

Position offered: Quantum Control Software Developer

Company name: M-Labs Limited

Website: <https://m-labs.hk>

Job description:

We are a small HK company who develop open source tools for physics laboratories.

Our flagship product is the ARTIQ control and data acquisition system - a programmable software and FPGA system that runs most the equipment involved in modern quantum physics experiments with trapped ions, cold atoms, or diamond NV centers. A list of scientific publications on some of the experiments involving ARTIQ can be found here: <https://m-labs.hk/experiment-control/publications/>. In particular, the world's first unbreakable quantum key distribution system runs on ARTIQ.

ARTIQ has been developed in collaboration with the NIST Ion Storage Group, whose former leader David Wineland won the 2012 Nobel Prize in physics, the Ion Trap Quantum Computing group at the University of Oxford, and several other institutions.

ARTIQ is used today by hundreds of quantum physics research groups around the world.

You will have the opportunity to improve and extend the ARTIQ quantum physics experiment control software, and develop firmware for scientific instruments related to ARTIQ.

Knowledge of quantum physics is NOT required.

We are looking for people with these skills or willing to learn:

- Embedded systems
- FPGAs
- Rust
- Python
- Linux
- Compilers and LLVM
- Nix/NixOS
- Distributed systems
- Signal processing

We are looking for highly motivated candidates with an interest in fundamental scientific research, able to pick up new skills quickly, diligent, and with a long-term perspective.

Application method:

Please send your application including your CV/Resume to Sébastien Bourdeauducq (sb@m-labs.hk). Additionally, please include source code of a past project of yours to demonstrate your project experience.

職位：量子控制軟件開發人員
公司名稱：M-Labs Limited
<https://m-labs.hk>

職位描述：

我們是一家為物理實驗室開發開源工具的小型香港公司。

我們的旗艦產品是 ARTIQ 控制和數據採集系統——一個可編程的軟件與 FPGA 系統。它能運行現代量

子物理實驗中涉及的大多數設備，包括捕獲離子、冷原子或金剛石氮空位中心。有關 ARTIQ 的一些實

驗的科學出版物，包括世界上第一個以 ARTIQ 系統運行的防破解量子密鑰分發系統，都可以在此瀏覽：<https://m-labs.hk/experiment-control/publications/>。

ARTIQ 是與 NIST 離子儲存團隊（其前任領導人 David Wineland 獲得 2012 年諾貝爾物理學獎）、牛

津大學的離子阱量子計算團隊以及其他機構合作開發的。目前全球有多達數百個量子物理研究團隊使用

ARTIQ。

您將有機會改進和擴展 ARTIQ 量子物理實驗控制軟件，以及開發與 ARTIQ 相關的科學儀器韌體。

此實習職位不需要任何關於量子物理學的知識。

我們正在尋找具有這些技能或願意學習的人：

- 嵌入式系統
- FPGA
- Rust
- Python
- Linux
- 編譯器和 LLVM
- Nix/NixOS
- 分散式系統
- 信號處理

我們正在尋找積極進取、對基礎科學研究感興趣、能夠快速掌握新技能、勤奮並具有長遠眼光的求職者。

申請方式：

請以英文填寫履歷表／簡歷，並將其與您的申請一併電郵至 dc@m-labs.hk。與此同時，請附上您的一個

過往項目的原始碼，以支持您的項目實踐經驗。請以英文填寫該電郵。