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Downloaded On: Apr. 19, 2025 8:47am Posted Mar. 10, 2025, set to expire Jul. 12, 2025

Job Title Electrical Energy Systems, Assistant Professor –

Dept of Electrical and Software Eng

Department Electrical and Software Engineering

Institution University of Calgary

Calgary, Alberta

Date Posted Mar. 10, 2025

Application Deadline Apr. 14, 2025

Position Start Date Jul. 1, 2025

Job Categories Assistant Professor

Academic Field(s) Engineering - Other

Job Website https://careers.ucalgary.ca/jobs/15751444-electrical-

energy-systems-assistant-professor-dept-of-electrical-

and-software-engineering

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Job Description

The Department of Electrical and Software Engineering in the Schulich School of Engineering at the University of Calgary is pleased to invite applications for a tenure-track Assistant Professor position in Electrical Energy Systems, with an anticipated start date of July 1, 2025. Candidates with an earned doctoral degree in Electrical Engineering or a closely related discipline, or those who will have earned a doctoral degree by the anticipated start date, and who have the potential for excellence in



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research and teaching are invited to apply.

Within the broad topic of Electrical Energy Systems and Energy Transition, the following topics are of particular interest:

Power Systems Protection

- Protective Relaying Principles and Applications: Expertise in protective relaying principles, protection system coordination, relay settings, fault current analysis, and fault location techniques for modern grids, with high penetration of renewable energy sources and battery energy storage systems at both transmission and distribution levels.
- Protection System Testing and Validation: Proficiency in real-time simulation, hardware-in-the-loop (HIL) testing of protective relays, and validation of advanced protection schemes through laboratory experiments, field implementation, and collaboration with industry partners.
- Interdisciplinary Research and Emerging Technologies: Interest in cybersecurity for protection systems, Al applications in protection systems, and advanced inverter control strategies to ensure reliable protection in renewable-rich power systems.

• Power Electronics

- Advanced Semiconductor Devices and Packaging: Expertise in power semiconductor devices, particularly wide bandgap devices, and advanced power electronics packaging techniques for high-efficiency and high-reliability applications.
- Al Applications in Power Electronics: Proficiency in applying artificial intelligence techniques to automate and optimize power electronics design, modeling, and control strategies.
- Specialized Power Electronics Applications: Experience in designing power converters for Point-of-Load (POL) applications, radiation-hardened power electronics for space environments, wireless power transfer systems for e-mobility, and agrivoltaics.
- Power Electronic Controls: Expertise in advanced control techniques for grid-connected converters, including integration of distributed energy resources and future smart grid technologies to enhance power system stability and reliability.

Candidates **must** meet all the following criteria to be considered for the position:

Position Requirements

The successful candidate will demonstrate

• a record of high-quality research and publications



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- the potential to establish an externally funded research program, and to achieve international recognition within five years
- the alignment between their research interests and the research priorities of the Schulich School of Engineering and the University of Calgary
- the ability to attract and develop excellent trainees, students, and future researchers
- ability to teach a range of undergraduate and graduate courses related to the topics in the position description above
- · excellent written and oral communication skills
- a commitment to Equity, Diversity, and Inclusion in Engineering

Candidates should be eligible for registration as a Professional Engineer with the Association of Professional Engineers and Geoscientists of Alberta (APEGA).

Experience working in industry or on industrial projects is considered an asset.

How to Apply

Interested candidates are encouraged to submit an application online via the 'Apply Now' link: https://careers.ucalgary.ca/jobs/15751444-electrical-energy-systems-assistant-professor-dept-of-electrical-and-software-engineeringSystems, Assistant Professor in Calgary, AB, Canada

Please be aware that the application process allows for only four attachments. Your four application attachments should be organized to contain the following (it is suggested that you merge these documents into a single pdf):

- Cover letter and curriculum vitae, including the name and contact information of three referees
- Statement of research interests, accomplishments and vision (maximum 2 pages)
- Statement of teaching philosophy (maximum 2 pages)
- Statement on equity, diversity and inclusion (maximum 2 pages)

Questions may be addressed to:

Dr. David Westwick
Interim Head, Department of Electrical and Software Engineering
ese.hire@ucalgary.ca

Applications are accepted until April 14, 2025

The University of Calgary has launched an institution-wide <u>Indigenous Strategy</u> committing to creating a rich, vibrant, and culturally competent campus that welcomes and supports Indigenous Peoples,



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encourages Indigenous community partnerships, is inclusive of Indigenous perspectives in all that we do.

As an equitable and inclusive employer, the University of Calgary recognizes that a diverse staff/faculty benefits and enriches the work, learning and research experiences of the entire campus and greater community. We are committed to removing barriers that have been historically encountered by some people in our society. We strive to recruit individuals who will further enhance our diversity and will support their academic and professional success while they are here. In particular, we encourage members of the designated groups (women, Indigenous peoples, persons with disabilities, members of visible/racialized minorities, and diverse sexual orientation and gender identities) to apply. To ensure a fair and equitable assessment, we offer accommodation at any stage during the recruitment process to applicants with disabilities. Questions regarding [diversity] EDI at UCalgary can be sent to the Office of Institutional Commitments(equity@ucalgary.ca) and requests for accommodations can be sent to Human Resources (hrhire@ucalgary.ca).

All qualified candidates are encouraged to apply; however Canadians and permanent residents will be given priority. In this connection, at the time of your application, please answer the following question: Are you a Canadian citizen or a permanent resident of Canada? (Yes/No)

For a listing of all academic opportunities at the University of Calgary, view our **Academic Careers** website. For more information about the **Schulich School of Engineering**, click here.

About the University of Calgary

UCalgary is Canada's entrepreneurial university, located in Canada's most enterprising city. It is a top research university and one of the highest-ranked universities of its age. Founded in 1966, its 36,000 students experience an innovative learning environment, made rich by research, hands-on experiences and entrepreneurial thinking. It is <u>Canada's leader in the creation of start-ups</u>. <u>Start something</u> today at the University of Calgary. For more information, visit <u>ucalgary.ca</u>.

About Calgary, Alberta

Calgary is one of the world's cleanest cities and has been named one of the world's most livable cities for years. Calgary is a city of leaders - in business, community, philanthropy and volunteerism. Calgarians benefit from a growing number of world-class dining and cultural events and enjoy more days of sunshine per year than any other major Canadian city. Calgary is less than an hour's drive from the majestic Rocky Mountains and boasts the most extensive urban pathway and bikeway network in North America.



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Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact David Westwick

Electrical and Software Engineering

University of Calgary

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Contact E-mail ese.hire@ucalgary.ca