

ALGEBRA SEMINAR

Some homological conjectures over fiber products rings

Thiago Freitas

Universidade Tecnológica Federal do Paraná

Câmpus de Guarapuava

E-mail: freitas.thf@gmail.com

ABSTRACT. The main objective of this talk is to show, over fiber product rings, some results obtained on some homological conjectures that are active topics of investigation. Precisely, we will address two famous conjectures: the Buchsbaum-Eisenbud-Horrocks conjecture and the Total rank conjecture. These two conjectures concern the lower bounds of the well-known Betti numbers. We will see that, despite being easy to understand problems, answers obtained so far for both conjectures are little known. This is a joint work with Victor Hugo Jorge Pérez (ICMC-USP-Brazil) and Aldício Miranda (UFU-MG-Brazil).