



Belfius Insurance & Belfius Bank hebben grote groeiambities als bank-verzekeraar niet-Leven. In dat verband is Belfius Insurance op zoek naar een Actuary Non Life Pricing & Product Support.

Als actuaris van het team Pricing & Product Support stuur je alle technische aspecten aan die te maken hebben met de tarifiering voor het productengamma van de takken BOAR/Niet-Leven zowel via de kanalen (Retail, Business en Corporate) als via de distributienetwerken (bancassurance en DVV-agenten). Je draagt bij tot het vastleggen van de technische pricing en het commercieel concurrentievermogen van de producten en doe je aanbevelingen om de strategische doelstellingen van de maatschappij te verwezenlijken.

Dat omvat onder meer de volgende taken:

- je implementeert en verbetert voortdurend de technische en de commerciële tarieven om een perfect evenwicht te garanderen tussen een concurrerend tarief en een rendabel tarief;
- je houdt continu toezicht op het concurrerend karakter van het tarief van de producten van de maatschappij in vergelijking met de concurrentie, alsook op de prestatie-indicatoren op het vlak van de rentabiliteit en de groei van de nieuwe productie, zodat de nodige acties kunnen worden ondernomen;
- je neemt deel aan het uitwerken van producten ter ondersteuning van het Product Management voor de technische aspecten van de producten;
- als lid van dit team zie je voortdurend toe op de ontwikkeling en de verbetering van je technische kennis om borg te staan voor de uitmuntendheid in het specifieke domein van de tarifiering.

#### **Profiel**

- je beschikt over een diploma actuaariaat, fysica, wiskunde, ingenieur of gelijkwaardig;
- kennis van de segmenten Business en Wholesale is een troef;
- je bent kritisch ingesteld en gaat analytisch en gestructureerd te werk;
- je bent een teamspeler maar kan ook autonoom werken;
- je bent leergierig en deelt graag je kennis;
- je vindt het heel gewoon om feedback te geven en te krijgen;
- je bent tweetalig (of je hebt een goede kennis van de andere landstaal);
- kennis van kantoorsoftware (Excel, Word, PowerPoint ...) + SAS enz.;
- kennis van specifieke pricingtools (het programma Emblem).

#### **Aanbod**

Bij Belfius willen we Meaningfull & Inspiring zijn voor de Belgische samenleving. Jij kan samen met ons mee het verschil maken.

We hechten belang aan een gezond evenwicht tussen werk en privé en geven je dan ook de mogelijkheid om je werktijden flexibel in te vullen en regelmatig van thuis uit te werken. De andere dagen werk je in een satellietkantoor of in onze hoofdzetel in het centrum van Brussel, gemakkelijk bereikbaar met de trein en elke andere vorm van openbaar vervoer.

Begin in onze hoofdzetel de dag met een trainingssessie in de fitnessruimte van de Belfius Workout, gebruik 's middags een gezonde lunch in ons bedrijfsrestaurant of in The Village, waar je - bij een koffie of een kleine snack - contacten met collega's kan leggen in open ontmoetingsruimten.

Neem je loopbaan in eigen handen en krijg zo de kans jezelf te ontwikkelen met behulp van onze Belfius Academy. Als werkgever investeren we in leiderschapsontwikkeling en dragen we diversiteit en gelijke kansen hoog in het vaandel.

We bieden jou bovendien een aantrekkelijk salarispakket aan dat je deels naar eigen behoeften kan samenstellen, met daarbovenop tal van bovenwettelijke voordelen zoals een groepsverzekering, een hospitalisatieverzekering, maaltijdcheques, een abonnement voor het openbaar vervoer, korting op bank- en verzekeringsproducten, enz.



Mountain View, CA, USA

## Qualifications

### *Minimum qualifications*

- Master's degree in physics, imaging, optics, or related discipline, or equivalent practical experience.
- 10 years of experience in Imaging Science and camera technology.
- Experienced in Matlab and Python.
- Experienced in camera hardware lab work and characterization.

### *Preferred qualifications*

- PhD in physics, imaging, optics, or related discipline.
- Background in physics, imaging science and algorithms.
- Knowledge of computational imaging methods.
- Knowledge of computer vision methods and algorithms.
- Knowledge of C++ and ML.

## About the job

As a member of our Computational Camera Hardware efforts, you will play a key role in defining what cameras are built in Google products and how to use them. You will work with multiple teams to understand the needs of Google and its users, you will develop methods for evaluating the multiple imaging technologies in consideration, you will lead the efforts to characterize and model these technologies, and finally you will be part of the discussion on how and when it will be deployed.

Google's mission is to organize the world's information and make it universally accessible and useful. Our Devices & Services team combines the best of Google AI, Software, and Hardware to create radically helpful experiences for users. We research, design, and develop new technologies and hardware to make our user's interaction with computing faster, seamless, and more powerful. Whether finding new ways to capture and sense the world around us, advancing form factors, or improving interaction methods, the Devices & Services team is making people's lives better through technology.

## Responsibilities

- Characterize camera devices and build/run labs for the characterization.
- Model and simulate camera performance based on characterization.
- Drive the virtuous cycle of characterization, modeling, simulation and validation of camera hardware.
- Engage with cross-functional partners and help drive camera roadmap.
- Propose new imaging and camera features based on modeling work.



ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. For this purpose, we welcome applications from all qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics.

Applications from women are encouraged.

