Defesa de Tese: Antonio José Melo Leite Júnior

Título: **An Approach for Discovering Probable Movement Patterns and Behaviors of People through Visual Analysis of Predictive Suffix Trees**

Data: **30/08/2019**

Horário: **14:00h**

Local: **Sala de Videoconferência da STI - Bloco 901**

Resumo:

Predictive Suffix Trees (PSTs) are data structures capable of simultaneously represent space, time, and probability used to predict when a person would leave her current position to move to a new probable location. Although they are usually complex to read, they can help crime investigation; management road traffic; or location-based advertising, for example. This work proposes the application of visual analytics to simplify the task of finding movement patterns and possible behaviors of a person, through the use of data stored in PSTs. For that, we introduce an approach that applies sensemaking and branching time to provide a less abstract character to PSTs, allowing analysts to explore the dynamics of space-time combinations (space, time and space versus time relations) considering probabilities. To validate the proposed solution, we developed a visualization tool and performed two distinct user studies, with a total of 77 participants and two different datasets. The obtained results demonstrated the feasibility of applying the solution, allowing analysts to solve initial problems, but letting they

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propose their own questions to find other answers to the problem.

Banca:

- **Prof. Dr. Creto Augusto Vidal (MDCC/UFC - Orientador)**
- **Profª. Drª. Emanuele Marques dos Santos (MDCC/UFC - Coorientador)**
- **Prof. Dr. José Antonio Fernandes Macedo (MDCC/UFC)**
- **Profª. Drª. Aura Conci (UFF)**
- **Prof. Dr. Anselmo Cardoso de Paiva (UFMA)**