



Post-doc position, IRIT-Université de Toulouse, France

Job Type: Post doc
Location: IRIT Laboratory, Toulouse, France,
Starting date: now
Duration: 12 months

Project Description

Nicolas Mellado, David Vanderhaeghe and their colleagues published at Siggraph 2017 a method for the constrained exploration of color palettes¹. In a nutshell, the approach optimizes the colors of a palette according to a constraint graph defined as input. The exploration can be done in real-time and/or by interpolating existing palettes.

This postdoctoral project aims at closing the gap between the developed research prototype and end-users, by leveraging the practical limitations of the existing technique. The main challenges are twofolds:

- Problem setup: proposing a new approach to extract constraints and properties between colors in order to generate a constraint graph for a given input.
- Exploration tools: developing practical exploration tools integrated in a mainstream software.

The recruited post doc will be in charge of conducting the research project according to her/his personal interests. He or she will also develop prototypes to test and evaluate the proposed approaches, with a strong preference for an integration into Adobe Illustrator. He or she will collaborate with the other researchers of the team, PhD candidates, and a research engineer also involved in the project.

Overview of the hosting structure

The STORM research group at IRIT develops its activities in the field of Computer Graphics ; it is composed by 4 permanent researchers, 10 PhD students and postdocs, 2 engineers. From geometric modeling to realistic rendering, the group aims at developing computationally efficient models and tools for digital content creation and edition. This project is part of the Structural Color Processing² project.

STORM is hosted at IRIT (Institut de Recherche en Informatique de Toulouse – Informatics Research Institute of Toulouse), one of the major potential of the French research in computer science, with a workforce of more than 700 members including 272 researchers and teachers 204 PhD students, 50 post-doc and researchers under contract and also 32 engineers and administrative employees.

Education

- PhD in Computer Graphics, Computer Science or Applied Mathematics

Key Qualifications

- Familiarity with vector-graphics software (at least Adobe Illustrator)
- Strong C++ development skills
- Good knowledge on linear algebra, non-linear optimization, color processing
- Strong problem-solving skills
- Must be able to work collaboratively and communicate with researchers and engineers
- English or French language (written and spoken)

1 <https://www.irit.fr/STORM/site/constrained-palette-space-exploration/>

2 <https://www.irit.fr/STORM/site/structural-color-processing/>