ESTEC, Noordwijk, The Netherlands

### Description

Materials Physics and Chemistry Engineer in the Materials Physics and Chemistry Section, Technical Reliability and Quality Division, Product Assurance and Safety Department, Directorate of Technology, Engineering and Quality.

The Materials Physics and Chemistry Section provides functional support to ESA projects and carries out technological research (R&D) in the fields of Materials Physics and Chemistry, associated processes and environmental effects.

The Section supports project-specific activities in the selection, characterisation, verification, approval and application of metallic and non-metallic materials & processes for ESA programmes with a focus on the process and environmental verification. Environmental verification covers the ground as well as the space environment.

### Duties

Reporting to the Head of Section and within the technical fields described above, your main tasks and responsibilities will include:

- providing expert technical support and consultancy to ESA projects, programmes and general studies in the field of materials physics and chemistry throughout all project phases, with a focus on the verification of the manufacturing processes, logistics and space environment compatibility, including the effects on the physical and chemical properties of the product impacting the space system reliability and life expectancy;
- ensuring materials and processes and sub-assemblies are compatible with mission requirements in terms of space and ground environmental effects (vacuum, temperature, contamination, etc.) as well as with storage and launcher requirements;
- participating in feasibility studies, project reviews and evaluations of procurement proposals;
- supporting project-specific activities in the selection, characterisation, verification, approval and application of metallic/non-metallic materials and processes for ESA programmes, focusing on materials physics & chemistry, critical processes and environmental effects;
- identifying critical development problems and assisting in their resolution via e.g. NRBs, auditing, etc.;
- coordinating and supporting non-conformance investigations and failure analysis in the required fields of competence above;
- developing and implementing procedures for new laboratory test methods and materials analysis techniques with a focus on the characterisation of physical and chemical properties and environmental effects; this includes analysing future mission requirements (in cooperation with the Space Environment and Effects Section for the definition of the mission environments) and preparing appropriate evaluation techniques as well as predictive modelling;
- contributing to the definition and implementation of technology development requirements and work plans for the Agency's technology programmes;
- defining, initiating and managing R&D activities covering both long- and short-term needs;
- contributing to implementation of Agency-wide initiatives such as CleanSpace, Space & Energy, etc., focusing on materials' physics & chemistry, associated processes and environmental effects;
- supporting and contributing to the establishment and implementation of requirements, handbooks and standards regarding space materials (Q-70 series) in the domain of competence;
- maintaining and developing ESA's competence in materials physics & chemistry, associated processes and environmental effects, promoting achievements and concepts through conferences, workshops and training;
- fostering new application areas for multidisciplinary activities, placing emphasis on innovative concepts, cutting-edge technologies and system architectures;
- laboratory activities, as required;
- monitoring applicable scientific and technological trends and maintaining state-of-the-art expertise;
- contributing to the dissemination of the results of the activities performed and the transfer of knowledge across the Agency.

Duties may also include supporting other activities within your field of competence.

**Technical competencies**

- General background and specific experience in the technical domains covered by the position
- Understanding of related technologies, R&D trends and the industrial landscape
- Project support experience in technical domains covered by the position
- Spacecraft systems knowledge and materials engineering aspects for space missions
- Hands-on laboratory experience with characterisation techniques aimed at evaluating physical and chemical properties and environmental effects on materials and related processes
- Proven experience in establishing and executing complex test plans as well as setting up and performing predictive modelling and correlation analyses, this also requires experience in discussing with customers their needs and in translating them into test requirements and goals
- Experience in the preparation of procurement activities for technology development and innovation (statements of work, proposal evaluation, etc)
- Experience in the management and monitoring of industrial activities, including participation in reviews
- Experience with materials & processes engineering and quality standards, possibly including their preparation and implementation

**Behavioural competencies**

- Result Orientation
- Operational Efficiency
- Fostering Cooperation
- Relationship Management
- Continuous Improvement
- Forward Thinking

**Education**

A Master's degree in materials science or engineering, materials physics or chemistry, applied physics or similar field related to the position is required.

**Additional requirements**

Understanding of how materials and their associated processes are affected by the environment (ground and space) and how test methods are developed to characterize such effects is required.

Familiarity and knowledge of environmental modelling software like SPENVIS is an asset.

CLINIQUES  
DE L'EUROPE

EUROPA  
ZIEKENHUIZEN

advanced care - personal touch

De Europa Ziekenhuizen zijn op zoek naar een medisch fysicus voor de dienst Radiotherapie van de site St-Elisabeth.

De Europa Ziekenhuizen is een belangrijke groep privéziekenhuizen in Brussel. De afdeling Radiotherapie beschikt over competitieve apparatuur, waaronder 2 lineaire versnellers (vervanging gepland over 2 jaar), een PET-CT Simulator, TPS Raystation (3DCRT, IMRT, mArc, Stereo), brachytherapie type HDR (Oncentra - Elekta) en LDR (Variseed) en Mosaïq als R&V- en Datamanagementsysteem.

Het team van de fysici bestaat uit 2 ervaren fysici en een dosimetrist. Sinds 2014 is onze afdeling Radiotherapie gecertificeerd volgens ISO 9001.

#### Taken

- Deelnemen aan de standaardactiviteiten van het fysica-team, verdeeld volgens beurtrol: maken van behandelplannen, verificatie en goedkeuring in Mosaïq, patiëntgerichte QA, kwaliteitscontrole van de machines, ...
- Projecten ontwikkelen en beheren met betrekking tot specifieke behandelingssystemen en/of -technieken.
- Deelnemen aan het ontwikkelen en waarborgen van de kwaliteit en het kwaliteitsbeheerssysteem onder toezicht van de kwaliteitsmanager.
- Deelnemen aan de ontwikkeling van de dienst door het optimaliseren en ontwikkelen van behandelingstechnieken en kwaliteitsborgingssystemen en de toekomstige vervanging van versnellers (Surface Tracking, Adaptive planning, Stereotaxie, EPID-dosimetrie...).

