

Erratum:
Positive Transfer Operators
and Decay of Correlations

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- (1) Page 5, in Remark 1.1 replace “ $\{i \mid x_i = 0\}$ ” by “ $\{i \mid x_i = 0\}$.”
- (2) Page 30 (Definition 1.14), “of finite (algebraic) multiplicity, and such that λ is not in the spectrum of $\mathcal{L} - \mathcal{L}|_{E_\lambda}$, where E_λ is the (finite-dimensional) generalized eigenspace of λ for \mathcal{L} .”
- (3) Page 78: In the last line of the statement of Lemma 2.2, replace $\|\psi\|_L \leq \|\varphi\|_L$ by $\|\psi\|_L \leq 2\|\varphi\|_L$.
- (4) Page 79: In (2.11), replace \Leftrightarrow by \Rightarrow , and $\|\psi\|^{(i)} \leq \|\varphi\|^{(i)}$ by “ $\|\psi\|^{(1)} \leq \|\varphi\|^{(1)}$ and $\|\psi\|^{(2)} \leq 2\|\varphi\|^{(2)}$.” In (2.12) replace $(e^{\Theta_\Lambda(\varphi, \psi)} - 1)$ by $2(e^{\Theta_\Lambda(\varphi, \psi)} - 1)$.
- (5) Page 80: In the numerators and denominators of lines 6 and 9, replace $d(x, y)$ by $d(x, y)^\theta$ and $d(x, x_0)$ by $d(x, x_0)^\theta$. In line 18, replace $(1 - e^{-(1+\xi)Ld(u, v)^\theta} - 1)$ by $(1 - e^{-(1+\xi)Ld(u, v)^\theta})$.
- (6) Page 83: On line 11, suppress L_0 in the definition of η . On line 15, replace $|\psi|_\eta$ by $|\psi|_\theta$. On line 16 replace $L_0 + 2\xi L_0$ by $1 + \xi L_0 e^{\xi L_0}$. On line 17 replace $> L_0(1 + 2\xi)$ by $> 1 + \xi L_0 e^{\xi L_0}$. On line 18, replace $\rho \leq$ by $\eta \leq$.
- (7) Page 88: In line 4 of Remark 2.5, replace “the topological pressure” by “exponential of the topological pressure”. Insert \log in front of the l.h.s. of (2.25).
- (8) Page 89: Insert \log in front of the l.h.s of (2.29).
- (9) Page 100 (Definition 2.4), replace line 14 by “ $I_k \subset \overline{f(I_j)}$ (assuming also $f|_{I_j}$ is injective and its inverse restricted to I_k is a homeomorphism onto its image).” (Exercise 2.12) replace in lines 20-21 “ $= \emptyset$ for all $n \geq 1$ and $k \neq j$. (In particular the flat traces $\text{tr}^b \mathcal{L}_g^n$ coincide with the Grothendieck traces $\text{tr} \mathcal{L}_g^n \dots$ ”
by
“consists in a single fixed point x_0 of f , for all $n \geq 1$ and $k \neq j$. (In particular the flat traces $\text{tr}^b \mathcal{L}_g^n$ coincide with the Grothendieck traces $\text{tr} \mathcal{L}_g^n$ minus the term $(g(x_0))^n / (1 - 1/(f'(x_0))^n) \dots$ ”
On line 25, replace “arcs I_j ” by “arcs I_j with endpoints-set $\cup_{\ell \geq 0} f^{-\ell}(x_0)$, where x_0 is a fixed point of f .”

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In the last two lines, replace “Also, since the periodic orbits... for all $j \neq k$.” by “Modifying the construction, one may replace x_0 and its inverse images by another full periodic orbit.”

- (10) Page 114, lines 7–8. Replace “Consider a Markov partition \mathcal{Z} for the circle map f such that ... (as in Exercise 2.12).”

by

“Consider a Markov partition \mathcal{Z} for the circle map f as in Exercise 2.12, neglecting the fact that a fixed point is counted twice (see [297, pp. 817–818] for a way out of this problem)”

- (11) Page 153, line 2: replace $D \sum_{i=0}^N \chi_{f(a_i, a_{i+1})}(D^{-1}\mu) \circ (f|(a_i, a_{i+1})^{-1}$ by $\sum_{i=0}^N \chi_{f(a_i, a_{i+1})} D(D^{-1}\mu) \circ (f|(a_i, a_{i+1})^{-1}$.

- (12) Page 155 replace $f_*(\epsilon_f \cdot g)\mu$ by $(g \cdot \epsilon_f)f_*(\mu)$.

