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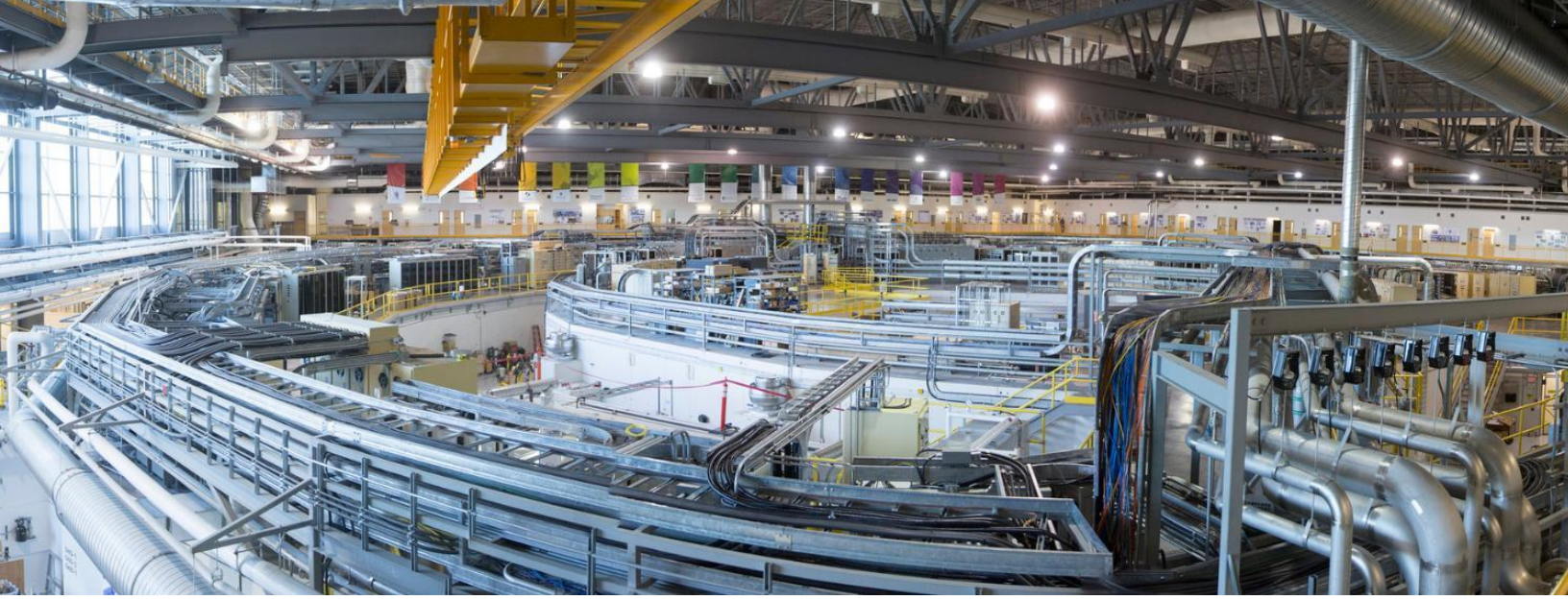
Canadian Light Source | Centre canadien de rayonnement synchrotron

DISCOVERY AT THE SPEED OF LIGHT

OPPORTUNITY PROFILE
Machine Director



Canadian Light Source

44 Innovation Boulevard, Saskatoon, SK S7N 2V3, Canada

www.lightsource.ca

We acknowledge we are on Treaty Six territory and the traditional homeland of the Métis. We pay our respects to the First Nations and Métis ancestors of this place and reaffirm our relationship with one another.

The Canadian Light Source (CLS) is a national research facility of the University of Saskatchewan, serving national and international users from academia, industry, and government institutions. CLS is the only synchrotron in Canada and one of the largest scientific infrastructure investments in the country's history.

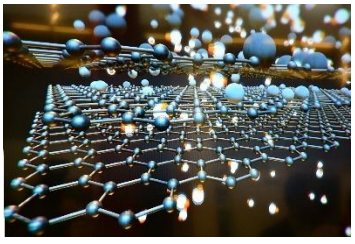
Since the start of operations in 2005, CLS has enabled close to 6,000 scientists from 57 Canadian academic institutions and 46 countries to publish almost 8,000 scientific publications, 1,937 Protein Data Bank deposits, 52 patents, and 904 PhD and master's theses, highlighting discoveries in a wide variety of fields.