#### Uw profiel

- U bent een expert in de medische fysica, in het domein van de radiotherapie, erkend door het Federaal Agentschap voor Nucleaire Controle of u valt onder de voorwaarden om deze erkenning te verkrijgen in het jaar volgend op uw aanstelling (K.B. van 13/02/2020, artikel 87 tot 89).
- U kunt omgaan met stress, bent gemotiveerd, flexibel, betrouwbaar en gewetensvol.
- U werkt graag in een team, u bent diplomatisch, u integreert zich snel in een team van fysici, artsen en RTT's.
- U hebt enige programmeerkennis en/of de wens om deze kennis te ontwikkelen
- U houdt van technologie en beschikt over de technische vaardigheden om een eerste diagnose te kunnen stellen in geval van problemen met de behandelingsapparatuur en om contact te leggen met de technische diensten van onze leveranciers.
- Kennis van zowel de twee nationale talen als het Engels is een pluspunt.

#### Aanbod

Wij bieden een voltijds vast contract aan in een modern, kwaliteitsvol ziekenhuis. U geniet bij ons van voorkeurstarieven voor de gezondheidszorg voor u en uw gezinsleden.

Als onderdeel van uw permanente vorming kunt u ter plaatse of elders (bijvoorbeeld bij onze leveranciers of bij de ESTRO) opleidingen volgen en deelnemen aan wetenschappelijke conferenties.

Als meteoroloog/oge ben je een specialist die meteorologische waarnemingen en voorspellingen opstelt in ondersteuning ten behoeve van de activiteiten van Defensie.

Je moet de volgende taken kunnen uitvoeren:

- de meteorologische situatie opvolgen en de autoriteiten inlichten over de impact op de lopende of geplande activiteiten;
- weersvoorspellingen opmaken op nationale of lokale schaal op korte en lange termijn;
- zich mondeling en schriftelijk kunnen richten tot een divers publiek in het domein van de operationele meteorologie;
- de meteorologische eenheid van Defensie (Meteo Wing) vertegenwoordigen als expert/e in technisch-meteorologische werkgroepen;
- een functie van dienstchef binnen de Meteo Wing bekleden, en dit vanaf het begin van de carrière;
- deelnemen als instructeur/trice of als manager aan de basis- en voortgezette vorming van meteorologen



#### Jouw profiel

- Je hebt voldaan aan de leerplicht en bent nog geen **34 jaar** in het jaar van inlijving.
- Je beschikt over een master in geografische wetenschappen (algemene oriëntatie), master in wiskunde, master in fysica, master in chemie, master in geologie, master in informatica, master in ingenieurswetenschappen, master in biochemie, master in biotechnologie, master in biologische wetenschappen, master in biologie
- Je bent Belg of onderdaan van een lidstaat van de Europese Economische Ruimte of van de Zwitserse Bondsstaat.



### **Jouw functie**

Als Optical Design Engineer maak je deel uit van het R&D team binnen Optical Design. Meer bepaald denk je na over de toekomstige generatie van optische toepassingen zoals laser scanning, spectroscopie, camera toepassingen, ...

### **Jouw verantwoordelijkheden zijn**

- Ontwikkelen en testen van prototypes.
- Nieuwe en innovatieve ideeën vertalen naar praktische oplossingen.
- Meewerken aan het ontwikkelen en optimaliseren van nieuwe en bestaande toepassingen.
- Opvolgen van trends.

### **Jouw profiel**

- Je hebt een Master diploma in een technische richting (Fotonica, Fysica of Burgerlijk ingenieur).
- Je hebt bij voorkeur een eerste ervaring binnen optical design.
- Je bent vertrouwd met optical design software (zoals Zemax).
- Kennis van CAD software is een plus (hier werken ze met SolidWorks).
- Je bent communicatief en spreekt vlot Nederlands en Engels.
- Je bent flexibel en bereid om sporadisch te reizen.

De Optical Design Engineer komt terecht in een sterk groeiend hightech bedrijf waar er sterk gekeken wordt naar de verdere ontwikkeling van de medewerkers. Daarnaast ontvang je een aantrekkelijk salaris, aangevuld met onder andere een bedrijfswagen, verzekeringen, maaltijdcheques, laptop en GSM en een bonus (10%).



This position is part of the EDIPI project – a Horizon 2020 Marie Skłodowska-Curie Actions, Innovative Training Network (ITN).

We would like to encourage applications from [CANDIDATES WORLDWIDE](#) wishing to pursue a PhD degree in the field of **Weather extremes**.

The Dynamical Meteorology and Climatology Unit of the Royal Meteorological Institute of Belgium (RMIB) is **offering a PhD Fellowship**, referred to as early-stage researcher (ESR) in Weather extremes, **starting between 01.03.2021 and 30.09.2021**, with preferences to start in September 2021. The Unit is investigating the variability and predictability of atmospheric (and climate) processes by developing and using tools coming from the dynamical systems theory, chaos theory and stochastic processes.

The position is advertised as part of the project **EDIPI, EUROPEAN WEATHER EXTREMES: DRIVERS, PREDICTABILITY AND IMPACTS**, funded through the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 956396. The project will start in March 2021.

