

LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS (LEPP) Theory Seminar



## **Bernard Julia** École normale supérieure, France

## **E8 families**

It is important to understand the origin of exceptional symmetries like E7 duality in 4d M-Sugra. Depending on the context and the defining property at work (anomaly or divergence cancellation, attractor mechanism, classification of supergauge theories in 4,5 or 6d, 2d integrable systems...) the E8 groups appear in various families. The Painlevé differential and difference equations may provide a framework to organize this field. Cross-fertilization between unexpectedly parallel problems is also promising.



LEPP, the Cornell University Laboratory for Elementary-Particle Physics, and CHESS resources have merged and a new lab, (CLASSE), has formed. LEPP's primary source of support is the National Science Foundation. Visit us at www.lepp.cornell.edu