It's the most complex organ in your body. As science reveals more about how the brain works, engineers are devising fixes for when it doesn't.

Randy Atkins: Ed Boyden, of MIT, calls himself a “neuroengineer.” While he studies nerve cells, his focus is broader.

Ed Boyden: I think of the brain as a system that can break in many ways.

Randy Atkins: Causing difficult-to-treat problems like epilepsy, depression, Parkinson’s disease.

Ed Boyden: And, like any system that we can think about from an engineering standpoint, we can try to devise strategies for improving its function.

Randy Atkins: Using tools ranging from magnetic stimulation to light waves, Boyden hopes to engineer targeted treatments within active brains…

Ed Boyden: …that will correct aberrant activity while preserving as much of the normal computations as possible.

Randy Atkins: With the National Academy of Engineering, Randy Atkins, 103 point 5 F-M and WTOP-dot-com.

- Ed Boyden's site at MIT
- Boyden's blog at Technology Review
- Multimedia presentations of Boyden's work
- More about the brain