1031-05-38   **Fangjun Arroyo*** (`farroyo@fmarion.edu`), Mathematics Department, Francis Marion University, Florence, SC 29501, and **Johnny Sun** (`angelion_sun@163.com`), , Peoples Rep of China. *A Pair of Formulas Involving the Difference and Shift Operators and Fibonacci-Like Sequences.* Preliminary report.

In this paper we give a pair of formulas involving the difference and shift operators and Fibonacci-like sequences. We provide some applications of these formulas. In particular, we derive some interesting combinatorial identities involving Fibonacci numbers. We also find good approximations for infinite series involving Fibonacci numbers. Finally, we prove convergence theorems for the infinite series involved in the two formulas. (Received July 25, 2007)