The successful candidate will join a network of 14 PhD Fellows (ESRs), pursuing their research training on the dynamics, predictability and impacts of temperature, precipitation (including drought) and surface wind extremes over Europe. The three overarching scientific questions that will be tackled are: Why does a specific type of weather extreme occur? How can we use this knowledge to better predict it? And finally, what are the likely impacts once it does occur?

### Project Description

#### *Project Title*

Investigation of extreme climate instabilities

Principal supervisor: Dr Stéphane Vannitsem, Senior Researcher at the RMIB and lecturer at the Free University of Brussels.

Promotor at the Université Libre de Bruxelles (ULB): Professor Thomas Gilbert

The project will leverage a recent approach – covariant vectors – applying it to a hierarchy of coupled climate models. In the first phase, the PhD candidate will investigate covariant vectors in a hierarchy of coupled ocean-atmosphere systems (using the Modular Arbitrary Order Ocean Atmosphere Model, MAOOAM), and elucidate the impact of low-frequency variability and transitions between climate states on the properties of these vectors. Building on the first phase, the candidate will then investigate the properties of background flows leading to extreme instability, as defined by the covariant vectors, in the same model hierarchy. The dynamical (and geometric) properties of the covariant vectors associated with these extreme situations will also be analysed.

The relation between the energetics of the solutions of the models and the instability properties will be explored, with emphasis on the extremely unstable or stable states. This approach will specifically be applied to extreme wind speed, which can be effectively emulated in the MAOOAM system. The candidate will leverage tools from dynamical systems theory and large deviation theory. Under climate change, the (short-to medium-range) predictability properties of the flow may vary. The candidate will investigate extensively the effect of the climate change on the instability properties of the flow, using concepts such as Snapshot and Pullback attractors. The impact on the extremal instability properties and on extreme wind speed episodes will also be investigated. This work will again use a hierarchy of MAOOAM simulations, in which the radiative response of the atmosphere will be modified, and also in more realistic climate models.

**Secondments for at least 6 months at Tel Aviv University (Israel) and at the LSCE (France)** will provide training on instanton theory, and applications of dynamical systems tools to observed data and state-of-the-art climate models, respectively.

### Job description

The position is available for a 3-year period and the key tasks as a PhD candidate at RMIB are:

- To work independently, develop and carry through your research project
- Comply with the PhD training program at the Université Libre de Bruxelles (Brussels, Belgium)
- Write scientific articles and your PhD thesis with support from your supervisors.
- Disseminate your research, participate in network related and international conferences and workshops
- To stay at a partner research institution for at least six months to develop new skills
- Contribute to the everyday activities at the RMIB



**Formal requirements**

Applicants should hold an MSc degree in **physics or similar** with outstanding background results, as well as display good English skills. While not an essential requirement, any relevant work experience or scientific publications (if any) will be taken into consideration.

**Eligibility**

Because the aim of EU ITN projects is to attract candidates from worldwide locations, **applicants must not** have resided and not have carried out their main activity (work, studies, etc.) in the country of the recruiting beneficiary for more than 12 months in the 3 years immediately before the recruitment date — unless as part of a procedure for obtaining refugee status under the Geneva Convention(1). If you are applying from a location that requires a visa or permit, then we will be able to provide support and advice throughout the process of relocation for you and your family. Feel free to ask us questions in advance if you need more information and reassurance.

The applicant must be an Early Stage Researcher (ESR) i.e. at the time of recruitment she/he must be in the first 4 years (full-time equivalent research experience)(2) of her/his research career and must not have been awarded a doctoral degree.

**Further requirements**

EDIPi will create an exciting environment for you to learn as PhD fellows. Candidates should be able to demonstrate enthusiasm for research and a desire to learn new skills. You should also enjoy working independently and as part of a wider network among other fellows. All fellows must be willing to travel and will be required to complete international secondments.



The Royal Meteorological Institute of Belgium is hiring a postdoctoral researcher in the context of a project financed by the JPI-Oceans/JPI-Climate programme for a period of **one year** that could be extended to an **additional year and a half**. The project title is "The Role of ocean dynamics and Ocean-Atmosphere interactions in Driving climate variations and future Projections of impact-relevant extreme events (ROADMAP)" proposed jointly by several European institutions and led by the Max-Planck Institute (Germany). More information on the consortium can be found at <http://www.jpi-climate.eu/joint-activities/joint-calls/CPIcloud/ROADMAP>. The objective on the Belgian side is to perform inference of dynamical links between different components of the climate system using tools from nonlinear sciences. A summary of our expected activities is provided below:

### Objective

The low-frequency variability and the interactions within the different components of the climate system covers a wide range of time scales from seasonal to multi-decadal. The understanding of these interactions is complicated by the limited period of available high-quality measurements. At the same time, state-of-the-art models often do not agree on the amplitude of the variability of the different components of the climate system. These facts call for intensive empirical analyses of the nature of the coupling between these components in space and time, and at the same time to explore in detail the emergence of low-frequency variability in climate models. Advanced analysis techniques based on dynamical system and information theory will be used to clarify the key spatio-temporal variability patterns in both the ocean and the atmosphere, and the interactions between the ocean and the atmosphere. These approaches will be first used in the context of intermediate-order coupled ocean-atmosphere models, observation datasets and probably on past CMIP runs, and will then be applied on the datasets developed in the other groups contributing to the project.

### Job description

The hired person will work on the use and development of tools to understand the link between different observables of the climate system. This will be done first in simple settings (reduced-order climate models) and then applied to more complex models and to real climate data.

