

Post Description	
Post Title:	Ground Segment Systems Division Trainee
Duty Station:	DEIMOS Engenharia, Lisbon (Portugal)
Division/Section:	<p>Ground Segment Systems Division. This area of DME focuses on development of turnkey software systems for satellite ground segment for both flight and payload data segments. In particular the following fields are subject to this division:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Development of software libraries to implement mission conventions (e.g. orbit, reference frames, times, etc) to be used along the ground segment for consistency purpose. <input type="checkbox"/> Mission planning & scheduling for the satellite and ground operations. <input type="checkbox"/> Monitoring & Control systems; Quality Control & Performance Monitoring Systems <input type="checkbox"/> Flight Dynamics operational systems; Instrument Data Processors; Archive & Inventory Systems
Roles	
Work description, tasks and responsibilities	<p>The trainee will be enrolled in the SMOS L1 Processor Prototype (L1PP) activities (more info at www.smos.com.pt). In particular, the trainee will be responsible for implementing and validating a stand-alone version of an algorithm, designed by the <i>Laboratoire d'Astrophysique de Toulouse</i> (LAT), to parameterize the SMOS antennas' patterns in spherical harmonics components. The following responsibilities are envisioned, to be progressively planned and implemented:</p> <ul style="list-style-type: none"> • Analyze the provided literature and understand the problem • Design and implement a stand alone version of the algorithm aforementioned • Cross validate the results with the code and test data provided by LAT • Integrate the generated parameterized antenna patterns with L1PP and analyze the final gain/loss in resolution
Deliveries	<p>In the end of the training the trainee should provide:</p> <ul style="list-style-type: none"> • Technical Note describing the design and implementation of the parameterization code and reporting the analysis of the results obtained. • Software package itself, containing release notes and a user manual • Set of data files, to be used as Auxiliary Data by the Processor Prototype
Tutor	Nuno Catarino
Capabilities	<p>The following capabilities are required for the post:</p> <ul style="list-style-type: none"> • Solid theoretical background in the area of numerical methods, functions optimisation, estimation and mathematical statistics • SW development in C/C++, Matlab/Simulink or similar • Responsibility towards the team-mates and customer
Training Conditions	
Training Calendar:	01/JUL/2007 to 31/SEP/2007 (3 months duration)
Training Hours:	30 hours a week (regular business hours)
Training Grant:	“Subsidio de Almoço”