

BASIC INFORMATION ON SUB-PROJECT

NAME OF PROGRAMME/FUND	Scholarship Fund - Sciex NMS ^{ch}
RESEARCH FIELD AND OTHER RESEARCH FIELDS INVOLVED (if applicable)	Engineering Sciences
TITLE OF THE SUB-PROJECT	Measurement & Modeling of Garbage Collector Impact on Observed Application Performance (MeMo)
REGION OF THE CZECH REPUBLIC (according to the location of the home institution)	Prague
GRANT AMOUNT SPENT	29 386,11 CHF
INTERMEDIATE BODY	Swissuniversities
HOME INSTITUTION	Charles University in Prague Faculty of Mathematics and Physics
HOST INSTITUTION	University of Lugano Faculty of Informatics
NAME OF THE FELLOW	Petr Libiř

ABSTRACT OF THE SUB-PROJECT	<p>Complex runtime mechanisms such as dynamic class loading, just-in-time compilation, or garbage collection impact the observed performance of contemporary applications significantly. Unfortunately, the specific impact is often not known, especially at the application level. To remedy this issue, the project proposes to combine the expertise of the Home Mentor and the Host Mentor teams in the domains of application performance measurement, garbage collector measurement, software instrumentation, and performance modeling, to achieve better understanding of the performance impact of garbage collection. The project proposes a short and concentrated effort consisting of (1) extending the existing GC measurement infrastructure to cover more GC implementations and more application behavior patterns, (2) analyzing the experiment results collected by the extended infrastructure, and (3) deriving general knowledge from the analysis. The specific contribution of the project is in focusing on observed application performance, rather than more generic garbage collection performance measures.</p>
MAIN RESULTS	
DATE OF REALISATION OF THE FELLOWSHIP	1.7.2010 - 31.12.2010
MORE INFORMATION ON THE PROGRAMME	www.sciex.ch