

Training Opportunity for Irish Trainees

Reference	Title	Duty Station
IE-2019-TEC-QEC	Component Lab Engineer	ESTEC
<p><u>Overview of the unit's mission:</u> The Radiation Hardness Assurance and Component Analysis Section is in charge of the following:</p> <ul style="list-style-type: none"> •Radiation Hardness Assurance of active EEE components in all application domains (except radiation environment and shielding analysis). •Laboratory Reliability analysis of Power, RF, Photonics, Micro-Nano Technology, Silicon based and passive EEE Components •EEE Component Laboratory Analysis and Investigation Techniques •EEE Component radiation testing •EEE Component and radiation laboratory •Radiation test facilities and dosimetry •Active EEE Components, radiation evaluation, radiation qualification and radiation hardening. •In-Flight Radiation Hardness Assurance verification and radiation related component technology demonstration 		
<p><u>Overview of the field of activity proposed:</u></p> <p>EEE Components are at the heart of equipment flown on-board ESA spacecraft. EEE Components have to operate reliably for the duration of the spacecraft lifetime in the harsh space environment. EEE Component reliability may be impacted by the thermal, radiation, vibration, shock and other environmental conditions found in space. The Materials and Electrical Components Laboratory maintain numerous facilities to carry out various analysis and test to ensure reliable EEE Components on ESA missions and external projects. The laboratory offers services in the area of:</p> <ul style="list-style-type: none"> ▪ Failure Analysis ▪ Destructive Physical Analysis ▪ Reliability Analysis ▪ Radiation Effects Characterisation <p>The laboratory focuses on tasks that are non-routine, are ESA project schedule critical, require independent and impartial support and require specific confidentiality constraints.</p> <p>The Trainee will be exposed to the various laboratory analysis and testing activities on EEE Components running in the lab. These include:</p> <ul style="list-style-type: none"> • <u>FA</u> (Failure Analysis) • <u>DPA</u> (Destructive Physical Analysis) • <u>CA</u> (Constructional Analysis) <p>To be noted, most of the activities learned as part of the internship could be further exploited at Tyndall facility in Cork (Ir).</p>		
<p><u>Required education:</u></p> <p>MS Degree in Electrical Engineering, physics or equivalent</p>		