This will be done in collaboration with several people working at the Royal Meteorological Institute and/or also with researchers from the ROADMAP consortium.

### Required competences

- A PhD degree in Science with a good background in mathematics
- A very good knowledge of English
- An ability to work within a team and to easily communicate research at the international level
- An experience in developing and/or using tools of dynamical systems and nonlinear sciences is an asset.

### We offer

- A contract at the level of SW2 of the Federal Belgian Scientific career for a 1-year period, that could potentially be extended by another 1 or 1.5 years.
- Reimbursement of the local public transports.
- A nice working environment.

Momenteel zijn wij voor onze klant op zoek naar een flexibele, stressbestendige Process Engineer die in het bezit is van een sterk verantwoordelijkheidsgevoel. Ben jij verder ook communicatief sterk in zowel het Nederlands als Engels? Lees dan zeker verder! Wij voelen alvast een match met jouw profiel.

### **Functieomschrijving**

Als Process Engineer ben jij dé eindverantwoordelijke voor APCVD-ontwikkelingen maar jouw functie gaat verder dan dit.

- Je staat in voor het bedenken van oplossingen en voor de voorbereiding van aanpassingen die de productie moeten vergemakkelijken;
- Je stelt noodzakelijkheden en specificaties, voor de verwerkingsapparatuur, op;
- Voor dit alles werk je samen met derden zoals productie-operatoren.
- Je staat in voor Cpk-berekeningen én coördineert/ontwikkelt processen.
- Je maakt gebruik van *Failure Mode and Effects Analysis technieken* om zo het risico op kwaliteitsverlies te minimaliseren.

### **Profiel**

Voor de functie van Process Engineer zoeken wij een profiel dat idealiter aan volgende voorwaarden voldoet.

- Ben jij in het bezit van een Master Fysica, Natuurkunde en heb je ervaring in/met Atmospheric Pressure Chemical Vapor Deposition?
- Heb jij verder affiniteit met halfgeleiderindustrieën en een productieomgeving?
- En ben je als laatste flexibel om zo ook in jouw vrije uren, voor de processen die onder jouw bevoegdheid vallen, in te staan?

### **Aanbod**

Onze klant biedt een vast contract van onbepaalde duur, met tal van mogelijkheden. Verder kom jij terecht in een dynamisch bedrijf waar jij de kans krijgt jezelf te blijven ontplooien.

**Functieomschrijving**

Ben je enthousiast over disruptieve technologie? Wilt u de barrières van de bestaande state of the art doorbreken?

We zijn momenteel op zoek naar een R&D procesingenieur.

Deze functie is binnen de R&D-afdeling, de belangrijkste verantwoordelijkheden zijn:

- Je ontwikkelt geavanceerde strategieën om de procesmogelijkheden van de VisionEngine te verbeteren om te voldoen aan de kwaliteit van het eindproduct van de 3D-geprinte lenzen.
- Je hebt oog voor het grotere geheel en creëert oplossingen die naadloos in het platform worden geïntegreerd.
- Je combineert analytisch en conceptueel denken, fysiek inzicht, flexibiliteit en een gestructureerde manier van werken om duurzame projectresultaten te leveren.
- Je stuurt projecten aan om duurzame veranderingen door te voeren.

De functie is gevestigd in Turnhout en je rapporteert rechtstreeks aan de VP R&D.

**Uw profiel**

- Je hebt een Master in natuurkunde, elektrische, mechanische of industriële techniek.
- Je bent een zelfstandige, volhardende en systematische werker met een doelgerichte en analytische instelling, met respect voor planning en deadlines.
- Je hebt meerdere jaren ervaring met R&D procesontwikkeling.
- Je hebt een sterke kennis van statistiek en bent in staat om gegevensverwerking in python of R.
- Ervaring met UV-uithardbare inkjetprocessen heeft sterk de voorkeur.
- Goede kennis van fysica, materiaal, optica en software ter ondersteuning van het vermogen om het productieproces en het eindproduct echt te begrijpen.
- Vloeiend in het Engels.

**Ons aanbod**

Het vermogen om in een opwindende omgeving te werken als onderdeel van een gedreven team, dat baanbrekende technologie op de markt brengt.

Een startup-omgeving met kansen om met het bedrijf mee te groeien en unieke technologie te creëren en de droom van slimme brillen voor iedereen mogelijk te maken.

Zürich, Switzerland

CSEM is a private research, technology and innovation center specializing in microtechnology, microelectronics, system engineering, and renewable energy systems. It offers its customers and industry partners custom-made innovative solutions. Our strength is the excellence of our people.

### Your mission

As a member of the Management team of our regional centers, you will be responsible for the strategic direction in the field of Photonics in order to achieve CSEM's mission and strategy. This includes strategic project acquisition and the technology roadmap. Your high-level experience in Photonics allows research to move forward and you act as a game-changing solver for the organization. You build and manage the division's opportunities pipeline in evaluating market opportunities, prospecting, negotiating and finalizing contracts, while maintaining trustful relationships with our customers. Your main responsibilities will be the following:

- **Research & Projects:** You define the technology platforms and requirements for Photonics. To define research activities, you ensure the interaction with the relevant technology partners within CSEM and the industry. By measuring the customers satisfaction, you initiate and manage the necessary improvements. With your excellent skills in Photonics, you act as mentor for strategic projects.
- **Business Development:** You lead and manage projects acquisition in Photonics - this includes the process from the feasibility study to resources, risks and budget management as well as final IP delivery. As an ambassador, you constantly build new relationships with industrial partners and academic institutions both in Switzerland and worldwide in order to capitalize on it to build new collaborations and business.

