

Caleb J.B. Davis

Department of Mathematics
University of Florida
489 Little Hall
Gainesville, Florida 32611

caleb.davis@ufl.edu
<https://people.clas.ufl.edu/caleb-davis/>

Education

University of Florida
Ph.D. Student – Mathematics

Gainesville, Florida
Aug. 2021 – Present

Appalachian State University
M.A. – Mathematics

Boone, North Carolina
Attended Jan. 2017 – May 2018

Appalachian State University
B.S. – General Mathematics

Boone, North Carolina
Attended Jan. 2015 – Dec. 2016

Central Carolina Community College
A.S.

Sanford, North Carolina
Attended Aug. 2012 – Dec. 2014

Publications

Combinatorial principles equivalent to weak induction, with Denis Hirschfeldt, Jeffrey L. Hirst, Jake Pardo, Arno Pauly, and Kieta Yokoyama, *Computability*, **9**:3-4 (2020) 219-229. Available online at (DOI) [10.3233/COM-180244](https://doi.org/10.3233/COM-180244).

Reverse mathematics and colorings of hypergraphs, with Jeffrey L. Hirst, Jake Pardo, and Tim Ransom, *Archive for Mathematical Logic*, **58** (2019) 575-585. Available online at (DOI) [10.1007/s00153-018-0654-z](https://doi.org/10.1007/s00153-018-0654-z).

Presentations and Projects

An introduction to reverse mathematics

Logic Seminar – The University of Florida – September 2021

Reverse mathematics and Hypergraph Coloring

Student Scholar's Day – Appalachian State University – April 2018

Reverse Mathematics Research

Appalachian State University – Independent Group Research – Fall 2017

Complex Analysis in Analytical Number Theory

Appalachian State University – Independent Group Research – Spring 2017

Fourier Analysis

Appalachian State University – Independent Group Research – Spring 2016

Fractional Calculus

Appalachian State University – Independent Group Research – Spring 2015

Employment History

Fall 2021

The University of Florida – Department of Mathematics

Teaching assistant for MAC1147 Precalculus Algebra and Trigonometry

Fall 2018 – Summer 2021

College of The Albemarle – Elizabeth City, North Carolina

Assistant Professor of Mathematics, September 2020 – July 2021

Instructor of Mathematics, August 2018 – September 2020

Teaching Experience:

Developmental Mathematics	(FA2018, SU2019)
Mathematical Measurement and Literacy	(SP2019, FA2019, SP2020)
Precalculus Algebra	(FA2018, SP2019, SU2019, FA2019, SP2021, SU2021)
Precalculus Trigonometry	(FA2018, SP2019, SP2020, FA2020, SP2021)
Brief Calculus	(SU2019, SU2020, SU2021)
Calculus I	(FA2018, FA2020)
Calculus II	(SP2019, SP2021)
Calculus III	(FA2019, FA2020)
Linear Algebra	(SP2020, SP2021)

Service:

- Member, Technology Visioning Team, Fall 2020 – Spring 2021
- Member, Interview Committee, December, 2020 – January 2021

Spring 2018

Appalachian State University – Boone, North Carolina

Research assistant

Fall 2017

Appalachian State University – Boone, North Carolina

Teaching assistant

Instructor for College Algebra with Applications

Spring 2017

Appalachian State University – Boone, North Carolina

Teaching assistant for College Algebra with Applications

Skills

Computer Programs:

Experience using various computational programs, including Maple, Mathematica, R, etc.

Experience using Microsoft Office, iWork and Google Workspace

Languages:

Maple, Mathematica, L^AT_EX 2_ε, R

Honors & Scholarships

NSF Supported S-STEM Program

Spring 2015 – Fall 2017

Phi Theta Kappa

2013 – Present

Dean's List, Appalachian State University.

Dean's and President's List multiple occasions, Central Carolina Community College.

Interests

Mathematics:

Research interests include various topics of Mathematical Logic, including Reverse Mathematics and Computability Theory. Additional interests include Computational Complexity and Model Theory.

Pedagogy:

Learning and discussing various methods of mathematical education at the secondary and tertiary levels.

Developing a personal method of instruction to achieve goals and outcomes of the course without compromising the student's education.