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To whom it may concern,

I am writing to apply for the role of assistant professor in cyber-physical systems (4651). As an internal applicant, I have years of experience in the school both as a member of staff and as a student. I have been a research fellow in the school since January 2023, following the completion of my PhD at the University of Oxford in 2022. My experience in research, teaching, leadership, and outreach have given me many of 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 taken on leadership and management roles which will help me as an assistant professor. I'm currently a technical work package lead in EU Horizon project CONVINCE. As well as designing our own contributions, I collaborate with other packages, and manage our needs with theirs to help build a cohesive software toolchain. During my PhD, I led the University of Oxford's RoboCup team, and led external collaborations with Accenture Labs. I have also run a half-day tutorial on multi-robot planning at the 2023 International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS). I am comfortable in leadership positions, and can effectively manage tasks under tight deadlines.

I am an active citizen of the school and hope to further this as assistant professor. I have given multiple tours of our robot labs to students and members of the university's robotics society. I've also engaged with regular events such as facts and snacks and social events. I've also been recently involved in updating and reorganising the robotics labs. I am keen to help with events such as open days and want to be a champion for the school. I'm particularly interested in bringing a robotics presence to these events. When I was applying for undergraduate study, seeing Bob being demonstrated in the building was a big part of why I wanted to study in Birmingham. Its been a longstanding desire of mine to get Bob up and running again for similar events.

I have substantial experience in enterprise, engagement, and impact events. My time leading Oxford's RoboCup team was focused on widening participation, recruiting students who had previously not had the opportunity to work in robotics. I've led multiple robotics demos at public events, such as the Goodwood festival of speed, and University of Oxford open days. I've also helped prepare robot demos for events at Blenheim palace, and for the opening of an Oxford college building visited by Prince William. I am passionate about outreach, and these events have taught me how to explain complex research in an accessible and entertaining way to members of the public.

Given my skills and prior experience, I am confident I can 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 considering my application, and I look forward to hearing from you.

Yours faithfully,

Charlie Street