



# Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

**Draft**

**July 13 2021**

Post Specification is available here: [Job Advert will be Posted Here](#)

<b>Post Title:</b>	<b>Assistant Professor in Sustainable Energy</b>
<b>Post Status:</b>	<b>4-year contract, Fixed-term</b>
<b>Department/Faculty:</b>	School of Physics, Faculty of STEM, Trinity College Dublin, the University of Dublin
<b>Location:</b>	School of Physics, Trinity College Dublin, the University of Dublin, College Green, Dublin 2, Ireland
<b>Reports to:</b>	Head of School of Physics
<b>Salary:</b>	Appointment will be made on Assistant Professor (Lecturer) scale at a point in line with Government Pay Policy €35,509 - €86,247 appointment will be made no lower than point [8] €50,410.  <a href="https://www.tcd.ie/hr/assets/pdf/monthly-academic.pdf">https://www.tcd.ie/hr/assets/pdf/monthly-academic.pdf</a>
<b>Hours of Work:</b>	Hours of work for academic staff are those as prescribed under Public Service Agreements. For further information please follow the link below:  <a href="http://www.tcd.ie/hr/assets/pdf/academic-hours-public-service-agreement.pdf">http://www.tcd.ie/hr/assets/pdf/academic-hours-public-service-agreement.pdf</a>
<b>Closing Date:</b>	12 Noon (Irish Standard Time), <b>14 January 2022</b>

**The successful applicant will be expected to take up post on 01 December 2021 or as soon thereafter as possible.**

## Further Information

Informal enquiries about this post should be made to Professor Stephen Dooley:  
[stephen.dooley@tcd.ie](mailto:stephen.dooley@tcd.ie)

## Application Information

Applicants should provide the following information when applying for this position:

1. A cover letter outlining their interest in the position.
2. A comprehensive curriculum vitae, including a full list of publications.
3. The names and contact details (i.e. addresses, e-mail, etc.) of three referees.
4. A research plan (summarising research to be carried out in the next four years and including details of funding to be sought - two pages).
5. A teaching statement (summarising teaching experience and approach – one page).
6. A short statement of interest and experience in public outreach and education.
7. A copy of one or two research papers with the applicant as lead author that best illustrate their scholarship in a topic pertinent to Sustainable Aviation or Sustainable Energy.

### Note:

- **Please note:** Candidates who do not address the application requirements above will not be considered at the short list stage.
- Candidates should note that the interview process for this appointment will include the delivery of a presentation.

## Job Description

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<b>Comp ID:</b>	(...)
<b>Job Title:</b>	Assistant Professor in Sustainable Energy
<b>School/Department:</b>	School of Physics
<b>Job Category and Level:</b>	Academic; Assistant Professor

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### The Purpose of the Role

The School of Physics at Trinity College Dublin invites applications at the level of Assistant Professor in the field of Sustainable Energy, which is an identified research challenge at Trinity College Dublin. The successful applicant will join a group of Principal Investigators in leading our research drive in the area of Sustainable Aviation Research that is funded through a partnership between Ryanair and Trinity College Dublin. Applicants will have a developing international profile, with strong potential to lead academia, society or enterprise in making global aviation an environmentally and economically sustainable activity.

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### Context

The Sustainable Aviation Challenge encompasses the physical, environmental and social sciences operating within constantly changing boundaries of international legislation and complex markets. Addressing this challenge requires the deployment by enterprise of innovative technologies and organisational concepts learned from research. Applicants whose research specifically seeks to accelerate this technology transfer to aviation or other sectors are especially welcome.

The successful candidate will have a strong record of scholarly research in Sustainable Energy with a physics background, which contributes to the specific challenge of Sustainable Aviation.

We seek applicants with research expertise in one or more of the following areas:

- Sustainable Aviation Fuels “SAF”; (Production, Certification, Techno-economics, LCA embodied greenhouse gas analysis, Phase change and chemical reaction physics).
  - Power-to-X & X-to-Power; (Device orientated and fundamental research of; Fuel cells, Electrolysers, Gas turbine combustion, Carbon dioxide, Ammonia or Hydrogen Utilization.)
  - Bio-energy: (Biorefining, catalysis).
  - Energy & Sustainability.
  - Other areas of physical science that complement our current research in addressing the challenges of Sustainable Energy and Sustainable Aviation.
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In addition, the ability to perform research contributing to Policy or Start-up Enterprises would be a distinct advantage.

