

## Software Engineering Revolution Driven by Complexity Science

**Authors :** Jay Xiong, Li Lin

**Abstract :** This paper introduces a new software engineering paradigm based on complexity science, called NSE (Nonlinear Software Engineering paradigm). The purpose of establishing NSE is to help software development organizations double their productivity, half their cost, and increase the quality of their products in several orders of magnitude simultaneously. NSE complies with the essential principles of complexity science. NSE brings revolutionary changes to almost all aspects in software engineering. NSE has been fully implemented with its support platform Panorama++.

**Keywords :** complexity science, software development, software engineering, software maintenance

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020