

## **Announcement of NTNU-CSC PhD Scholarship**

**Type of scholarship:** PhD

**Period of the scholarship:** June 2021 – May 2025 (four year)

### **Short description of the scholarship:**

We have a vacancy for a PhD candidate in Metal Forming at Department of Mechanical and Industrial Engineering, NTNU.

The PhD position will be related to NTNU Aluminium Product Innovation Center (NAPIC), which is a newly-established formal collaboration between Hydro and the three NTNU faculties Engineering, Natural Sciences and Architecture and Design. SINTEF and Sintef Raufoss Manufacturing are also part of the centre. The center is hosted by Department of Mechanical and Industrial Engineering, and the goal of NAPIC is to explore new aluminum product opportunities, employing a research-driven innovation approach based on cross-disciplinary collaboration between product design and development, manufacturing, materials technology and product applications.

### ***Dual degree opportunity at Texas A&M University (Texas A&M):***

We would like to put this position into the collaboration framework between NTNU and Texas A&M, and thus there could be an opportunity for a dual degree under the current contract with Texas A&M. We have one dual degree seeking PhD candidate already there, who started from Aug 2019.

### ***Duties of the position:***

The PhD candidate will work on challenging research problems related to advanced forming of aluminium products towards the Industry 4.0, including:

- Conduct research on advanced forming of aluminium extrusions– herewith experimental and numerical R&D with regards to 3D-bending of profiles, aiming to enhance the flexibility of machine, process and product.
- Design measurement methods for the in-line, real-time monitoring (detection) of the flexible 3D-bending process.
- Contribute to develop strategies (models) for adaptive control of forming process based on analytical, numerical, and AI-based approaches, thus improving dimensional accuracy of products.
- As part of the research activities, you will collaborate actively with the partners in NAPIC, as well as develop the NAPIC laboratories to enable researched-based new aluminium applications.
- Conduct and publish high-level research to qualify for an academic career.

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**Qualification and requirement:**

- Master's degree or second degree (equivalent to 120 credits) with a strong academic background in Mechanical Engineering or related field (focus on Metal Forming is advantageous), or equivalent education with a grade of B or better in terms of NTNU's grading scale. If you do not have letter grades from previous studies, you must have an equally good academic foundation. If you are unable to meet these criteria you may be considered only if you can document that you are particularly suitable for education leading to a PhD degree. (The diplomas, certificates and transcripts should be provided.)
- Having a great interest in experimental research.
- Personal characteristics: Curious, Collaborative, and Dedicated

In addition, for all applicants the following applies:

- Fluent English language, both written and spoken with certificates of TOEFL minimum 95 or IELTS minimum 6.5
- Chinese citizenship documents (copy of his/her passport or national ID of P.R. China)
- CV
- A motivation letter

In the evaluation of which candidate is best qualified, emphasis will be placed on education, experience and personal suitability, as well as motivation, in terms of the qualification requirements specified in the announcement.

**Deadline for submission of application:** 15<sup>th</sup> Feb 2021

**Scholarship:** 17,000 NOK/month (minimum) for a period of up to 48 months  
*CSC will provide a living stipend, currently 12,500 NOK per month for a period of up to forty-eight (48) months, and a round-trip international airfare between China and Norway. NTNU will provide a monthly additional funding for a period of up to forty-eight (48) months, which combined with the CSC living stipend ensures the sufficient income (currently minimum 17,000 NOK per month) required by NTNU. No tuition fees will be charged for PhD candidates at NTNU.*

**Supervisor info:**

Name: Geir Ringen (main supervisor), Torgeir Welo (co-supervisor)

Title: Professor

Institute: Department of Mechanical and Industrial Engineering, NTNU

Email: geir.ringen@ntnu.no, torgeir.welo@ntnu.no

**Email and contact information for where to send the application:**

Please send the application documentiaon to Dr. Jun Ma: jun.ma@ntnu.no, with a copy to Prof. Geir Ringen: geir.ringen@ntnu.no, Prof. Torgeir Welo: torgeir.welo@ntnu.no.