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Ali Punjani is the CEO of Structura Biotechnology Inc. in Toronto, Canada. Structura develops, distributes and maintains the CryoSPARC software system that today is one of the most widely used tools globally for 3D reconstruction from single particle cryo-EM data.

Ali has a background in engineering, completed a MSc at the University of California, Berkeley, in computer science and machine learning, and subsequently pursued his PhD at the University of Toronto in computer science, where he worked on novel cryo-EM reconstruction algorithms. These methods developments formed the basis for early versions of CryoSPARC, and research work has since been ongoing at Structura Biotechnology Inc.



Methods and tools in CryoSPARC for processing of membrane protein cryo-EM data

This talk will describe new methods and software tools that have been developed in the CryoSPARC software system that may be useful for processing of single particle cryo-EM data of membrane proteins.

The talk will provide details on developments across preprocessing, particle curation, refinement and diagnostics, as well as new software tools that allow for automated processing. The new tools are demonstrated on several datasets of active GPCR complexes.