(Originally made on May 23, 2008)

Errata of
M. Hino and T. Kumagai: A trace theorem for Dirichlet forms on fractals
J. Funct. Anal. **238** (2006), 578–611

(i) p. 591, l. 17:
Further, if $g \ge 0$ μ-a.e., $\cdots$ $\to$ Further, in the case of $J = \emptyset$, if $g \ge 0$ μ-a.e., $\cdots$

(ii) Unless $W = S$ and Φ is the identity map, Eq. (3.8) in p. 593 does not necessarily hold. We make the following modifications.

- Insert the following sentences before the beginning of p. 585, l. 3:

  For $A \subset S^m$, $m \in \mathbb{Z}_+$, consider $A' \subset S^m$ such that $K_{A'} = \bigcup_{\psi \in \mathfrak{G}} \psi(K_A)$ and $K_w \ne K_{w'}$ for distinct $w, w' \in A'$. Note that A' is uniquely determined due to assumption (A1). The set A' will be denoted by $\mathcal{R}(A)$.

- Replace condition (B4) in p. 585 with the following:

  (B4) For $f \in \mathcal{F}$, if $\mathcal{E}_{S^m \setminus \mathcal{R}(\Phi(\hat{I}^m))}(f) = 0$ for every $m \in \mathbb{Z}_+$, then f is a constant function.

- Modify the proof of Proposition 3.8 as follows:
  - p. 592, l. 12: $\mathcal{E}_{\Phi(\hat{I}^m)}(f) \to \mathcal{E}_{\mathcal{R}(\Phi(\hat{I}^m))}(f)$, $\mathcal{E}_{\Phi(\hat{I}^m)}(g) \to \mathcal{E}_{\mathcal{R}(\Phi(\hat{I}^m))}(g)$
  - p. 592, l. 14: $\mathcal{E}_{\Phi(\hat{I}^{m_1})}(f) \to \mathcal{E}_{\mathcal{R}(\Phi(\hat{I}^{m_1}))}(f)$
  - p. 592, l. 15: $\mathcal{E}_{S^{m_1} \setminus \Phi(\hat{I}^{m_1})}(f) \to \mathcal{E}_{S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1}))}(f)$
  - p. 593, l. 6: $\mathcal{E}_{S^{m_1} \setminus \Phi(\hat{I}^{m_1})}(F_w^* h) \to \mathcal{E}_{S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1}))}(F_w^* h)$
  - p. 593, l. 7: $\mathcal{E}_{w \cdot (S^{m_1} \setminus \Phi(\hat{I}^{m_1}))}(h) \to \mathcal{E}_{w \cdot (S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1})))}(h)$
  - p. 593, l. 15: $\mathcal{E}_{w \cdot (S^{m_1} \setminus \Phi(\hat{I}^{m_1})) \cup \cdots} \to \mathcal{E}_{w \cdot (S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1}))) \cup \cdots}$

We confirm that (3.8) holds by these modifications. By definition, the following hold:

- $w \cdot (S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1}))) \subset D'(w) \cdot S^{m_1}$,
- $(D'(w) \cap ((\Phi(\hat{I}^n) \cdot S^{m_0}) \setminus \Phi(\hat{I}^{n+m_0}))) \cdot S^{m_1} \subset (D'(w) \cdot S^{m_1}) \cap ((\Phi(\hat{I}^n) \cdot S^{b_0}) \setminus \Phi(\hat{I}^{n+b_0}))$.

Therefore, it suffices to prove

$$w \cdot (S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1}))) \subset (\Phi(\hat{I}^n) \cdot S^{b_0}) \setminus \Phi(\hat{I}^{n+b_0}).$$

Let $T = w \cdot (S^{m_1} \setminus \mathcal{R}(\Phi(\hat{I}^{m_1})))$. Since $T \subset \Phi(\hat{I}^n) \cdot S^{b_0}$, it is sufficient to prove that $T \cap \Phi(\hat{I}^{n+b_0}) = \emptyset$. Since $T \subset w \cdot S^{m_1}$, it suffices to prove

$$(w \cdot S^{m_1}) \cap \Phi(\hat{I}^{n+b_0}) \subset w \cdot \mathcal{R}(\Phi(\hat{I}^{m_1})). \tag{1}$$

Let $u \in \hat{I}^{n+b_0}$, $v \in \hat{I}^{m_1}$ and suppose $\Phi(u \cdot v) \in w \cdot S^{m_1}$. From Lemma 2.1,

$$\begin{aligned} F_{\Phi(u\cdot v)} &= F_{u\cdot v} \circ \Psi(u \cdot v)^{-1} \\ &= F_{\Phi(u)} \circ \Psi(u) \circ F_{\Phi(v)} \circ \Psi(v) \circ \Psi(u \cdot v)^{-1}. \end{aligned}$$

By noting that $\Psi(u) \in \mathfrak{G}$ and $\Psi(v) \circ \Psi(u \cdot v)^{-1} \in \mathfrak{G}$, we obtain $K_{\Phi(u\cdot v)} \subset K_{\Phi(u)\mathcal{R}(\Phi(v))}$. Since $\Phi(u \cdot v) \in w \cdot S^{m_1}$, we have $w = \Phi(u)$ and $\Phi(u \cdot v) \in w \cdot \mathcal{R}(\Phi(v)) \subset w \cdot \mathcal{R}(\Phi(\hat{I}^{m_1}))$. Therefore, (1) holds.

(iii) By following the correction in [1], the non-diagonality condition (SC3) in p. 605 should be replaced by the following:

(SC3) (*Non-diagonality*) Let $m \geq 1$ and B be a cube in H_0 of side length $2/l^m$ that is described as $\prod_{j=1}^{D}[k_j/l^m, (k_j+2)/l^m]$ for $k_j \in \{0, 1, ..., l^m-2\}$. Then, $\mathrm{Int}(H_1 \cap B)$ is either an empty set or a connected set.

(iv) In Section 5.3 the identity $\mathcal{F} = \mathcal{F}_S$ is used without proof, but this property is not obvious. Its proof was provided in [2, Proposition 5.1].

Acknowledgments. We thank N. Kajino for pointing out some errors in the paper.

References

[1] M. T. Barlow, R. F. Bass, T. Kumagai, A. Teplyaev, Uniqueness of Brownian motion on Sierpinski carpets. J. Eur. Math. Soc. **12** (2010), 655–701.

[2] M. Hino, Upper estimate of martingale dimension for self-similar fractals, Probab. Theory Related Fields **156** (2013), 739–793.