

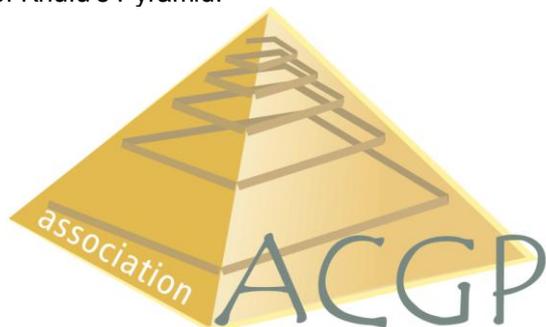
The birth of a theory, one man's intuition

On January 2, 1999, Henri Houdin, a retired engineer from the Ecole des Arts et Métiers (PA41), watches *Le Mystère des Pyramides*, a documentary by Jean-François Delassus and François de Closets about the construction of the Pyramids. He confronts the theories put forward with his eye as an expert construction engineer. They don't stand up. And then it hit him:
the pyramids were built from the inside-out!

A revolutionary idea, since it sweep away, by reversing the basic paradigm, all other hypotheses based on construction from the outside. He called on his son Jean-Pierre, an architect DPLG with 3D experience, to help him in his research.

In the course of 2000, they meet members of the team who participated in a 1986 microgravimetry mission carried out on the Khufu's Pyramid under the aegis of the EDF Foundation. The latter present them plans with an anomaly in the construction that none of the known hypotheses could explain. This anomaly, dubbed "spiral construction", corresponds perfectly to the shape of a ramp built inside the monument, which would have partly used to build it!

In 2003, under the impetus of Henri Houdin, the Association Construire la Grande Pyramide (ACGP), is created by some twenty personalities from the worlds of research, civil engineering and Egyptology; its aim is to bring together the scientific, technical and financial resources to support the development and recognition of the construction theory from inside out and to study the internal structure of the large smooth pyramids of the Fourth Dynasty on the example of Khufu's Pyramid.



www.construire-la-grande-pyramide.fr

In 2005, Dassault Systèmes welcome Jean-Pierre Houdin to its recently launched "Passion For Innovation" sponsorship program. Together, they decide to put theory to the test with the industrial and scientific 3D solutions from Dassault Systèmes. Jean-Pierre Houdin is finally able to analyze and validate his theory in the virtual 3D world that enables today's industrialists to build in the real.



The three-dimensional reconstruction of this gigantic construction site allows to test in real time whether an approach is plausible, and whether the human and material organization it implies is optimal and coherent, and whether it respects the immutable laws of physics and mechanics. Hundreds of calculations and algorithms are used to assess the coherence of what the team is designing, to check whether the models and assumptions defy the laws of gravity or run counter to the forces and materials being manipulated. Simulations validate and enrich the theory, constantly prompting Jean-Pierre Houdin to ask new questions, so that no shadow remains in the mystery of the construction of the Great Pyramid.

The developments

Between 2008 and 2010, Jean-Pierre Houdin and Dassault Systèmes proceed in a major update of the theory following an unexpected discovery by American Egyptologist Bob Brier while on location filming for a documentary dedicated to the theory. On January 27, 2011, they announce the possible presence of two unknown Antechambers adjacent to the King's Chamber.