Record Nr. UNISALENTO991002945499707536 Berkovich spaces and applications [e-book] / Antoine Ducros, Charles **Titolo** Favre, Johannes Nicaise, editors Pubbl/distr/stampa Cham [Switzerland]: Springer, 2015 **ISBN** 9783319110295 Descrizione fisica 1 online resource (xix, 413 pages) Collana Lecture Notes in Mathematics, 1617-9692; 2119 Classificazione AMS 14-06 AMS 14F20 AMS 14G22 **LC QA551** Altri autori (Persone) Ducros, Antoineauthor Favre, Charlesauthor Nicaise, Johannesauthor Disciplina 516.35 Soggetti Geometry, Analytic **Topology** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references Nota di contenuto Introduction to Berkovich analytic spaces -- Etale cohomology of schemes and analytic spaces -- Countability properties of Berkovich spaces -- Cohomological finiteness of proper morphisms in algebraic geometry: a purely transcendental proof, without projective tools --Bruhat-Tits buildings and analytic geometry -- Dynamics on Berkovich spaces in low dimensions -- Compactifications of spaces of representations (after Culler, Morgan and Shalen) Sommario/riassunto We present an introduction to Berkovich?s theory of non-archimedean analytic spaces that emphasizes its applications in various fields. The first part contains surveys of a foundational nature, including an introduction to Berkovich analytic spaces by M. Temkin, and to étale cohomology by A. Ducros, as well as a short note by C. Favre on the topology of some Berkovich spaces. The second part focuses on applications to geometry. A second text by A. Ducros contains a new proof of the fact that the higher direct images of a coherent sheaf under a proper map are coherent, and B. Rémy, A. Thuillier and A. Werner provide an overview of their work on the compactification of

Bruhat-Tits buildings using Berkovich analytic geometry. The third and final part explores the relationship between non-archimedean geometry and dynamics. A contribution by M. Jonsson contains a thorough discussion of non-archimedean dynamical systems in dimension 1 and 2. Finally a survey by J.-P. Otal gives an account of Morgan-Shalen's theory of compactification of character varieties. This book will provide the reader with enough material on the basic concepts and constructions related to Berkovich spaces to move on to more advanced research articles on the subject. We also hope that the applications presented here will inspire the reader to discover new settings where these beautiful and intricate objects might arise