Título: **Automated Verification of Care Pathways Using Constraint Programming**

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Local: **Sala de Seminários - Bloco 942-A (GREat)**

Resumo:

Clinical Pathways are used to standardize medical treatments. Due to their procedural nature, these pathways work as a data-dependent transition system, where a state is connected to others through one or many transitions. Some of these transitions have a guard condition that must be satisfied to follow to the next state. The bad construction of these transitions and their guard conditions can lead to satisfiability problems during pathway executions. This study proposes an application to check four possible problems: states in deadlock, non-determinism, inaccessible steps and transitions with logically equivalent guard conditions. We use a free open source Java library dedicated to constraint programming to encode and verify care pathways. We then use our algorithms to find construction problems in 53 real care pathways used both in hospitals and surgeries, helping to enhance reliability within these processes.

Banca:

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