David White

Curriculum Vitae

Department of Mathematics
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🌐 `dave-white.github.io` | ⭘ `dave-white (GitHub)`

RESEARCH INTERESTS

My primary domain of study is low-dimensional topology, drawing from the fields of

- symplectic topology,
- differential topology,
- knot theory,
- gauge theory.

Of particular interest are the applications of Floer homology theory and the Atiyah-Floer conjecture.

EDUCATION

2017–present **Ph.D. (expected spring 2023)**, *North Carolina State University* (NCSU), Raleigh, NC
Mathematics

2007–2011 **B.A. (2011)**, *Duke University*, Durham, NC
Philosophy and Mathematics

PAPERS

2022 David G. White. "Symplectic Instanton Knot Homology". In progress

TALKS

Mar. 2022 **Symplectic instanton knot homology**, *Pure Math Grad Student Seminar*, NCSU
Presentation of current research to fellow math graduate students.

Mar. 2022 **Introduction to Floer homology**, *Pure Math Grad Student Seminar*, NCSU
Informational presentation to fellow math graduate students.

Feb. 2022 **Symplectic Instanton Knot Homology**, *Indiana University*, Bloomington, IN
Informal presentation and discussion, by invitation.

TEACHING

All courses below were held at North Carolina State University (NCSU).

Primary instructor

Course	Terms	Materials
Calculus III - Multivariable calculus	Fall 2019	
Topics in Contemporary Mathematics	Summer 2, 2021 & 2019	Lecture notes on social choice theory

Recitation leader (teaching assistant)

Course	Terms	Materials
Survey of Geometry	Fall 2021	
Calculus III - Multivariable calculus	Spring 2021 & 2019	
Calculus I - Single-variable calculus	Spring 2020, Fall 2018	MVT notes

SERVICE

Jun. 2021   Led a workshop for fellow graduate students at NCSU (organized by its AMS chapter) on configuration and usage of `vim` plus its `vim-latex` plugin for editing, managing and automating LaTeX projects. Presentation slides and setup code can be found on the Resources page of my website.

EMPLOYMENT

2017   **Tutor**, *Mathnasium*, Huntersville, NC
Mathematics tutor for K-12 students.

2015–2016   **Associate Software Developer**, *iPipeline, Inc.*, Exton, PA
Front- and backend developer of engine producing prospectus for insurance and other actuarial products.

2011–2013   **Senior Developer**, *BPM Specialists, Inc.*, Atlanta, GA
Pega-certified Senior Developer & Systems Architect. Worked on Java-based business process management (BPM) applications for clients including Wells Fargo and TSYS.

SKILLS

Computing

Mathematical	SymPy, Maple, MATLAB, Mathematica	High-level	C/C++, Java, VisualBasic (.NET)
Scripting	Python, PHP, Javascript, Vimscript, `bash`, `zsh`	Document / Markup	TeX, HTML, CSS, Markdown
System	Linux, MacOS	Version control	Git

Languages

French	Intermediate	*Proficient reader, intermediate to advanced listening comprehension, developing speaker. Some university coursework.*
German	Beginner	*Some university coursework.*