

# DMNS FAIR

Queens College, City University of New York  
Division of Mathematics and Natural Sciences  
Faculty Achievement In Research

**MY NAME:** Allan Ludman

**MY DEPARTMENT:** SEES

**SOMETHING INTERSTING ABOUT ME (OPTIONAL, MAY BE LEFT BLANK):**

**MY RESEARCH (IN SIMPLE WORDS THAT CAN BE UNDERSTOOD BY ANYONE ON THE Q64 BUS):** I have devoted 45 years to deciphering the geologic history of the Northern Appalachian mountain system, mostly in Maine with some work in adjacent New Brunswick. A large part of my research has been doing primary geologic mapping – a four-dimensional exercise requiring field studies to determine what types of rock are present, how they are related to one another spatially, the processes by which they were formed and deformed, and the timing of events over the hundreds of millions of years over which the mountain-building processes were active.

Anomalously in an age of increasing specialization, my field studies are supplemented by a wide range of analytical methods from the disciplines of mineralogy, igneous, sedimentary, and metamorphic petrology, geochemistry, geophysics, and paleontology. These have provided fertile ground for undergraduate, Masters and Doctoral student research and for journal articles, guidebooks, Geological Society of America Memoirs. And for geological and environmental consulting.

Accomplishments include: a comprehensive model for one of the three principal mountain-building events in Northern Appalachian history; fossil-based evidence for the ages of rocks in a large part of New England; recognition and geodynamic analysis of an ancient fault zone that rivals the San Andreas in terms of length and exceeds it in terms of longevity; and last, but not least, detailed geologic maps of nearly 6,500 mi<sup>2</sup> in central and eastern Maine that have stimulated other researchers and provided valuable information to public health departments and local corporations.

**MY RESEARCH IN 140 CHARACTERS (OPTIONAL, MAY BE LEFT BLANK):**

Unraveling the evolution of the Northern Appalachians in Maine and New Brunswick by field mapping and geochemical and geophysical analyses.