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Valentin Deaconu* (vdeaconu@unr.edu), Dept of Math & Stat/084, University of Nevada,
Reno, NV 89557, and **Fred Shultz**. *C*-algebras associated with interval maps.*

For each piecewise monotonic map τ of $[0, 1]$, we associate a pair of C*-algebras F_τ and O_τ and calculate their K-groups. The algebra F_τ is an AI-algebra. We characterize when F_τ and O_τ are simple. In those cases, F_τ has a unique trace, and O_τ is purely infinite with a unique KMS-state. In the case that τ is Markov, these algebras include the Cuntz-Krieger algebras O_A , and the associated AF-algebras F_A . Other examples for which the K-groups are computed include tent maps, quadratic maps, multimodal maps, interval exchange maps, and β -transformations. For the case of interval exchange maps and of β -transformations, the C*-algebra O_τ coincides with the algebras defined by Putnam and Katayama-Matsumoto-Watatani respectively. (Received August 29, 2005)