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Spin-triplet supercurrents of odd and even parity in nanostructured devices

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- A. Singh, S. Voltan, **K. Lahabi** and J. Aarts. Colossal proximity effect in a superconducting triplet spin valve based on the half-metallic ferromagnet CrO₂, *Physical Review X*, **5**(2), 021019, 2015.
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- **K. Lahabi**, R. Fermin, M. Hubert, A. B. Hamida and J. Aarts. Generating spin-triplet supercurrents with a ferromagnetic vortex, *to be submitted*.
- A. Singh*, **K. Lahabi***, L. Maduro and J. Aarts. Controlling spin-triplet supercurrent with domain-walls in a CrO₂ nanowire, *to be submitted*.
- **K. Lahabi**, Y. Yasui, V. F. Becerra, M. S. Anwar, S. Yonezawa, M. V. Milošević, J. Aarts and Y. Maeno. Signatures of an asymmetric Josephson potential in chiral domain wall junctions, *to be submitted*.
- **K. Lahabi** and J. Aarts. Spin-textured Josephson junctions, *Patent application pending*.

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CURRICULUM VITAE

I was born in September 1987 in Iran. In January 2004 I moved to England to continue my studies. Upon completing my A-levels at Lincoln Christ Hospital School, Lincoln, I was granted admission to Bristol University in the fall of 2006. In the third year of my undergraduate degree I was offered a full-time internship at MHS electronics, Swindon, to investigate the dynamics of photoresist on a rotating silicon wafer. For my final year Bachelor's project I worked on localised electromagnetic modes in photonic crystal cavities. I graduated from Bristol in 2010 with an upper-second class Bachelor of Science (honours) in Physics with Industrial Experience.

In 2011 I was awarded the full Science at Leuven Scholarship from KU Leuven, Belgium, where I studied Master of Physics. My Master's project was on the interplay between ferromagnetism and superconductivity in epitaxially grown multilayers. I graduated magna cum laude in 2013. Soon after, I started my PhD under the supervision of Prof. Jan Aarts (Leiden) and Dr. Paul Alkemade (TU Delft).