

The monograph is well written. Despite some omissions, the book, which is intended for a broader audience, can also be an excellent reference book for a mathematician interested in nonlinear functional analysis. The bibliography of 39 pages is very impressive.

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Groups, trees and projective modules, by Warren Dicks, Lecture Notes in Math., vol. 790, Springer-Verlag, Berlin and New York, 1980, 126 pp., \$9.80.

Trees, by Jean-Pierre Serre, Springer-Verlag, Berlin and New York, 1980, ix + 142 pp., \$29.80.

Classically, one studies a discrete subgroup Γ of a Lie group G by its action on the homogeneous space $X = G/K$ where K is a maximal compact subgroup of G ; for torsion-free Γ , the form $\Gamma \backslash X$ is a $K(\Gamma, 1)$ space. When $G = SL_2(\mathbf{R})$ and $\Gamma = SL_2(\mathbf{Z})$ one has the well-studied reduction theory for Γ and its subgroups acting on the upper half-plane $\mathcal{H} = SL_2(\mathbf{R})/SO_2$ by linear fractional transformations. A program initiated by Bruhat and Tits makes available certain simplicial complexes called buildings which play the role of the symmetric space for p -adic groups [20, 22, 28]. For $G = SL_n(\mathbf{Q}_p)$ the building is a contractible $n - 1$ dimensional complex, $T_n(\mathbf{Q}_p)$, in which the vertices are the elements of $SL_n(\mathbf{Q}_p)/SL_n(\mathbf{Z}_p)$ and the simplices come from flags of \mathbf{Z}_p -submodules of \mathbf{Q}_p^n which "cover" flags of subspaces of $(\mathbf{Z}/p\mathbf{Z})^n$. When $n = 2$ this Bruhat-Tits tree provides the background fiber to the first part of