IEEE COMPUTATIONAL INTELLIGENCE SOCIETY RECOGNIZES
JERRY MENDEL AND DONGRUI WU

Dr. Jerry Mendel and former CiSoft Ph.D. graduate, Dongrui Wu, have won the prestigious 2014 IEEE Computational Intelligence Society IEEE Transactions on Fuzzy Systems Outstanding paper award for their paper, “On the Continuity of Type-1 and Interval Type-2 Fuzzy Logic Systems”. Dr. Mendel was presented the award by CT Lin, the Editor in Chief of the IEEE Transactions on Fuzzy Systems (pictured), at the 2014 World Congress on Computational Intelligence banquet in Beijing this July.

In order to understand the significance of their work, Dr. Mendel defined Fuzzy Logic and their breakthrough in this specific subject. Dr. Mendel likes to define fuzzy logic as a “human constrain logic.” Regular logic comprehends a certain aspect as “black and white.” However, Fuzzy Logic “let’s you fill in the shades of grey between the black and the white.” This system has provided a path in which subjective judgments, which have different layers built into them, can be described mathematically.

Dr. Mendel and Dr. Wu worked on an area called “Type-2 Fuzzy Logic” in which one of the most important applications, for Fuzzy Logic in general, is in the field of Control Systems. Important properties were studied in two areas of Fuzzy Logic controllers, which were very mathematical. However, they were able to prove certain important properties that none other had looked at before. In addition, they discovered during this journey a very important design constraint for Type-2 Fuzzy Logic controllers that had not been thought about before, and “that unless people invoke that constraint they could get very strange behaviors”, warned Mendel.