### Your profile

You have a superior level of education (MSc, PhD) in Physics, Electrical Engineering or a related field and you bring at least 5 years of experience in a similar function. Your strong analytical skills, coupled with the ability to influence and negotiate, allow you to collaborate effectively with internal and external partners. Solid communication and presentation skills and the aptitude to deal with various internal partners across the organization are building other key assets of your profile. With your capacity to transform opportunities into business, combined with a natural curiosity, out-of-the-box thinking and strong focus on innovation, you leave your footprint by setting new standards in the field of Photonics. Positive and energetic, you are recognized for your can-do attitude and your team spirit. You enjoy working in a multidisciplinary and multitasking environment and to maintain contacts effectively, you are regularly present in our regional centres. Fluency in German and English language is required (French is a plus), as well as proficiency with customer relation management tools and social media.

### We offer

CSEM offers a stimulating and multidisciplinary work environment with the opportunity to work with leading Swiss and international companies. You will have the opportunity to benefit from a multicultural company which clearly promotes an employee-driven culture. CSEM is an equal opportunities employer.

### Functiebeschrijving

- Als Safety Manager help je de veiligheid van het spoornetwerk te verbeteren en ben je mee verantwoordelijk voor de veiligheid van de infrastructuur, ons personeel en onze klanten.
- Je ondersteunt de designteams van 'Signalling Projects' in het kader van projecten die verband houden met de veiligheid. Je werkt mee aan het ontwerp en de ontwikkeling van seininrichtingssystemen, meer bepaald voor het ETCS-systeem (European Train Control System) en de inklingsystemen (Interlocking).
- Via 'safety reviews' heb je regelmatig contact met de personen die bij het project betrokken zijn (het designteam, het testteam, de projectleider en gebruikers) en die jou de nodige ondersteuning bieden. Je ziet erop toe dat iedereen de vereiste veiligheidsvoorschriften naleeft door, onder meer, reviews en veiligheidsaudits te organiseren.
- Je zorgt ervoor dat de activiteiten zoals in de veiligheidsplannen beschreven, worden uitgevoerd. Je gebruikt hiervoor professionele analysemethoden zoals FMECA, FTA, HAZOP, PHI/PHA en je leeft daarbij de Europese sectorale regels en meer bepaald de CENELEC-normen EN50126/EN50128/EN50129 na.
- Je voert veiligheidsstudies uit en rechtvaardigt eventueel je keuzes. Je houdt voor elk project een 'hazard log' bij.
- Bij de ingebruikname van nieuwe systemen of wijzigingen in bestaande systemen stel je een nauwkeurige beschrijving op van de uitgevoerde veiligheidsacties en bundel je ze in een veiligheidsdossier, zoals wettelijk is bepaald. Je werkt nauw samen met de externe beoordelingsinstanties (Independent Safety Assessor of Independent Assessor) die het veiligheidsdossier beoordelen. Wanneer het veiligheidsdossier wordt goedgekeurd, ontvang je een certificaat en kan de indiening van het betreffende systeem worden voortgezet.
- Voor elk project geef je feedback over je ervaring en stel je verbeteringen voor die ook voor andere projecten van toepassing kunnen zijn.
- Je werkt nauw samen met andere Safety Managers en Safety Engineers en rapporteert aan de Head of Signalling Projects (en aan zijn afgevaardigde, de Safety & Quality Team Leader).
- Je werkplaats bevindt zich in Brussel, dicht bij het station Brussel-Zuid.

### Profiel

- Je beschikt over een diploma van burgerlijk of industrieel ingenieur of een master in fysica, chemie of wiskunde.
- Je hebt minimum 5 jaar ervaring in een industriële omgeving als ontwerper, tester, kwaliteits- of veiligheidsverantwoordelijke.
- Je bent geboeid door techniek.
- Je hebt een zeer goede kennis van het Frans of Nederlands en een functionele kennis van de tweede landstaal, zodat je goed kan samenwerken met de anderstalige teamleden.
- Je hebt een goede kennis van MS Office (Excel, Word, MS Project, ...).
- Een eerste ervaring met betrekking tot de veiligheid van spoorweggerelateerde of industriële projecten is een pluspunt.
- Kennis van de normen IEC61508, EN 50126, EN50128 en EN 50129 en/of ervaring met de methodes FMECA-, FTA-, PHA-, SHA- en IHA- en RAM-analyses is een troef.
- Je geeft voorrang aan de veiligheid, je kent de veiligheidsvereisten en je past ze toe. Je streeft ernaar het veiligheidsniveau van de onderneming te verhogen en je neemt de nodige acties.
- Je brengt de risicofactoren in kaart en je bent verantwoordelijk voor de systematische en permanente evaluatie, het beheer en toezicht ervan.
- Door je geloofwaardigheid, expertise en aanpak heb je de reputatie van een bekwame gesprekspartner binnen de onderneming te zijn.
- Je werkt nauwgezet, je hebt oog voor detail en structureert informatie. Je onderscheidt hoofdzaken van bijzaken, je hebt inzicht in oorzakelijke verbanden en je gaat actief op zoek naar bijkomende informatie.
- Je neemt genuanceerde, heldere en uiteenlopende stellingen in ten opzichte van een complex probleem.



