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To whom it may concern,

I am writing to apply for the assistant professor position in cyber-physical systems (4651). I have years of experience in the school of computer science as a member of staff and as a student. I have been a research fellow in the school since January 2023. This followed my PhD, which I completed at the University of Oxford in 2022. My experience with research, teaching, leadership and outreach have given me the skills required of an assistant professor.

I am interested in the application of artificial intelligence techniques and formal verification to robotics. The goal of my research is to develop robotic systems with a guaranteed quality of service under uncertainty. My current research as part of EU Horizon project CONVINCE is focused on robot planning under spatiotemporal uncertainty. For this, I apply sequential decision-making techniques to data-driven models of uncertainty. The core achievment of my research so far has been techniques for multi-robot planning which apply model checking techniques to reason over the temporal behaviour of other robots and other exogenous processes in the environment. My research has been published in high-quality venues such as IEEE Transactions on Robotics (T-RO), the Journal for Artificial Intelligence Research (JAIR), and the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS). The applicability of my research has been demonstrated in external collaborations with the University of Lincoln for agricultural robotics, and Accenture Labs for hybrid order picking systems in warehouses. Recently, I have also co-authored two grant proposals, one for an EU Horizon project, and one for a Google scholarship. I am excited to continue with this research, and I believe an assistant professorship in the school of computer science provides me with an ideal opportunity to pursue it.

I am enthuastic to teach and supervise students. Teaching is an important part of academic life which helps build a researcher through the development of communication and presentation skills. I have already taught lectures for the Advanced Robotics course, and helped write the latest exam. I have taught undergraduates how to write software for robots as part of Oxford's RoboCup team, and have worked as a teaching assistant on a robotics crash course for CDT students. I also have su-

pervision experience, having supervised numerous undergraduate, masters, and internship projects, and am currently on the supervision team for two PhD students. I have also conributed to designing undergraduate projects. I am excited to continue teaching and leading modules as an assistant professor.

I've adopted leadership and management roles which prepare me for an assistant professorship. I'm currently a technical work package lead in EU Horizon project CONVINCE. As well as internal management I collaborate with other consortium members, balancing our requirements with theirs to help build a cohesive robotic toolchain. During my PhD, I led the University of Oxford's RoboCup team, as well as external collaborations with Accenture Labs. Further, I organised a half-day tutorial on multi-robot planning under uncertainty at AAMAS 2023. I feel comfortable in these leadership positions, and have learned to efficiently manage tasks under tight deadlines.

I am an active citizen of the school and will deepen my involvement as an assistant professor. I have integrated myself into the school through social events and presentation opportunities such as facts and snacks. I am heavily involved with the robotics labs and have given multiple tours to students and members of the university's robotics society. I am also involved in the ongoing update and reorganisation of both labs. I want to be a champion for the school and am eager to help with open days. I want to bring robotics back to open days, as watching 'Bob' run in the building played a significant role in me choosing to study in Birmingham. A longstanding goal of mine is to get Bob up and running again for future open days.

I have substantial experience with enterprise, engagement, and impact. While leading Oxford's RoboCup team I focused on widening participation, recruiting students who hadn't previously had the opportunity to work in robotics. I've also led multiple robotic demos at public events including the Goodwood festival of speed, University of Oxford open days, and the grand opening of an Oxford college building attended by Prince William. I am passionate about outreach, and through these events have learned how to explain complex topics to the public in an accessible and entertaining way.

Using my skills and experience, I will quickly adapt to the role of assistant professor. To support this application I include a research statement, teaching statement, and CV along with this cover letter. Thank you for reading my application, and I look forward to hearing from you.

Yours faithfully,

Charlie Street