

Training Opportunity for Belgian Trainees

Reference	Title of Training Opportunity	Duty Station
BE-2020-EOP-8MP	Earth Observation System Simulation Engineering	ESTEC
<p><u>Overview of the unit's mission:</u></p> <p>The role of the Future Missions and Instruments Division is to prepare the Earth observation (EO) missions, instruments and technologies of the future, encompassing a wide range of research missions (Earth Explorers, Missions of Opportunity, Scouts) and operational missions (Copernicus Sentinels together with the EU and meteorology missions together with EUMETSAT). The work carried out is mainly related to :</p> <p>1) the end-to-end definition of space missions, including orbits, instruments, platforms, end-to-end performance, data flow, launcher interfaces, and ground processing to meet the observation requirements. 2) definition and pre-development of instruments (optical and microwave) and platforms (including payload data handling and transmission), including breadboarding of critical elements for technology development and risk retirement.</p> <p>The definition is carried out in close cooperation with specialists in the different domains as well as with the scientists and/or data users proposing the mission or expected to use its results.</p> <p>Candidates interested are encouraged to visit the ESA website: http://www.esa.int</p>		
<p><u>Overview of the field of activity proposed:</u></p> <p>You will support the work of the Future Missions and Instruments Division in the definition, development and exploitation of System Engineering Tools suitable for the preliminary analysis and sizing of future EO missions.</p> <p>In particular, you will perform the following activities:</p> <ul style="list-style-type: none"> • Participate to the development of new System Engineering Tools for preliminary analysis and sizing of future EO missions, ensuring a coherent and representative modelling of each element of the system, (satellite/platform and its subsystems, payload, ground processing) contributing to the system performance; • Participate to the evolution of the existing System Engineering Tools used in the Division; • Use the above System Engineering Tools for system trade-offs, preliminary sizing and performance evaluation of a selected set of future EO missions; • Provide feedback from mission optimisation to the spacecraft and mission design. 		
<p><u>Required education:</u></p> <ul style="list-style-type: none"> • Master-level degree in a relevant technical or scientific discipline, e.g. space systems engineering • Experience in space system engineering, orbit/mission analysis, Earth Observation remote sensing techniques and optical or microwave instruments, would be an asset. • Knowledge of Microsoft Excel, Matlab and/or Python programming is required. • Innovation, creativity and problem-solving mindset; • Good interpersonal and communication skills; • Ability to work in a multi-cultural environment as part of a team; • Fluency in English and/or French, the working languages of the Agency; • Belgian nationality is a mandatory condition. 		