

## Abstract

This final project examines steady flow profiles over an inclined channel. Different steady flow profiles may appear depending on the type of flow, i.e. subcritical or supercritical. Here, the steady Saint Venant model is adopted, its solution can be obtained through the application of the numerical integration method (trapezoid). When the water levels upstream and downstream of the channel are known, water level along the channel can be obtained as the solution of a non-linear system of equations, which is then solved by the Newton iteration. This method is known as the standard step method of simultaneous procedure. Furthermore, simulation is done using the measurement data at the downstream part of Ciliwung River. Field data is the water level along the river, from TB Simutupang to PA. Manggarai. Our simulation result has shown a good agreement with field measurement data.

**Keywords:** Flow profile, saint venant, newton method, ciliwung river.