Badri Roysam, chair of the electrical and computer engineering department at the UH Cullen College of Engineering, has been named a 2018 Fellow of the Institute of Electrical and Electronics Engineers (IEEE).

The honor is the IEEE’s highest grade of membership and is reserved for those with an outstanding record of accomplishments in an IEEE field. No more than one-tenth of 1 percent of IEEE’s voting members can be named Fellows in a given year.

In naming Roysam as a Fellow of both the 2017 and 2018 Classes, the IEEE cited his contributions to image processing algorithms for biological microscopy.

Roysam is indeed world-renowned for his accomplishments in the field of image processing. Inventor of a novel software platform called FARSIGHT, Roysam is credited with pushing medical imaging to new heights by allowing researchers to rapidly analyze images of human tissue collected from laser-scanning microscopes by quantifying specific molecules of interest in cells and tissue. To date scientists have used it for everything from analyzing brain tissue after injury to studying the effectiveness of experimental medications.

Since inventing the FARSIGHT software Roysam has undertaken a variety of research projects aimed at providing far superior imaging analyses than ever before possible. In 2011 Roysam received more than $5
million from the Defense Advanced Research Projects Agency (DARPA) to explore why neural devices implanted in the brain inevitably fail over time.

The following year Roysam joined forces with UH chemical engineer Navin Varadarajan to apply the TIMING software to study the best ways to modify human immune cells to fight against cancer.

Throughout his career as both a researcher and an administrator, Roysam says the IEEE has played an integral role in his success.

“ IEEE has been one of the most important technical societies to me both personally and professionally,” he said. “The organization has introduced me to the latest developments in my field through its prestigious publications and has allowed me to connect with some of the brightest minds in my field through its meetings and conferences. To say that I am honored to be named a Fellow of such a respected organization is an understatement.”

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