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## Post-Doctoral Research Fellow

Location: **CA - Quebec (Bromont)**

Job Code: **MEMS Process Development Engineer – Sr.**

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### Description

NXTSENS Microsystems Inc. is a fabless semiconductor spin out from McGill University and is headquartered in Montreal, QC, Canada. NXTSENS was founded in the spring of 2015 and currently has 4 founders and 4 employees. In collaboration with Teledyne DALSA, NXTSENS has demonstrated the highest performance MEMS oscillator currently available. Its prototypes are the first MEMS timing devices to meet GPS/GSM specifications while able to withstand shocks in excess of 100,000 g and operate unaffected within a high vibration environment.

NXTSENS is in the process of bringing its technology to commercialization through a collaboration with Teledyne DALSA. We're looking for top-notch MEMS Process Engineers to join our team. If you're interested in being a part of our journey of revolutionizing the frequency and timing market, we definitely want to hear from you.

#### Job Summary:

The candidate will work at Teledyne DALSA's advanced microfabrication facility in Bromont, QC. This position requires in-depth knowledge of high volume MEMS microfabrication processes where yield is essential. The candidate will interface with Teledyne DALSA's experienced foundry team in order to introduce and improve several key process steps that are essential to NXTSENS products. Training will be provided for advanced equipment. Key roles include but are not limited to:

- Develop a MEMS manufacturing process step that involves ultra-high aspect ratio etching and advanced hard masks.
- Develop a wafer to wafer bonding process step for ultra-highly doped silicon wafers.
- Manage the aspects of process development and be the representative of NXTSENS Microsystems Inc. at the microfabrication facility.
- Manage the reporting and documentation associated with the projects.

#### Skills and Qualifications:

- Ph.D. ME, Ph.D. AA, Ph.D. EE, Ph.D. Physics, or other equivalent
- Microfabrication experience is a must.
- Expertise in wafer to wafer bonding (e.g. anodic bonding, silicon-fusion bonding, etc.)
- Expertise in wet and especially dry etching (e.g. RIE, ICP-RIE, DRIE, etc.)
- Good knowledge of both French and English languages is preferred.
- Thorough understanding of fundamental principles of MEMS actuation and sensing.
- Previous experience in project management is an advantage.
- Hands-on knowledge of MEMS fabrication techniques and limitations.
- Values clear communication and has the ability to work with a multi-disciplinary team.

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