Algebra Seminar

Speaker:

Eugene Chibrikov

Wednesday, December 13, 2017

1:00 p.m., HH-3017

The Algorithm for Identifying and Representing Treatment Exposure Patterns

Abstract:

We introduce a novel method to represent data of drug treatments or any other uniquely defined exposure entities over time. This approach allows us to employ the techniques of abstract algebra. We use Grobner-Shirshov bases theory, which we generalize to the case of partial ordering, to develop a general algorithm for identifying unique treatment patterns. As an application we develop a uniform method to reduce treatment gaps and overlaps in a typical database of prescription records, an implementation of which is then demonstrated on a large database.