From helping in the fight against COVID-19 to creating new cancer-fighting drugs, developing more nutritious and climate-resistant crops and supporting clean-tech and green mining processes, CLS infrastructure and experts help researchers solve problems, train the next generation of scientists, and support industries to become more efficient and sustainable.

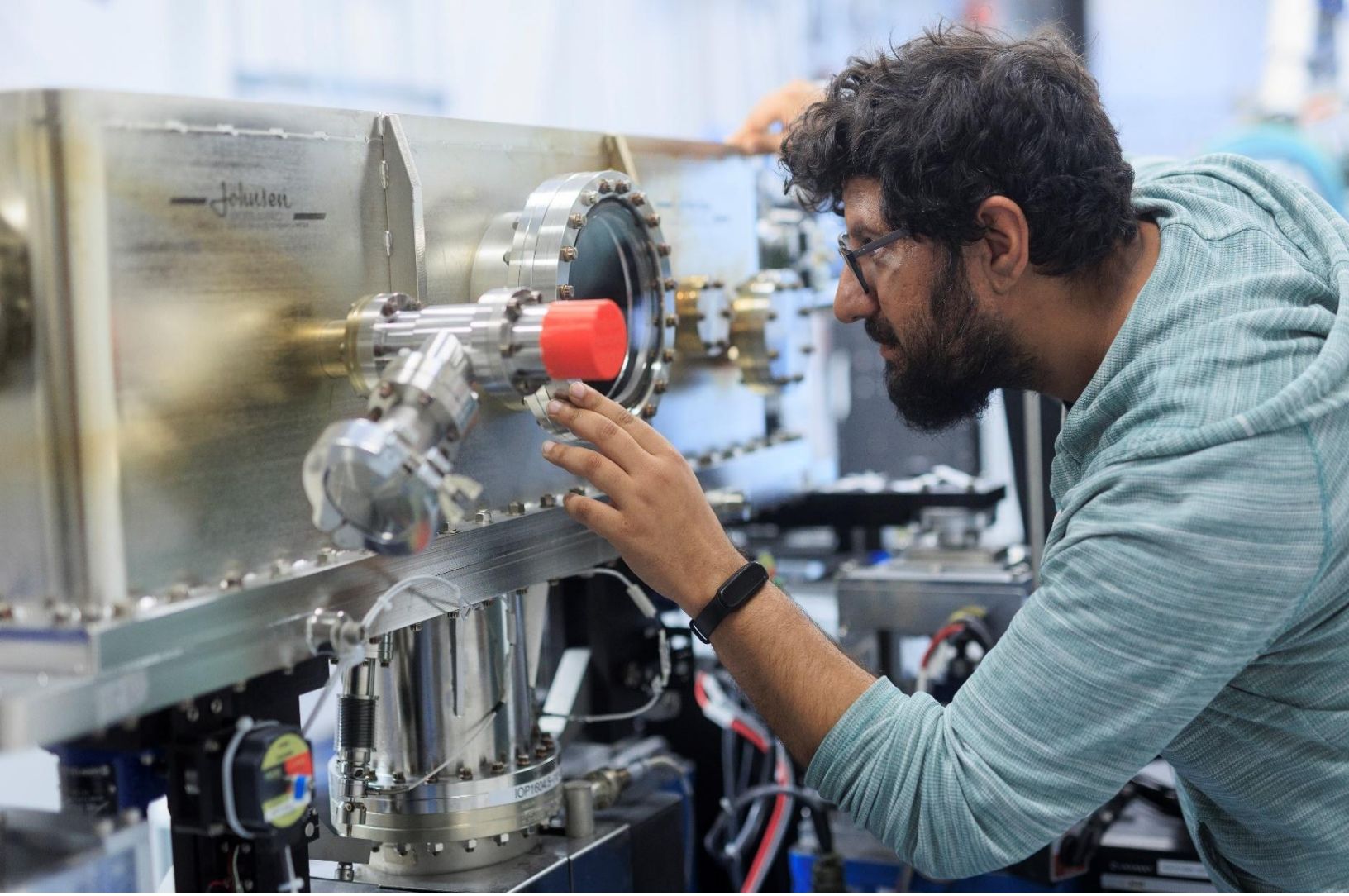
Health

Agriculture

Environment



Advanced Materials



Vision

As a valued Canadian voice for innovation, our leadership and world-class talent achieve excellence in light source services and solutions.

Mission

We enable science, learning, and socio-economic benefits through the provision of synchrotron light.

