Peter Hilton Memorial Lecture - 2019

How hard is algebraic topology? Between the constructive and the non.

Speaker: Shmuel Weinberger, University of Chicago
Time: Thursday April 4, 2019, 3:00 p.m.
Location: Binghamton University, Lecture Hall 9
Abstract: In algebraic topology one studies geometric problems and problems of constructing and deforming highly nonlinear functions by means of algebra. If one knows that two maps are homotopic (i.e. can be deformed to one another) because a certain calculation says they both lie in the trivial group, then what has one learned? (A striking example of this is Smale's turning the sphere inside out, which now can be seen after much highly nontrivial effort, on youtube.) The question I shall discuss is how hard is it to understand what the algebraic topologists tell us.

The lecture will be followed by a reception at 4:30 p.m. in The President's Reception Room, Anderson Performing Arts Center, Binghamton University. This reception is for the whole Binghamton Mathematics Community as well as for our visitors.