- (13) Page 156, lines 16–19: replace

“... (3) of Theorem 1.5. Then, since ν_g is also an eigenfunctional of \mathcal{L}_g^* on the dual of BV/\mathcal{N} , we have $\int \varphi d\nu_g = 0$ whenever $\varphi \in \mathcal{N}$, in particular if φ is the characteristic function of a finite or countable set. Therefore ν_g is atomless.”

by

“... (3) of Theorem 1.5 (using the field generated by all intervals instead of cylinders, Lebesgue instead of Bernoulli measure, and noting that ν_g is regular by construction). Then, since ν_g coincides with an eigenfunctional of \mathcal{L}_g^* restricted to functions in BV/\mathcal{N} which are continuous or characteristic functions of unions of intervals, we have $\int \varphi d\nu_g = 0$ whenever φ is the characteristic function of a finite set (such a function is in \mathcal{N}). Therefore ν_g is atomless, which serves to prove that $\int \varphi d\nu_g = \nu_g(\varphi)$ for all $\varphi \in BV/\mathcal{N}$.”

- (14) Page 161, last line: there is a factor R missing.

- (15) Page 172: Replace $\theta_\epsilon(y - x)$ by $\theta_\epsilon(x - y)$. Page 173: Replace each $\theta_\epsilon(x - y)$ by $\theta_\epsilon(y - x)$ and vice-versa.

- (16) Page 172, line 3: replace “in the definition of τ ” by “in the definition of \mathcal{A}_δ .”

- (17) Page 186, line 2: replace “[−11]” by “[−1, 1].”

- (18) Page 227, line 7: replace $(\mathbb{Z}_+)^2$ by \mathbb{Z}_*^2 .

- (19) Page 230, line 16: replace “ $d(y_i, y_{i+1})$ ” by “ $d(f(y_i), y_{i+1})$.”

- (20) Page 240, line -8: replace “ f ” by “ F .”

- (21) Page 274, line -6: “ $\hat{f}_{kj} : \mathcal{D}_k^1 \times \mathcal{D}_k^2 \rightarrow \mathbb{C} \times \mathbb{C}$,” line -3: “ \mathcal{B}_k ,” line -2: “ $(\overline{\mathbb{C}} \setminus \overline{\mathcal{D}}_k^1) \times \mathcal{D}_k^2$.”

- (22) Page 275, line 1: replace “ $\partial \mathcal{D}_i^1$ and $\partial \mathcal{D}_i^2$ ” by “ $\partial \mathcal{D}_k^1$ ” and “ $\partial \mathcal{D}_k^2$,” line 6: “from \mathcal{B}_k to \mathcal{B}_j .”

- (23) Page 275, line 7: replace “ $\mathcal{A}(\mathbb{C} \setminus \overline{\mathcal{D}(1)})$ ” by “ $\mathcal{A}(\overline{\mathbb{C}} \setminus \overline{\mathcal{D}(1)}) \ominus \mathbb{C}$ (i.e., without the constant functions);” line 8: replace “as a subset of the Radon” by “as a superset of the Radon.”

- (24) Page 275, line 13: replace “ $\langle z^{-j-1} | z^k \rangle$ ” by “ $\langle z^j | z^{-k-1} \rangle$.”

- (25) Page 280, line 6: replace “ $= z_1^{-n_1} z_2^{n_2}$ ” by “ $= z_1^{-n_1-1} z_2^{n_2}$.”

- (26) Page 282, replace lines 6–7–8 by

$$\mathcal{I}_k^1 \times \mathcal{I}_k^2 \subset A_k, \mathcal{D}_k^1 \times \mathcal{D}_k^2 \subset \hat{A}_k, \text{ and } \psi_k(\mathcal{I}_k^1 \times \mathcal{I}_k^2) = \tilde{R}_k^\omega,$$

where \widehat{A}_k is a complex neighbourhood of A_k , and,

$$\psi_j \circ \hat{f}_{kj} |_{(\mathcal{I}_k^1 \times \mathcal{I}_k^2) \cap \hat{f}_{kj}^{-1}(\mathcal{I}_j^1 \times \mathcal{I}_j^2)} = f \circ \psi_k |_{\psi_k^{-1}(\tilde{R}_k^\omega \cap f^{-1} \tilde{R}_j^\omega)} \cdot$$

- (27) Page 282, line 17: “arbitrary $z \in \widehat{A}_k$,” “ $P_{k,z}^s : \widehat{A}_k \rightarrow E_z^s$.”
- (28) Between line 17 of page 282 and line 1 of page 283, all f must be replaced by \hat{f} and all A_k, A_ℓ by $\widehat{A}_k, \widehat{A}_\ell$.
- (29) Page 282, line 24: “ $D\hat{f}_z^{-1} P_{k,z}^u = P_{\ell, \hat{f}^{-1}(z)}^u \circ D\hat{f}_z^{-1}$.”