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	abstract	Present state of the study of nonlinear ``integrable" systems related to the group of area-preserving diffeomorphisms on various surfaces is overviewed. Roles of area-preserving diffeomorphisms in 4-d self-dual gravity are reviewed. Recent progress in new members of this family, the SDiff(2) KP and Toda hierarchies, is reported. The group of area-preserving diffeomorphisms on a cylinder plays a key role just as the infinite matrix group GL(∞) does in the ordinary KP and Toda lattice hierarchies. The notion of tau functions is also shown to persist in these hierarchies, and gives rise to a central extension of the corresponding Lie algebra.	**abstract**	Present state of the study of nonlinear ``integrable" systems related to the group of area-preserving diffeomorphisms on various surfaces is overviewed. Roles of area-preserving diffeomorphisms in 4-d self-dual gravity are reviewed. Recent progress in new members of this family, the SDiff(2) KP and Toda hierarchies, is reported. The group of area-preserving diffeomorphisms on a cylinder plays a key role just as the infinite matrix group GL(∞) does in the ordinary KP and Toda lattice hierarchies. The notion of tau functions is also shown to persist in these hierarchies, and gives rise to a central extension of the corresponding Lie algebra.Comment: 16 page		
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