Curriculum Vitae of Matty Van Son

Personal Details

NAME: Matty Van Son

DATE OF BIRTH: 26 May 1994

INSTITUTION: University of Liverpool, Department of Mathematical Sciences
PhD student

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Education

[2012-2015] BSc in Theoretical Physics and Mathematics, NUI Maynooth

[2015-2016] MSc in Mathematical science, University of Liverpool

[2016-present] PhD in Mathematics, University of Liverpool.
Title: *Extended Markov numbers and integer geometry*

Research Experience

- **Research areas:**

  - **Number theory:** Markov numbers and extensions, Diophantine approximation, continued fractions

  - **Geometry**: Geometry of numbers, geometrical continued fractions.

  - **Knot theory**: Energy of knots.

- **Scholarships:**

  - [2015] £2,000.00, bursary from the Department of Mathematical Sciences, University of Liverpool.

Teaching Experience

- **Tutorials:**

  – Mathematics Engineering II (MATH299), 2016

  – Linear Algebra and Geometry (MATH244), 2016–2017

  – Introduction to Statistics (MATH162), 2017

  – Geometry of Curves (MATH248), 2017–2019

  – Mathematical IT Skills (MATH111), 2017

  – Networks in Theory and Applications (MATH367), 2018

  – Chaos and Dynamical Systems (MATH322), 2018–2019

  – Number Theory (MATH342), 2019

  – Group Theory (MATH343), 2019

- **Undergraduate group projects:**

  – MATH111 in 2017

Conference organisation

Co-organiser of the workshop *Geometry, Combinatorics, and Markov Numbers*, Liverpool, UK, May 2020 (postponed due to the coronavirus pandemic)

Publications

[1] O. Karpenkov and M. Van Son. Generalised Markov numbers. *Journal of Number Theory*, 213:16–66, 2020.

[2] O. Karpenkov and M. Van Son. Generalized Perron Identity for broken lines. *Journal de théorie des nombres de Bordeaux*, 31:131–144, 2019.

[3] M. Van Son. Palindromic Sequences of the Markov Spectrum. *Mathematical Notes*, 106:457–467, 2019.

[4] M. Van Son. Uniqueness conjectures for extended Markov numbers. *arXiv:1911.00746, preprint*, 2019.