At CERN, the European Organization for Nuclear Research, physicists and engineers are probing the fundamental structure of the universe. Using the world's largest and most complex scientific instruments, they study the basic constituents of matter - fundamental particles that are made to collide together at close to the speed of light. The process gives physicists clues about how particles interact, and provides insights into the fundamental laws of nature. Find out more on <http://home.cern>.

Geneva, Switzerland

### Job Description

CERN has approved in June 2020 the creation of a Quantum Technology Initiative to explore the potential applications of quantum technologies (computing, sensing, networks, and theory) to HEP research. The proposed work contributes to the implementation of the agreed objectives in the quantum computing area, establish a presence of CERN in the ongoing international quantum activities in HEP and other disciplines, and support the research objectives of the HL-LHC programme and beyond.

As a Fellow you will:

- Take part in the Quantum Computing R&D activities in CERN [openlab](#) as part of the CERN Quantum Technology Initiative;
- Contribute to the creation of a quantum computing simulation platform composed of classical hardware, specialized quantum simulators and remotely-accessed quantum hardware on which quantum version of ML/DL algorithms used in HEP can be developed and tested;
- Work with experts in [openlab](#) and the CERN experiments to identify use cases, develop algorithms, optimize simulators on different hardware and support doctoral students in the R&D projects.

### Qualifications

#### *Eligibility criteria*

- You are a national of a [CERN Member or Associate Member State](#);
- You have a PhD, or at least 4 years' relevant experience since the completion of your MSc (or the equivalent diploma which gives access to doctoral programmes) in Computer Science, Physics, Mathematics or in a similar relevant course, and in both cases a maximum limit of 10 years' experience after completion of you MSc.

#### *Essential skills and experience*

- Knowledge of basic quantum computing algorithms;
- Expertise on quantum simulators.

### Additional Information

CERN would very much like to benefit from your expertise, commitment and passion. In return, we offer:

- An employment contract for between six months (minimum) up to a maximum of 36 months. A regular fellowship duration is 24 months.
- A stipend ranging from 7,201 to 8,178 Swiss Francs per month (net of tax).
- Coverage by CERN's comprehensive health scheme (for yourself, your spouse and children), and membership of the CERN Pension Fund.
- Depending on your individual circumstances: an installation grant, family, child and infant allowances as well as travel expenses to and from Geneva.
- 2.5 days of paid leave per month.



Silvaco is a privately held company with a leading position among providers of EDA software tools used for process and device development, analog / mixed-signal applications, power IC, and memory design. The company is headquartered in Santa Clara, California, and has a global presence, with offices located in North America, Europe, Japan, and Asia.

Montbonnot-Saint-Martin

### **Position Description**

Silvaco is looking for a software engineer to join our optical team in one of the company's offices in Europe. Working at the very center of the TCAD group, the Optical Software Developer will help Silvaco develop and deliver high quality products and services.

As a member of the TCAD group, you will design, implement, evaluate, and improve physical models and optical methods for the simulation of electro-optical semiconductor devices. The successful candidate will be an experienced software engineer with expertise in simulating optical devices such as lasers, LEDs, displays, or sensors. As an integral member of a team of highly trained and experienced engineers, the successful candidate must also be able to:

- Develop, support, test, and maintain existing optical simulation software.
- Identify, implement, and test new optical solvers and physical models.
- Provide accurate and effective written documentation.
- Communicate complex ideas and testing results effectively, both orally and in writing.

### **Minimum Qualifications**

- Ph.D. in Physics, Engineering, Computational Science, or a related field
- Strong proficiency in C ++ and software design
- Strong electro-optics fundamentals including solid-state physics, optical physics, and optical solution methods
- Good communication and organization skills, with a logical approach to problem solving, good time management, and task prioritization skills

### **Desirable Qualifications**

- Knowledge of quantum mechanics and light-matter interaction
- Experience with laser, LED, display, or sensor simulation
- Experience implementing optical methods such as ray-tracing, finite difference time domain, beam propagation method, or mode solvers
- Experience with parallel computing





At CERN, the European Organization for Nuclear Research, physicists and engineers are probing the fundamental structure of the universe. Using the world's largest and most complex scientific instruments, they study the basic constituents of matter - fundamental particles that are made to collide together at close to the speed of light. The process gives physicists clues about how particles interact, and provides insights into the fundamental laws of nature. Find out more on <http://home.cern>.

Geneva, Switzerland

### Job Description

#### *Introduction*

The CERN Theoretical Physics Department (CERN-TH) has launched a talent pool recruitment exercise for Limited Duration (LD) research staff positions. This pool aims at defining a list of pre-assessed and endorsed candidates that can be hired for present and future opportunities, determined by the needs of the Organization. We are looking for outstanding researchers in any of the areas of theoretical particle physics traditionally covered at CERN.

The objectives of the Theoretical Physics department are:

- Develop new theoretical ideas aimed at understanding the fundamental constituents and forces of nature.
- Develop their relevance for the experimental programme of CERN and to take full advantage of the stimulating environment of a large laboratory.
- Contribute to the general scientific culture at CERN through active participation in the various training programmes and promotion of scientific events on site.

### Functions

Your main functions will include:

- Making significant contributions to theoretical research related to elementary particle physics.
- Participating in and initiating a large variety of activities within the Theoretical Physics Department and possibly in collaboration with the experimental physicists working at CERN.
- Taking part in CERN committees and study groups.
- Helping maintain continued contacts with the outside scientific community.

### Qualifications

PhD in the field of Theoretical Physics.

