

Application for Financial Aid

- **Applicant Information**

Name of Applicant	Kale Sonali Arvind
Position Title	Senior Member of Technical Staff
Institution	Persistent Systems Private Limited
Postal Address	Kale Sonali Arvind, Persistent Systems Private Limited "Bhageerath" 402, Senapati Bapat Road Pune 411016 India
Email Address	sonali@persistent.co.in
Phone Number	+91 (20) 567 8900 (ext. 328)
Citizenship	INDIAN
Academic level	Postgraduate.

- **Vita and Bibliography**

A brief introduction to my contribution to Virtual Observatory: I have been working for Virtual Observatory since April 2002. As part of this project, I have developed the following tools:

- 1) **C++ VOTable Parser:** The VOTable format is a proposed XML standard for the exchange of tabular data, with particular emphasis on astronomical tables. We have developed a C++ library for API based access to VOTable files. The APIs can be used directly to develop VOTable applications without having to do raw VOTable processing. This parser is available in two modes: streaming mode and non-streaming mode. The streaming parser can be used for parsing real-time, streaming VOTables as well as large VOTables, which do not fit in the memory. The non-streaming parser on the other hand can be used to access data from VOTable documents that can fit in memory. The parser is made available at <http://vo.iucaa.ernet.in/~voi/cplusplusparser.htm>.

Related publications:

- **A C++ Parser for VOTables**
Ajit Kembhavi, Hrishikesh Hegde, Sonali Kale, P.R. Krishnan, Vasudev Navelkar, T. M. Vijayaraman
Published in *ESO Astrophysics Symposia* series.

- 2) **VOPlot:** VOPlot is a graphical tool for visualization of data in VOTable format and to perform basic statistical analysis. VOPlot can produce output in postscript and VOTable formats and can be easily integrated with packages that require visualization support. More information about VOPlot is available at <http://vo.iucaa.ernet.in/~voi/voplot.htm>

Table 1: Vita

Name:	Kale Sonali Arvind
Date of birth:	March 16 1977.
Nationality:	Indian
Passport Number:	B2174271
Official Address:	Persistent Systems Private Limited "Bhageerath" 402, Senapati Bapat Road Pune 411016 India
Experience:	4 years, since July 1999
Residential Address:	24/1, Premnagar Society, Pune Satara Road, Pune 411047 Maharashtra India
Email ID:	sonali@persistent.co.in
Telephone:	+91 (20) 567 8900 (ext 328) (Off), +91 (20) 421 1110 (Res)
Fax:	+91 (20) 567 8901
Educational Qualifications	
Bachelor of Computer Science (B.C.S.)	79%, Distinction
Master of Computer Science (M.C.S.)	85%, Distinction
Institutions with which I Collaborate in Research	1.Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune, India 2.Centre de Données astronomiques de Strasbourg (CDS), Strasbourg, France.
Contribution to Virtual Observatory	1.C++ VOTable Parser (streaming and non-streaming mode) 2.VOPlot (VOTable Plotting tool)

- **Presentation Information**

Presentation Type	Oral
Presentation Title	Toolkit for scientific discovery using VOTables
Abstract	<p>Graphical interfaces are extremely useful tools in data mining as well as statistical analysis of huge datasets. We describe a graphical visualization tool, VOPlot, that can be interfaced with data in VOTable format to form a valuable aid in scientific discovery.</p> <p>The VOPlot toolkit, developed by us, is available as either a stand-alone tool or as a web-based applet fully integrated with Vizier catalogue service. The VOPlot tool is very versatile, and can be used to perform a number of graphical tasks and simple statistical estimations.</p> <p>VOPlot can produce output in postscript and VOTable formats and can be easily integrated with packages that require visualization support. It has full two-way communication with Aladin, and has been adopted in packages like LEDAS. We describe VOPlot and recent enhancements to it, and demonstrate its usefulness in specific science applications.</p>

- **Requested Financial Aid**

Hotel	For the period of the Conference.
Registration Fee	Yes.
Demo Fee	No.
International travel	Yes. Due to low value of Indian rupee, I am greatly dependent on your support for my international travel.

- **Letter of recommendation**

Professor Ajit Kembhavi (email: akk@iucaa.ernet.in), Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune, India and **T.M.Vijayaraman** (email: vijay@persistent.co.in), Persistent Systems, Pune, India who both know me personally have agreed to send the letter of recommendation for my financial support.