

## Hiring Neutron Instrumentation & Control Experts – TVB Associates

TVB Associates is seeking mid- to senior-career neutron instrument & control system experts for part-time consulting roles. Join our team to:

- Contribute to instrument development at the Canadian Neutron Beam Laboratory (CNBL, McMaster), expanding from 2 to 5 or more instruments (diffraction, SANS, reflectometry, imaging)
- Work with EPICS & Python-based controls (PyDM, Typhos, Bluesky, Ophyd) and motor/motion systems (Galil and others)
- Mentor junior instrument scientists and control system developers
- Influence the design and strategy of new initiatives for neutron beam infrastructure

Ideal for senior or retired experts wanting high-impact work without full-time commitments.

Flexible location | Part-time | Global expert network

### MORE DETAILS

Part-Time Senior & Mid-Career Neutron Instrumentation and Control Systems Experts TVB Associates

Location: Flexible (remote with occasional travel)

Engagement: Part-time consulting and advisory roles

### About TVB Associates

TVB Associates works with research organizations on the design, development, and strategy of scientific research infrastructure. One of our current contracts includes neutron instrument development with the Canadian Neutron Beam Laboratory (CNBL) at McMaster University, which is planning an expansion from two instruments to five or more in the coming years, including diffraction, SANS, reflectometry, and imaging capabilities.

### The Opportunity

We are seeking mid- to senior-career experts in neutron instrumentation and instrument control systems to join our network of part-time consultants and advisors. This is an opportunity to contribute technical expertise to active instrument development projects, mentor younger instrument scientists and control system developers, and support strategic planning for new neutron capabilities—all while maintaining flexibility and existing professional commitments.

This role is also suitable for retired experts who want to stay engaged with neutron beam instrumentation, contribute their experience, and influence the next generation of instrument scientists without taking on a full-time position.

### Key Areas of Expertise Sought

We are particularly interested in candidates with experience in one or more of the following:

- Strategic planning for major upgrades to reactor-based neutron facilities
- Neutron beamline design, simulation and operation (e.g., diffraction, small-angle neutron scattering, reflectometry, imaging), including neutron optics, neutron detectors (especially large area detectors with high spatial resolution) and sample environments
- Instrument control systems and data acquisition (e.g., User interface, EPICS, Python-based controls, PyDM, Typhos, Bluesky, Ophyd; data handling, reduction and other data workflows) including motor controller hardware (e.g., beamline motion stages, Galil motors, and custom solutions)
- Reactor neutron sources (e.g. reactor core geometry), cold neutron sources

### What You'll Do

Depending on your interests and availability, you may:

- Participate in technical reviews, feasibility studies, and business cases for new infrastructure
- Contribute to neutron instrument design and development of their control systems, while mentoring and guiding junior instrument scientists and control system developers
- Advise on plans for neutron source upgrades, cold sources, neutron optics, instruments, neutron detectors, control systems, sample environments and ancillary equipment
- Support emerging neutron programs and research infrastructure initiatives

### Who You Are

- A recognized expert in neutron instrumentation, controls systems, or neutron facility strategy
- Mid- to senior-career (e.g., senior scientist, instrument scientist, engineer, technical lead, or equivalent)
- Interested in part-time, high-impact consulting work

### Why Work With TVB Associates

- Flexible, part-time consulting roles that can fit alongside your current position or retirement
- Direct involvement in the expansion of Canada's neutron instrument capacity at CNBL
- Opportunities to mentor the next generation of neutron instrument scientists and control system developers

### To Express Interest

Please send a brief CV and a short statement of interest outlining your expertise and availability to:

[Daniel.Banks@tvbassociates.ca](mailto:Daniel.Banks@tvbassociates.ca)

Daniel Banks

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