

# Currents in the Heisenberg Group, II part

Giovanni Canarecci \*

## Abstract

In the Heisenberg Group currents and  $\mathbb{H}$ -regular surfaces can be used to develop a theory with the purpose of solving Plateau (minimality) problems. In this talk we present different sets of  $\mathbb{H}$ -currents and some of their properties.

In Riemannian setting, the Plateau Problem can be solved with currents using the Compactness Theorem and the Deformation Theorem, that require as an important tool the “slicing theory”. Here we will show some of its property in the Heisenberg group.

Finally, another question that arised naturally in the study of currents is how to describe “orientability” in a Heisenberg sense and whether or not there exist regular Möbius Strips in  $\mathbb{H}^n$ . We will show a definition of  $\mathbb{H}$ -orientability strongly connected with the Euclidean orientability.

---

\*giovanni.canarecci@helsinki.fi, University of Helsinki, Finland