

What Does and Does Not Explain the 9/11 Collapse of WTC Towers

Even after a decade of discussion and evaluation by many individuals and groups, there remains considerable misunderstanding and confusion regarding the underlying reasons for the collapse of the WTC towers. With due respect for proponents of the variety of theories advanced, papers 405, 466, 476, 499 and discussions D20, D25, D27, D28 (which are all in pdf and can be downloaded from this website. Click <http://www.civil.northwestern.edu/people/bazant/PDFs/Papers>) provide completely rational and mathematically supported explanations for all of the events that were observed and refute all of the erroneous theories that have been proposed.

The credibility of these explanations is supported by the fact that (a) they are based on universally accepted principles of structural mechanics, structural dynamics, and continuum mechanics, (b) they are widely accepted in the Engineering Mechanics Institute (EMI) and the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE), in the Applied Mechanics Division (AMD) of the American Society of Mechanical Engineers (ASME), in the American Institute of Steel Construction (AISC), in the Society of Engineering Science (SES), and in the International Union of Theoretical and Applied Mechanics (IUTAM), with no objections from any of these organizations, and (c) they do not disagree in any respect with the detailed analysis of the fire and collapse of the floors impacted by aircraft, carried out at the National Institute of Standards and Technology (NIST) under the direction of Dr. Shyam Sunder (cited in 476.pdf).

Paper 405.pdf shows clearly that the aircraft impacts alone were sufficient to cause complete collapse, driven only by gravity, and that the collapse progression had to be essentially vertical.

Paper 466.pdf derives the differential equations governing the vertical collapse mode with mass accretion, concrete slabs comminution, plastic energy dissipation in steel, dynamic air expulsion, and dynamic fragment ejection.

Paper 476.pdf refutes all of the main arguments by the laymen who believe in some sort conspiracy (including the arguments concerning high temperatures).

Paper 499.pdf and the four discussions refute the additional critiques and misconceptions stated by laymen after the publication of 476.pdf.

Finally, NU-SEGIM report [00-WTC-2016-buckling.pdf](#) discusses the implications of new column buckling tests of Korol and Sivakumaran.