



Nadrian C. (Ned) Seeman earned his Ph.D. in Crystallography from the University of Pittsburgh in 1970. Subsequently he performed postdoctoral work at Columbia and MIT, emphasizing nucleic acid crystallography. He obtained his first independent position at SUNY/Albany, where his frustrations with the macromolecular crystallization experiment led him to the campus pub one day in the fall of 1980. While there, he realized that the similarity between 6-arm DNA branched junctions and the flying fish in the periodic array of Escher's 'Depth' might lead to a rational approach to the organization of matter on the nanometer scale, particularly crystallization. Ever since that time, he has been trying to implement this approach and its spin-offs, such as nanorobotics and the organization of nanoelectronics.

While at Albany he laid the foundation for the structural DNA nanotechnology field by focusing on the self-assembly of DNA to form well-defined and predictable species, particularly crystals. Ned's research has continued to focus on the self-assembly of DNA molecules into three-dimensional crystalline arrays and their associated biophysics. Following his move to NYU in 1988, his group's first construct of a closed polyhedral object from DNA (a cube) was reported in 1991. Since that time the idea of using DNA as a 'tinkertoy' to design self-assembling objects, lattices, and nanomechanical devices has blossomed. While applications of these materials are yet to be identified, they are providing an intellectual training ground for understanding how to design and self-assemble three-dimensional supramolecular objects with structural fidelity and function. His construction of nanoscale materials and mechanical devices, and the work by others he has inspired, has led to extensive study of the structure, dynamics, and thermodynamics of DNA-based materials

Ned is the Margaret and Herman Sokol Professor of Chemistry at NYU. He was the founding president of the International Society for Nanoscale Science, Computation, and Engineering. He has published over 270 papers, and has won the Sidhu Award, the Feynman Prize, the Emerging Technologies Award, the Tulip Award in DNA Computing, the World Technology Network Award in Biotechnology, the NYACS Nichols Medal, the SCC Frontiers of Science Award, the ISNSCE Nanoscience Prize, the Kavli Prize in Nanoscience, and the Einstein Professorship of the Chinese Academy of Sciences.