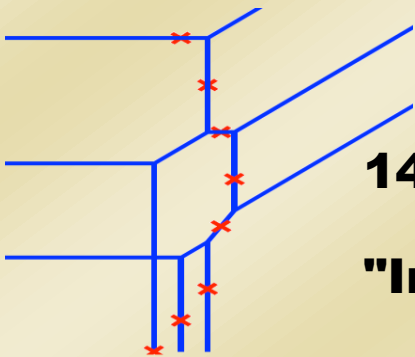


# JOURNÉE GEORGES DE RHAM 2014



$$\Omega^p \longrightarrow \Omega^{p+1}$$

UNIVERSITÉ DE GENÈVE, UNI BASTIONS B106  
LE 9 AVRIL 2014



**14:30-15:45 Ilia Itenberg (Paris)**

**"Invariants in real enumerative geometry"**



**Abstract.** We discuss several enumerative problems in algebraic geometry where an invariant way of (signed) counting of real solutions exists. First systematic examples of such problems were discovered by J.-Y. Welschinger. His invariants can be viewed as real counterparts of Gromov-Witten numbers, and they provide lower bounds for the number of real rational curves interpolating configurations of points on real rational surfaces and some 3-folds. Another, more recent, example proposes a real framework for the so-called Hurwitz numbers.



**16:15-17:30 Alex Lubotzky (Jerusalem)**

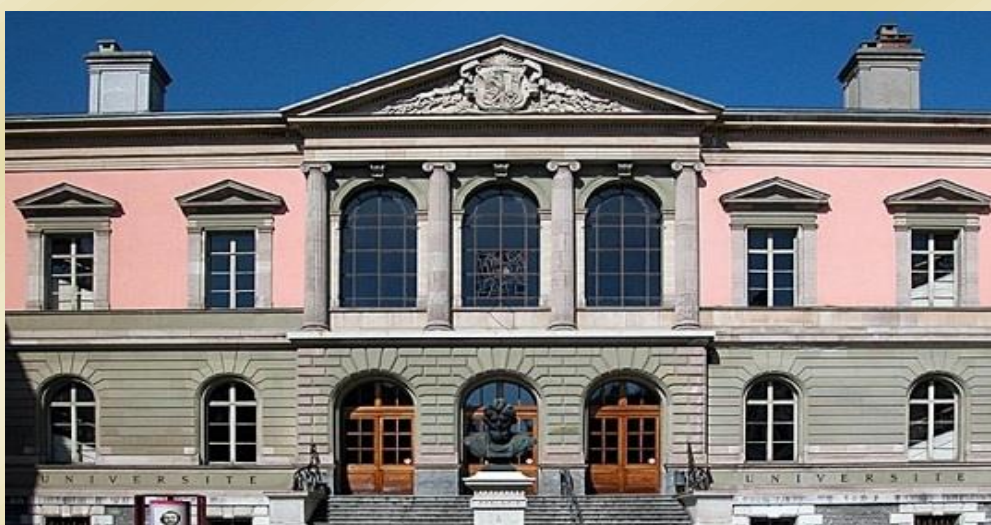
**"High dimensional expanders and Ramanujan complexes"**



**Abstract.** Expander graphs have played, in the last few decades, an important role in computer science, and in the last decade, also in pure mathematics. In recent years a theory of "high-dimensional expanders" is starting to emerge - i.e., simplicial complexes which generalize various properties of expander graphs. This has some geometric motivations (led by Gromov) and combinatorial ones (started by Linial and Meshulam). The talk will survey the various directions of research and their applications, as well as potential applications in math and CS. Some of these lead to questions about buildings and representation theory of p-adic groups.

❖ *Les exposés seront suivis d'un apéritif.*

❖ *Pour participer au diner, merci d'envoyer un email à [Isabelle.Cosandier@unige.ch](mailto:Isabelle.Cosandier@unige.ch) avant le 2 avril.*



**UNIVERSITÉ  
DE GENÈVE**



CONFÉRENCE UNIVERSITAIRE  
DE SUISSE OCCIDENTALE