ERRATA / ADDENDA TO ERGODIC THEORY VIA JOININGS

Date: October 3, 2004.

Page	Line	Replace by ...
26	5	Show that the system (X, Γ) is minimal, admits no nontrivial equicontinuous factor, but the relation Q is not an equivalence relation ...
40	-8	There is here a gap in the proof. We need the fact that for a function f with $\mathrm{cls}\,\{f \circ \gamma : \gamma \in \Gamma\} \subset C(X)$ (closure in the pointwise convergence topology), every cluster point of $\{f \circ \gamma : \gamma \in \Gamma\}$ is a limit of a sequence $\{f \circ \gamma_i\}$. See Grothedieck [109] and Todorcevic, Topics in Topology, Springer Lecture Notes in Mathematics, **1652**, 1997.
57	3	$\hat{d}(\phi, \psi) = \sum_{n=1}^{\infty} 2^{-n} \frac{1}{2}\big(\mu(\phi A_n \bigtriangleup \psi A_n) + \mu(\phi^{-1} A_n \bigtriangleup \psi^{-1} A_n)\big).$
58	3	$\alpha(n, y) = \begin{cases} \alpha(T^{n-1}y) \cdots \alpha(Ty)\alpha(y) & \text{for } n \geq 1 \\ \mathrm{id} & \text{for } n = 0 \\ \alpha(T^n y)^{-1} \cdots \alpha(T^{-1}y)^{-1} & \text{for } n < 0. \end{cases}$
65	-13	Conversely, assume that π admits no non-zero invariant vectors and suppose that $\mathfrak{m}(f) \neq 0$ for some function $0 \neq f \in B_\pi$. By Theorem 1.51.2(c) we can assume that f is in $AP(\Gamma)$ and, therefore, that it arises as $f(\gamma) = \langle \pi(\gamma)x, x \rangle$ for a finite dimensional irreducible sub-representation of π. This however contradicts the previous lemma and we conclude that $\mathfrak{m}(f) = 0$ for every function $f \in B_\pi$.
68	-5	Denote $\text{weak-cls}\,\pi(X) = Y \subset L^2(\mu)$, and $\nu = \pi_*(\mu)$, then, since the action of Γ on the compact space Y is WAP and topologically transitive, we can apply Lemma 1.50 to deduce that (Y, ν, Γ) is a nontrivial isometric factor.
81	11	This is wrong; condition 2 does not imply mixing.
149	-6	... we must have $\hat{\pi}^{k+1}(\hat{\lambda}) = \nu^{k+1}$. The assumption that Γ is abelian implies that $\hat{\lambda}$ is Γ-invariant. Set $\lambda = \sigma^{k+1}(\hat{\lambda})$; ...
218	-10	Here and in the sequel replace $C(X)$ by $\mathrm{Aut}\,(\mathbf{X})$.
223	6	Here and in the sequel replace n by r.
223	17	Here and in the sequel replace 3 by r.
292	1	A subset $A \subset X$ is called *uniform* if $\lim_{N\to\infty} \operatorname{ess\,sup}_x \left\lvert \frac{1}{N} \sum_0^{N-1} \mathbf{1}_A(T^i x) - \mu(A) \right\rvert = 0.$ A partition α is uniform if every set in $\cup_{n=0}^{\infty} \alpha_{-n}^{n}$ is uniform.