

# CHUANFANG NING

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RobotX Center

Laussane, 23/03/2022

**Subject:** Motivation letter for Robotics Summer School

Dear Robotic Summer School Committee,

My name is Chuanfang Ning. I am a 2<sup>nd</sup> year master student in Robotics from EPFL. I am writing to apply for the Robotics Summer School. And I believe my skills, academic background, and professional experience are a suitable fit for it.

Instead of codes that are only survivable on a computer, I prefer my efforts to be shown vividly beyond the screen. I like to transfer state-of-art algorithms to hardware and examine their performance in real-world challenges. In both of my full grades semester projects at EPFL, I developed a robotic system from basic mechatronics and then coded perception and control algorithm on top of it to turn recent research work into application.

I am experienced in Python/C++ programming under the ROS framework on industrial robots like UR5, mobile robots like Thymio and Omnibot and automation systems like Optobot, which I think should be helpful to succeed in the SMB project. I am able to write codes and prepare clean packages that fit well into large-scale projects, which should be beneficial to collaborate in a team with other participants.

I major in mobile robotics track for my master study. I have been working with different mobile robot platforms like Thymio in Basics of Mobile Robot Course (6/6 final project) and E-puck in Swarm Intelligence course. Holding the passion in human robot interaction, I have solid knowledge in both robot perception (vision-based like DL and sensor-based like LiDAR fusion) and robot manipulation (MPC, trajectory planning, haptic interface). Working at BioRob and VITA lab on deep learning methods for mobile furniture localization also exposed me to some of the latest perception technologies in assistive robotics, thus allowing me to transfer my skills to SMB like for artifact detection. In addition to my programming ability, I have a solid background in electrical engineering. I honed my ability in deployment, calibration, and (tele-)operation of multi-modal sensors and actuators with microcontrollers (also softcore ones), which can be helpful to understanding and using the hardware packages in SMB.

Despite my previous knowledge, I have not yet engaged in intensive robotics project within teams during a time-limited period. I would like to sharpen my skills with the exciting SMB project and also enrich my vision with robotics talks. There are talks not only from laboratories but also talks from speakers with a joint between academy and industry, which resonates with my main motivation in bringing robotics to the human side to help people in daily life.

I am an open-minded team member, and I would enjoy working in a multicultural environment with participants from all around the world. Fluent in English, German and Chinese, I could always cooperate with other participants smoothly. For more detailed information about me please refer to my personal [website](#). I am looking forward to attending the summer school and contributing to the success and diversity of it.

Yours sincerely,  
Chuanfang