JOB DESCRIPTION

Job Title:	Post-Doctoral Research Assistant in the Analysis of String Manipulating Programs with Real-World Regular Expressions
Department / Unit:	Computer Science
Job type	Research
Grade:	RHUL 7
Accountable to:	Matthew Hague

Purpose of the Post

The successful applicant will contribute to the development of constraint satisfaction algorithms for string constraints using "real-world" regular expressions. That is, regular expressions using features such as capture groups and back-references that are not normally considered by theoretical research. In addition, the handling of length constraints represents a significant challenge.

Key Tasks

- Development of string constraint tooling
- Contribution to theory of string constraints
- Benchmarking in collaboration with Prodo.dev

Other Duties

The duties listed are not exhaustive and may be varied from time to time as dictated by the changing needs of the College. The post holder will be expected to undertake other duties as appropriate and   as requested by his/her manager.

The post holder may be required to work at any of the locations at which the business of Royal Holloway is conducted.

Internal and external relationships

The following list is not exhaustive but the post holder will be required to liaise with:

Prodo.dev with respect to string constraint benchmarks and applications.

Collaborators in Germany (Anthony Lin, Kaiserslautern, and Johannes Kinder, Music), Sweden (Philipp Rümmer), and China (Zhilin Wu).