Bien-Air is a growing international company which develops, manufactures and markets high-tech instruments for microsurgery. We have held an enviable position in the international market for many years thanks to our emphasis on invention and innovation, and the high quality of our products and services. To support our growth, we are looking to add to our team at our site in **Biel** by recruiting a :

SOFTWARE ENGINEER – MOTOR CONTROL

This engineer will play a key role in a fast-moving team and participate in architecture design and implementation of BLDC sensorless motor control models. The engineer will work closely with the electronic team to design, simulate, optimize and implement the embedded control software to improve system-level behaviors.

Roles and Responsibilities:

- Sensorless control of permanent magnet high speed motors; including advanced modulation, position and velocity estimation, fault detection, and efficiency optimization
- Definition of motor parameters using simulation and characterisation tools
- Tuning and calibration of complete systems on test stand
- Unit-tests for build environment, sub-system validation testing, integration testing, hardware and software-in-the-loop testing
- Conceive, validate and document software according medical standards
- Participates in the writing of risk analysis, specifications and tests plans relating to the surgical use
- Collaborate on Human Machine Interface improvement and visual design

Qualifications & experience required:

- Bachelor's degree in computer science, computer engineering or electrical engineering
- At least 5 years full time industry experience
- Good knowledge of sensorless BLDC motor control and modelling
- Good knowledge of embedded C++ firmware development
- Knowledge of object-oriented and multi-threaded programming and system architectures
- Experience with medical standards (ISO13485 / 14971 / 62366 / 62304 / 60601)
- Exposure to other languages and systems such as: Python, R, Qt 5, embedded Linux
- French or German as mother tongue with good knowledge of English (a minimum of Upper Intermediate [B2] to Advanced [C1])

We are offering successful applicants the opportunity to join an internationally renowned company, with attractive working conditions and benefits, within a high-tech environment. Completed applications should be e-mailed to:

Bien-Air Surgery SA,
Human Resources, Route de Soleure 1, 2504 Bienne, Switzerland
job.surgery@bienair.com, www.bienair.com