

Training Opportunity for Swiss Trainees

Reference	Title	Duty Station
CH-2016-SCI-OS	3D visualization of data from ESA planetary missions (Mars Express, Rosetta)	ESAC
<p>Overview of the unit's mission:</p> <p>ESAC Science Data Centre is responsible for developing and operating the science archives of all ESA space science missions (astronomy and solar system), in close cooperation with the Science Operations Centres at ESAC, the instrument teams and the scientific community.</p> <p>In addition to the usual web graphical user interfaces to the archives, following the overall trend of other Space Agencies and institutes in Space Industry, we are exploring new ways (3D, Virtual Reality) of displaying planetary data to our end users. For example, we are now developing prototypes of 3D Visualization tools which aim at providing new immersive experience through exploring planetary datasets from past and present ESA planetary missions (mainly focusing to Mars Express but will be extended to other missions, like Rosetta and Venus Express).</p>		
<p>Overview of the field of activity proposed:</p> <p>The Trainee will work together with a small team of software engineers and scientists at ESAC and the outcome of her/his work will be part of the future operational version of ESA's Planetary Science Archive, with full credits to her/him. She/he will get all needed software and computer support and training for the project. An Agile/Scrum software development methodology will be used.</p> <p>With support from the engineers and scientists at ESAC, the Trainee is expected to perform the following tasks:</p> <ul style="list-style-type: none"> - Identify the existing data from Mars Express and Rosetta which can be used for 3D and VR tools - Collect and identify the data visualization science cases to be implemented for the tools - Develop associated prototypes of 3D and VR visualization tools using the WebGL framework - Connect these prototypes to the Planetary Science Archive 		
<p>Required education:</p> <p>Strong IT knowledge in general, preferably in software development in Java and web technology Interest in Planetary Science and science data management and data visualization would be an asset. Ability to work in a team with engineers and scientists</p>		