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Kneading Determinants and Transfer Operators in Higher Dimensions (Erratum)

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In the statement of Theorem 1 on p. 6, R must be replaced by $R^{1/n}$.

Axiom 1: May be greatly weakened (see [BB] on `arxiv.org`)

Axiom 2: *The second condition is not needed. However, the first asumption must be uniform in t, i.e.,the new condition is:* There is $0 \le R < 1$ so that for $k = 0, \dots, n$:

1. $\mathcal{M}_k$ is bounded on $\mathcal{A}_{k,\mathcal{B}_{k,t}}$ with $\rho(\mathcal{M}_k|_{\mathcal{A}_{\mathcal{B}_{k,t}}}) \le 1$, $\rho_{ess}(\mathcal{M}_k|_{\mathcal{A}_{\mathcal{B}_{k,t}}}) < R$, and there are no eigenvalues of modulus $\widetilde{R}$, for each $1 < t < \infty$.
2. Let $\Pi_{k,t}$ be the (finite-rank) spectral projector on $\mathcal{A}_{k,\mathcal{B}_{k,t}}$ associated to the spectrum of $\mathcal{M}_k$ outside the disc of radius $\widetilde{R}$. Let $\{\varphi_{k,t,s}\}$ be a basis for the corresponding generalised eigenspace. Then, there is $C > 0$ so that $\max_{k,s} \sup_{1<t<\infty} \|\varphi_{k,t,s}\|_{\mathcal{B}_{k,t}} \le C$, and, for all k, j , we have

$$\sup_{1<t<\infty} \|\mathcal{M}_k^j\|_{\mathcal{B}_{k,t}} \le C \, , \quad \sup_{1<t<\infty} \|\mathcal{M}_k^j(\mathrm{Id} - \Pi_{k,t})\|_{\mathcal{B}_{k,t}} \le C R^j \, .$$

Axiom 3: *should be amended as follows:* There is $\mathcal{E}_0 > 0$ so that, for all $0 < \mathcal{E} < \mathcal{E}_0$, each $j \ge 1$ and each admissible composition $\psi^j_{\vec{\omega}}$, letting $V_{\vec{\omega},\mathcal{E}}$ be the set of x in the domain of definition of $\psi^j_{\vec{\omega}}$ so that $\|\psi^{j+\ell}_{\vec{\omega}}(x) - x\| < \mathcal{E}$, the map $\psi^{j+\ell}_{\vec{\omega}} - \mathrm{Id}$ is injective on $V_{\vec{\omega},\mathcal{E}}$.

Also, for each $\eta > 0$ there is C so that for all k, every sequence $\{\mathcal{E}_j\}$ with $0 < \mathcal{E}_j < \mathcal{E}_0$, and each k-form $\mathbf{1}_k = dx_{i_1} \wedge \cdots \wedge dx_{i_k}$

$$\sum_{\vec{\omega} \in \Omega^j} \sup_{x \in V_{\vec{\omega},\mathcal{E}_j}} \frac{|g^{(j)}_{\vec{\omega}}(\psi^j_{\vec{\omega}} x)|}{|\det(D\psi^j_{\vec{\omega}}(x) - \mathrm{Id})|} \big|(\psi^j_{\vec{\omega}})^*(\mathbf{1}_k)(x)/\mathbf{1}_k(x)\big| \le C \exp(\eta j) \, , \forall j \, .$$

On p. 9, the condition that the expanding endomorphism is $2\max(r,n) + r$ times differentiable should be replaced by "nr times differentiable."

Reference [Bai] will appear in Duke Mah. J. in 2004.