Values

- **Safety**: We make safety paramount.
- **Innovation**: We expand the boundaries of what is possible.
- **Leadership**: We are leaders in light source applications, global science, and organizational excellence.
- **Collaboration**: We enable collaboration among users and sectors across academia, industry, and government.
- **Equity, Diversity, and Inclusion**: We are committed to equity, diversity and inclusion.
- **Accountability**: We utilize resources responsibly and hold ourselves to the highest standards of ethics and integrity.

The Role: Machine Director

The Machine Director provides technical, strategic and operational leadership and vision for the accelerator systems and affiliated infrastructure at the Canadian Light Source. This includes guiding long-term development initiatives, overseeing system enhancements, and ensuring alignment with CLS strategic objectives. Reporting directly to the Chief Executive Officer and working closely with the Chief Science Officer and the rest of the Executive Team, the Machine Director is accountable for the overall performance, reliability, and advancement of CLS accelerator operations. The role is central to maintaining the operational excellence and scientific capability of the facility.

The Canadian Light Source (CLS) operates a state-of-the-art 2.9 GeV synchrotron, designed around a 12-cell double bend achromat lattice with a total circumference of 170.88 meters. This third-generation light source features 12 straight sections, each 5.2 meters in length, optimized for insertion devices such as undulators and wigglers. The storage ring supports a beam current of 220 mA and achieves a horizontal emittance of 18.1 nm-rad, enabling high-brightness synchrotron radiation across a broad spectral range. The upstream accelerator complex is a 220 keV thermionic RF electron source, a six-section LINAC boosting energy to 250 MeV, and a booster ring that ramps the beam to full energy before injection into the storage ring. The CLS is equipped with a diverse array of insertion devices, including superconducting wigglers and APPLE-II undulators, tailored for advanced materials research, life sciences, and environmental studies. With a cavity frequency of 500 MHz and a harmonic number of 285, the facility ensures precise control over beam dynamics and photon output.

Key Responsibilities

Strategic and Operational Leadership

- Provide strategic leadership and vision for planning and implementation of initiatives that support the long-term development and enhancement of the accelerator and dependent systems.
- Provide direction and oversight for the efficient, safe, and effective operation of all accelerator-related systems.
- Ensure the alignment of division activities with CLS's strategic goals, working in collaboration with the CEO and senior leadership.

Operational Oversight and System Development

- Oversee the development and application of operational policies and procedures related to accelerator operations and upgrades.
- Direct the implementation of major maintenance programs and the development of asset management strategies, including Enterprise Asset Management (EAM) systems.
- Lead the planning and execution of major system upgrades, replacements, and insertion device developments.

Budget and Resource Management

- Administer the approved Machine Division budget, monitor expenditures, and provide financial forecasts and performance reports.
- Ensure the efficient allocation and transparent utilization of resources within the division.

People and Culture

- Provide leadership and guidance to Managers and Supervisors responsible for accelerator systems.
- Support the development of a high-performing team through coaching, mentorship, and professional development.
- Ensure that employee matters are addressed in accordance with CLS policies, guidelines, and applicable collective agreements.

Compliance and Risk Management

- Ensure compliance with all applicable regulatory requirements, legislation, and safety standards.
- Foster a culture of safety, accountability, and continuous improvement across all areas of responsibility.

Stakeholder Collaboration

- Liaise with internal departments and external partners, including the Machine Advisory Committee and the University of Saskatchewan, to ensure alignment and support for accelerator-related initiatives.
- Represent CLS on various external committees and maintain constructive relationships with academic, government, and industry stakeholders.

Scope and Impact

This role has significant organizational influence, with responsibility for both day-to-day operations and long-term planning. The Machine Director applies expert knowledge to shape the vision and strategic direction of the division, balancing technical demands with organizational priorities. The role demands political acuity, sound judgment, and the ability to navigate complex operational and stakeholder environments.

Working through a team of direct reports, the Machine Director is accountable for decisions and performance across all aspects of accelerator operations. They play a key role in identifying future needs, evaluating opportunities for innovation, and ensuring the division's direction remains responsive to evolving industry trends and scientific priorities.

Core Accountabilities

- Champion a culture of safety and ensure all activities are conducted in alignment with CLS's safety standards.
- Uphold the principles of diversity, equity, and inclusion in all interactions and decisions.
- Promote ethical conduct, integrity, and professionalism in the delivery of responsibilities.
- Protect confidential information and handle sensitive matters appropriately.
- Drive continuous improvement and deliver high-quality service to internal and external users.
- Take ownership of decisions, meet established timelines, and demonstrate accountability to the organization.

