Jeffrey Gray, Ph.D.

Titles & Department

Professor, Department of Chemical and Biomolecular Engineering; Johns Hopkins University Provost's Discovery Award recipient

Specialization Areas

Protein structure prediction and design, protein-protein docking, antibody engineering, deep learning, membrane protein modeling, glycoprotein modeling.

Summary of Research & Work

Dr. Gray's work focuses on developing algorithms and tools to predict and design biomolecules. Recent work includes RosettaDock for the prediction of the structure of protein complexes and structure prediction/design algorithms for proteins interacting with solid surfaces.

Publications

- Fast, accurate antibody structure prediction from deep learning on massive set of natural antibodies
- Toward generalizable prediction of antibody thermostability using machine learning on sequence and structure features
- Structure-based neural network protein–carbohydrate interaction predictions at the residue level