Trinity researchers carry out world-leading knowledge generation in the areas of Sustainable Energy and the Science of Fuels, both of which are vibrant and growing research areas in the university. Sustainable Aviation is an identified strategic thrust in Trinity's new E3 Research Institute, which is a corner stone of the planned Dublin Innovation District (<https://www.tcd.ie/e3/>).

The successful applicant will work in a friendly and enjoyable scholarly environment and will receive attentive mentorship and support in defining and achieving their career goals. It is expected that the successful applicant will benefit from working collaboratively with other academics, researchers, enterprise partners and students in the lively and enjoyable international research environments of the School of Physics at Trinity College Dublin and the planned Dublin Innovation District (<https://www.tcd.ie/e3/>).

To allow the successful applicant establish an independently funded programme of research and/or engagement of industry and enterprise, the appointment carries a ramped teaching load over the first 36 months, and close guidance on funding strategy and grant preparation will be provided. We expect that the successful candidate will develop their career to be able to exploit future opportunities in a dynamic, growing, and research-intensive school as the energy area is of such strategic and global importance.

Applications are particularly encouraged from those seeking to deploy the findings of their research in market-facing enterprise initiatives and from those groups traditionally underrepresented in Physics. See the School profile below.

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## Main Responsibilities

The successful candidate is expected to play a full role as an academic in the School of Physics, Trinity College Dublin. This will include duties under four main headings:

### Teaching

Curriculum and syllabus development and design; delivering university-level (UG and PG) lecture and laboratory (experimental/computational) courses; design and implementation of both continuous and exam-based assessments. Contribute to the MSc in Energy Science (<http://www.tcd.ie/courses/energyscience/>).

### Research & Enterprise

Establish and lead an independent research or enterprise group of (e.g. PG student, post-doctoral) researchers in the fields of Sustainable Aviation and Sustainable Energy.

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### **Contribution to University and Society**

Industry, Enterprise, Government and Public engagement in the areas of Sustainable Energy and Sustainable Aviation.

### **Academic Administration**

Contribute to the smooth running of the educational and research programmes of the School of Physics and Trinity College Dublin; in due course take up leadership roles in the School and University appropriate to the level of appointment. Delivery of high-class teaching at both undergraduate and postgraduate levels and a commitment to the development of new, relevant and evidence-based options.

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### **Person Requirements**

The role-holder will require the following knowledge, skills and attributes for successful performance in the role.

### **Qualifications**

The successful candidate will have an undergraduate degree in physics and a PhD in a STEM subject pertinent to the challenges of Sustainable Energy or Sustainable Aviation (essential qualification).

### **Knowledge & Experience**

The successful candidate will have

- At least three years of postdoctoral research or enterprise experience (Essential experience).
- Experience in the field of sustainable fuels, bioenergy, or other area of sustainability or sustainable energy sources and technologies that can address any aspect of the Sustainable Aviation or Sustainable Energy challenges, as evidenced by a strong publication record (Essential).
- Knowledge of national or international research funding and investment landscapes (Essential).
- Experience of contributing to research funding applications (Essential).
- A record of securing grant funding (Desirable).
- Experience in the supervision of postgraduate or postdoctoral researchers. (Desirable).
- Experience/Knowledge/Interest in the design and delivery of undergraduate teaching and ability to teach a range of general physics and specialist energy science or policy topics (Essential).
- Experience/Knowledge/Interest in the engagement and organisation of industry, enterprise and societal actors on the Energy-Climate-Economy Challenge (Desirable).
- Experience/Knowledge/Interest in outreach and promoting science or the Energy-Climate-Economy Challenge beyond the scientific community (Desirable).

- Experience/Knowledge/Interest in high-quality student-centred teaching (Desirable).

### **Skills & Competencies**

The successful candidate will have already demonstrated clear potential to become an outstanding academic, teacher, and independent researcher in their field. They are now ready for an academic position to demonstrate this and to provide leadership to society as a School of Physics, Trinity College Dublin academic associated with SFI Research Centres and independent enterprises.

Within the academic freedom of the successful candidate, coaching, support and mentorship will be provided in the strategy and details of securing funding from industry, enterprise and European and Irish Government bodies.

The successful candidate will have a clear strategy to perform research of an internationally excellent standard and have an enduring interest in the challenge of securing climate and economic sustainability.