Leadership Expectations

- Translate strategic objectives into actionable plans, delivering results through effective delegation and collaboration.
- Foster a positive and productive team environment through communication, coaching, and performance management.
- Provide strong administrative, financial, and human resources leadership within the division.
- Maintain a broad understanding of the technical, operational, and regulatory environments in which CLS operates.
- Model transparent, informed decision-making and support knowledge-sharing across teams.

Experience and Education

The ideal candidate will be a proven leader who aligns divisional goals with organizational strategy and achieves results through both their own contributions and the effective leadership of others. The primary language of work is English.

- Ph.D. in accelerator physics, or a closely relevant discipline, **is required**;
- Minimum 10 years of experience as an accelerator physicist, or a relevant position, **is required**;

- Demonstrates exceptional written and verbal communication skills and possess the credibility and presence to effectively engage with internal teams, external partners, and key stakeholders **is required;**
- Recent experience in a senior leadership or management role in a synchrotron facility **is preferred**;
- Broad understanding of the functional area, demonstrates sound knowledge of organizational policies and procedures, and offers strong administrative, financial, and human resources leadership **is preferred**;
- Skilled in engaging, motivating, and coaching teams to achieve high performance, and adept at making informed decisions in complex and dynamic environments **is preferred**.

Compensation

The role is at a senior administrative level, with a total range in Canadian dollars from $160,000 to $208,000, with potential to earn an additional 10% bonus opportunity. A comprehensive benefits package, including health, dental, life insurance, pension/retirement income planning is included. Relocation and immigration support will be provided, if required.

The Location: Saskatoon, Saskatchewan

Discover Saskatoon: A City of Opportunity and Natural Beauty

Saskatoon is a vibrant, fast-growing city that offers the perfect balance of urban sophistication and natural beauty. As the largest city in Saskatchewan, with a population of over 266,000, Saskatoon is a place where innovation meets quality of life. Nestled in the scenic South Saskatchewan River Valley and surrounded by rich farmland, the city is defined by its stunning riverbanks, over 80 kilometers of trails, and expansive green spaces that invite year-round exploration. With more than half its population under the age of 40, Saskatoon exudes youthful energy and a welcoming, multicultural spirit. Its vibrant downtown, thriving arts and culinary scenes, and strong sense of community make it a place where professionals thrive and families flourish. The city enjoys some of the sunniest weather in Canada, with warm summers (20°C to 35°C) and crisp, snowy winters that add seasonal charm.

Economically, Saskatoon is a powerhouse of opportunity. It boasts one of the lowest costs of living among major Canadian cities, paired with low unemployment and a steadily expanding economy rooted in agriculture, mining, energy, and a growing tech and research sector. New industries in renewable energy, crop science, and innovation are flourishing, making Saskatoon a magnet for forward-thinking professionals. The city is easily accessible via John G. Diefenbaker International Airport, with direct flights to major destinations across Canada and North America. Whether you're drawn by career potential, lifestyle, or landscape, Saskatoon is a place where you can lead, grow, and truly thrive. For more, visit City of Saskatoon and Tourism Saskatoon.

The University of Saskatchewan: A Leader in Research and Innovation

The CLS is owned by and located at the beautiful University of Saskatchewan campus, one of Canada's top research-intensive institutions and a proud member of the U15 Group of Canadian Research Universities. USask is a world leader in water and food security, vaccine development and infectious diseases, and human, animal and environmental health. With state-of-the-art centres like the CLS, the Vaccine and Infectious Disease Organization (VIDO), and the Global Institute for Food Security, USask attracts top-tier

talent and global partnerships. The university's commitment to discovery, collaboration, and community impact makes it a cornerstone of Saskatoon's success and a compelling destination for visionary leaders and scholars.

Application Instructions

The appointment of the Machine Director is a permanent, full-time position. The position is open until filled, with an anticipated start date of **June 1, 2026**. The primary work and mailing address for the Machine Director is Canadian Light Source, 44 Innovation Boulevard, Saskatoon, Saskatchewan, S7N 2V3, Canada. To apply in confidence, interested candidates are invited to submit a CV/resume and cover letter to the attention of John Dugdale and/or Heather Fookes at saskatoon@leadersinternational.com or call 403-263-0600. Consideration of candidates is ongoing until the position is filled.

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