

# Interfacing SICStus Prolog with Excel

## Background

[SICStus Prolog](#) is the world leading commercial Prolog implementation. It has many uses in solving difficult algorithmic problems. In combination with its built in constraint solver it is particularly powerful for tasks such as advanced product configuration and travel optimization. Currently, the successful application is often confined to larger projects that can afford the time and effort to build a customized system that uses Prolog embedded.

We believe that there is scope to expand the use of SICStus Prolog by providing access to it via Excel. [DataNitro](#) has released a Python environment for Excel, which we believe can be used to interface Prolog as well. The intended end user would be both experienced Prolog developers who want a more convenient environment for smaller applications, as well as end users who may not be familiar with Prolog, but who want to access the powerful constraint solver.

## Objective

In his/her thesis the master student will build an interface between SICStus Prolog and Excel using DataNitro. The work consists of:

- An analysis of how the interface might work
- The integrations itself
- Functional verification of the system
- Documentation
- Building sample applications that show the power of using Prolog with Excel. This would involve researching which application areas would be most important for potential customers.

Hence, the project includes

- Elements of theoretical studies
- Software development and testing
- Market research
- A written report

## Competence

We are looking for a bright MSc student with the following requirements:

- Fluent in C
- Taken constraint programming course
- Fluency in Prolog is highly desirable
- Knowledge of Windows programming, Excel and Python is a plus
- A good spoken and written English

## Applications

Applications should include a brief personal letter, your CV with your education, professional experience and specific skills and recent grades. In your application, make sure to give examples of previous programming or other projects that you consider relevant for the position. Candidates are encouraged to send in their application as soon as possible via e-mail. Suitable applicants will be interviewed as applications are received.

## About SICS

The Swedish Institute of Computer Science (SICS) is a non-profit research organization focusing on applied computer science. SICS employs approx. 130 researchers, including 70 PhDs.

The SICStus development is done in the Computer Systems Laboratory of SICS.

## Work environment

We offer you a challenging task, a good working environment and a supervision that makes sure that both the project and your academic thesis will be successful.

The SICStus team is mainly placed in SICS' office in Uppsala. The work can be done either in Uppsala or in Kista. If the work is done in Kista, some travel to Uppsala will be required.

It may be possible to extend this project to make it suitable for two MSc students to carry out in collaboration.

## Contact

Mats Carlson

[matsc@sics.se](mailto:matsc@sics.se)

SICS, Box 1263, SE-164 29 Kista, Sweden

+46 70 264 7180