Better bird spotting
UI professor’s mission: To track wildlife in real time, avert plane crashes

BY PAUL WOOD

When wild things and jet airplanes share the same space, there’s a danger that both can be damaged. A Jan. 15 collision involving a US Airways jetliner on the Hudson River, with all 155 passengers safe, is one of the happy endings.

A University of Illinois professor’s research could help prevent more of those happy endings coming.

About 200 people have been killed worldwide in a result of wildlife strikes since 1988, according to Bird Strike Committee USA, a governmentalillance coalition formed in 2001, to study and prevent collisions between animals and aircraft.

Dr. Edwin Herrick’s mission is to find a way for radar to track animals in real time. The UI engineering professor has compiled more than 3400000 data points from radars at two Washington state airports, data so enormous that he compares it to “drinking water out of a fire hose.”

In a Federal Aviation Administration study, Herrick and his researchers will soon use avian radars at O’Hare International Airport, New York’s John F. Kennedy Airport, and Dallas/Fort Worth Airport.

He said it could take two to three years to gather and analyze the data.

In a recent test, he recently flew a radar controlled small helicopter at the Seattle-Tacoma Airport to show his radar array can detect a bird-sized target in over cold.

Rudy Frasca, who runs the FAA’s Air Traffic Modernization Institute, says there has been an explosion since 1980s — 33 years ago. He has a collection of pictures from World War II to the latest technology that he regularly takes into the air.

Frasca’s never had a bird collision.

“Birds are always the first ones,” said Frasca, who notes that pilots enthusiastically support research on the problem.

Each collision cost the US $500 million a year, according to Bird Strike Committee USA.

The airplanes can usually keep flying after hitting birds, the committee notes. However, aircraft repairs are costly.

Herrick and his way to determine if birds or other objects caused a mishap is similar to a crime scene investigation.

“They will examine the engines, and typically there is debris left in engines. They can identify species based on both feathers and DNA,” he said. “There are very few things that could shut down both engines.”

“The issue is usually birds, but other wildlife such as coyotes and deer have been hit by airplanes.”

Some researchers, especially those in the Agriculture Department, work on changing habitat for birds, studying the optimum height for grass or even harrowing the birds, Herrick said.

His research is aimed at finding a way for air traffic controllers to know where flocks of birds are and where they are going.

“If you’re observing birds, right now you are limited to what you can see them daylight,” he said.

Though there is some research on night radars, “radar expands that potential to 24/7,” Herrick said.

“We’re being open to radar units in the West that generate different types of data. It’s largely a matter of storage, because radars have a high frequency of data generation, which researchers and experts improve, he said. Real-time observation will become a reality, just as 30 years ago wind shear was considered too difficult to measure, he said.