### Experience

- Demonstrated post-doctoral research activities which have led to scientific publications in peer-reviewed journals.
- Evidence of ability to make significant contributions to the work of the Organization.

### Technical competencies:

- Knowledge and application of computational and mathematical physics.
- Knowledge and application of particle physics, phenomenology.
- Thorough knowledge of theoretical physics.

### Behavioural competencies

- Achieving Results.
- Solving Problems.
- Building Relationships.
- Creating Vision and Strategic Partnerships.

### Language skills

Spoken and written English: ability to draw-up technical specifications and/or scientific reports and to make oral presentations.



# JOB OFFER

---

## BIRA-IASB is looking for: **Scientist (M/F)**

---

**Statute: Contractual (full time)**

**Deadline for applications: This position will remain open until filled**

### Assignment, division & context

The Space Weather group within the Space Physics division develops services related to the conditions in the near-Earth space environment (radiation belts, cosmic radiation, magnetosphere, ...) and its effects on both space and ground based technology as well as human health related activities. Within the framework of the Space Safety Programme (S2P) of the European Space Agency (ESA), the Space Weather group is responsible for coordinating/operating the Space Radiation Expert Service Centre (R-ESC) and the SSA Space Weather Coordination Centre (SSCC). Both entities play a key role in the establishment of a network of space weather services targeting a large user community whose operational systems (in space, in the air and on the ground) can be severely affected by Space Weather. More information can be found on the website <https://swe.ssa.esa.int/>.

The successful candidate will join the Space Weather Group to take part in the operational and scientific activities of the SSCC and R-ESC.

### Job description

The Space Weather group consists of ten employees, both scientists and IT specialists. You will mainly contribute to the operation and development activities within the SSCC and R-ESC:

- service development and expansion
- scientific and technical service assessment
- support to continued service provision
- execution of validation campaigns
- user community engagement activities
- network configuration management
- network promotion through online media and in person events
- SSCC operator contributing to the SSCC user support helpdesk and product provision monitoring

### More about BIRA-IASB

The Royal Belgian Institute for Space Aeronomy (BIRA-IASB) is a Belgian Federal Scientific Institute. Since its founding in 1964, BIRA-IASB has been conducting research and providing public services in space aeronomy, i.e. the physics and chemistry of Earth's atmosphere and other planets, and outer space.

Our scientists use instruments on the ground, in the air, on board balloons or in space and computer models.

[www.aeronomie.be](http://www.aeronomie.be)

## Qualifications

Candidates must have a degree (university level or higher education of the long type) in Science or Engineering.

## Technical skills

- You have a basic knowledge of space physics and space weather
- You have a strong interest in programming and scripting languages, basic knowledge of Python
- You have a good knowledge of Linux and Windows
- Experience in the field of space physics and familiarity with the ESA Space Safety Programme is a plus

## Generic skills

- You are able to work autonomously and in team, and you have a sense for initiative.
- You have the capacity to integrate in a mixed technical/scientific environment.
- You create and promote the group spirit by sharing your opinions and ideas and by contributing when solutions need to be found.
- You supervise internal and external clients in a transparent, honest and objective manner, provide them with a personal service and maintain constructive contacts.
- You act with integrity, in accordance with the expectations of the organization, respect confidentiality, make commitments and avoid any form of bias.
- You plan and manage your own growth according to your possibilities, interests and ambitions by critically questioning your own performance and by continuously familiarizing yourself with new insights, skills and knowledge.
- You have the commitment, the will and the ambition to achieve results and take responsibility for the correctness of actions taken.
- You are fluent in written and spoken English
- A good knowledge of French and/or Dutch is a plus as you will work in a bilingual environment.

## We offer

- The position is on a contractual basis. Salary is according to the federal regulations for scientific contractual personnel.
- All relevant work experience (public + private sector) will be considered when determining seniority.
- Possibility to acquire a bonus for bilinguism (Dutch/French)
- Possibility of training (to be followed during working hours)
- Attractive annual leave policy (minimum 26 days by year)
- Options to balance professional and personal life (flexible schedule) within the 38 hours week
- Pleasant work environment in a scientific institution located in a green setting in Uccle, Brussels.
- Full refund of commuting expenses when using public transportation, compensation when using the bicycle
- Possibility to work from home
- Access to special advantages arranged for the employees of the federal scientific institutions: museum card, hospitalization insurance, reductions via the Fed + card, etc.
- Company restaurant with reasonably priced hot meals and salad bar.
- On-site childcare during school holidays in July and August.
- Dynamic working environment with international contacts.

## Procedure

After evaluating the submitted applications, the selected candidates will be invited for an interview. Candidates whose diploma is not awarded in Belgium must submit a NARIC certificate of equivalence. If the equivalence certificate has not yet been obtained, the application must at least have been initiated at the time of application.

More information about the equivalence certificate can be found on the website:

[www.enic-naric.net/index.aspx?c=Belgium](http://www.enic-naric.net/index.aspx?c=Belgium)

For additional technical information please contact Sophie Chabanski via [sophie.chabanski@aeronomie.be](mailto:sophie.chabanski@aeronomie.be). Regarding contract related questions and salary please contact Ms. Kristien Brouckmans via [hr-ae@aeronomie.be](mailto:hr-ae@aeronomie.be)



## Interested?

Send your application letter to:

[sophie.chabanski@aeronomie.be](mailto:sophie.chabanski@aeronomie.be) with [hr-ae@aeronomie.be](mailto:hr-ae@aeronomie.be) in copy

with the following reference "D14\_S2P"