KIMBERLY MCGUIRE, PHD

ROBOTICS ENGINEER
INDEPENDENT CONTRACTOR

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Dutch/American
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SUMMARY

Kimberly McGuire is an independent roboticist with a background in aerial robotics and embedded systems. She completed her PhD on swarm robotics in 2019 and worked with the Crazyflie until 2024. She is also an experienced speaker and technical writer and currently working on robotic simulation projects.

HIGHLIGHTS

- Best Speaker Robotics Developer day
- Published paper in Science Robotics
- Co-lead of Aerial ROS Community group

EXPERIENCE

ROBOTICS INTERGRATION ENGINEER
2022-2024 Bitcraze AB, Sweden

As robotics engineer at Bitcraze I focus on integration of Aerial robotic vehicles with the ROS 2 framework with added simulation support.

EMBEDDED SOFTWARE DEVELOPER
2019-2022 Bitcraze AB, Sweden

As embedded software engineer I worked on the freeRTOS C firmware of the STM32 based Crazyflie nano quadcopter, which involved sensor fusion and onboard autonomy.

PHD RESEARCHER
2015-2019, TU Delft, The Netherlands

I was tasked to design a group of tiny quadcopters, only weighing about 50 grams, to achieve autonomous exploration in indoor structured environments.

INTERN COMPUTATIONAL PHOTOGRAPHY
2013, NEC, Japan

I worked on validating a novel high sensitivity sensing method for computational photography to utilize near infrared light imagery

SKILLS

CAD ★ | Windows ★ | Simulation ★ | Aerial ★ | C ★
Computer Vision ★ | Gazebo ★ | Matlab ★ | State Estimation ★
Ubuntu ★ | Blender ★ | Crazyflie ★ | Mobile ★ | Optical Flow ★
Python ★ | ROS ★ | RTOS ★ | 3D printing ☆ | C++ ☆
Control ☆ | Deliberation ☆ | ESP ☆ | Keras ☆ | Neural Networks ☆
OpenCV ☆ | Paparazzi ☆ | SOLIDWORKS ☆ | Swarm ☆ | Webots ☆

And many more...

★ Expert ☆ Proficient

EDUCATION

PHD AEROSPACE ENGINEERING
2019 - TU Delft, NL

Swarm Robotics, Embedded systems

MSC MECHANICAL ENGINEERING
2014 - TU Delft, NL

Bio-inspired Robotics, Computer vision

BSC INDUSTRIAL DESIGN ENGINEERING
2011 - TU Delft, NL

Ïndustrial product design methods

See my portfolio: knmcguire.github.io/projects