11: Replace "Sections 35–39" with "Sections 36–39".

pp. 345-346: The proof of Lemma 38.7 should be modified as follows:

p. 345, l. -3: Replace "Since $V > 0$ for $y > 0$, W is smooth there. The equation for W is:" with "At any point $y \in \mathbb{R}$ such that $W(y) > 0$, the equation for W is:".

p. 346, l. 3: Replace "$D = \{y > 0 :\ H(y) \neq 0\}$" with "$D := \{y \in \mathbb{R} :\ W(y) > 0 \text{ and } H(y) \neq 0\}$".

p. 346, l. -2: Replace "and that $Z(y_1) > 0$ (hence $y_1 \in D$)." with ". Moreover $Z(y_1) > Z(R) \ge 0$ (due to $f(y_1) > f(R)$) and $W(y_1) \ge W(0) = Z^{1-r}(0) > 0$, hence $y_1 \in D$.".

p. 372, (40.48): Replace "$(0,1)$" with "$(0,1/2)$".

p. 372, (40.52): Replace "$x \in \{0,1\}$" with "$x = 0$".

p. 373: Add the following text after (40.53): "By Theorem 40.14 and parabolic estimates, u can be extended to a function $u \in C^{2,1}((0,1)\times(0,T])$. This fact and the maximum principle imply $u_t(1/2,t) > c > 0$ for $t \in (T/2, T)$. Increasing the constant C if necessary, we thus have $Cu_t \ge e^{-2\lambda t}(w+u)$ for $x = 1/2$ and $t \in (t_0, T)$."

p. 373, l. 4: Replace "$(0,1)$" with "$(0,1/2)$".

p. 441: After Proposition 48.4(e), add:

"(f) For any smoothly bounded domain Ω of $\mathbb{R}^n$, assertion (d) remains valid if e^{-tA} is replaced with the Neumann heat semigroup in Ω and $4\pi t$ is replaced with $C(\Omega)\min(t,1)$."

At the end of proof of Proposition 48.4(e), add:

"Assertion (f) follows from [154, Theorem 3.2.9]."

p. 492, line -2: Replace "$|\nabla v(t) g^{1/2}$" with "$|\nabla v(t)| g^{1/2}$".

p. 509, formula (52.5): Replace ", $x \in Q_T$" with "in Q_T".

p. 509: The second sentence in the proof of Proposition 52.4 should read: "Also, we may obviously assume that $w \in C^{2,1}(\Omega \times (0,t])$, b, c are defined in $\Omega \times (0,T]$ and (52.3) is true in $\Omega \times (0,T]$."

p. 534, l. 14: Remove "in italic".

p. 553, reference [175]: Replace "J. Funct. Anal. **10**" with "J. Funct. Anal. **100**".

p. 569, reference [419]: Replace "Soviet Math. Dokl. **5**" with "Soviet Math. Dokl. **6**".