Boundary dynamics for holomorphic sequences, non-autonomous dynamical systems and wandering domains

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There are many classical results, related to the Denjoy–Wolff Theorem, concerning the relationship between orbits of interior points and orbits of boundary points under iterates of holomorphic self-maps of the unit disc. Here, for the first time, we address such questions in the very general setting of sequences (Fn) of holomorphic maps between simply connected domains. We show that, while some classical results can be generalised, with an interesting dependence on the geometry of the domains, a much richer variety of behaviours is possible. Some of our results are new even in the classical setting. Our methods apply in particular to non-autonomous dynamical systems, when (Fn) are forward compositions of holomorphic maps, and to the study of wandering domains in holomorphic dynamics. This is joint work with A.M.Benini, V. Evdoridou, P. Rippon and G.Stallard.