# Proof-Based Math Readings Session: Matrix Algebra

2023 Fall

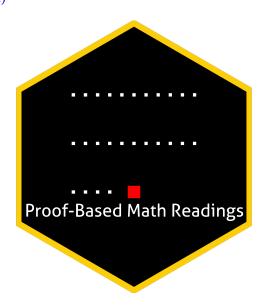
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### 0 Motivation

- Proof-Based Math Readings is a free and independent online reading group where we study mathematics required in economics master's/PhD programs using an intuitive approach.
- This session of the reading group is on Matrix Algebra.

### 1 Prerequisites

- CGPA: 3.00/4.00.
- Proof resources below and Linear Algebra Gilbert Strang (2005) are the prerequisites for this session.
- Please use the **O** Application Form to join our reading group.
- Applicants are informed about their application results within a week via email.

#### 2 Format

- This session takes 12 weeks.
- We discuss the topics/exercises that we struggle with at Proof-Based Math Readings [Discord].
- We do not have face-to-face/online meetings due to the size of the group.
- Members are expected to read the chapters from the book.

### 3 Resources

#### 3.1 Main Book

Matrix Algebra - Karim M. Abadir, Jan R. Magnus (2005) is our main book because it is well-structured and well-written. It also provides detailed solutions for exercises in the book.

- Matrix Algebra Karim M. Abadir, Jan R. Magnus (2005)
- 🗏 Matrix Algebra Karim M. Abadir, Jan R. Magnus (2005, Errata)

#### 3.2 Supplementary

#### 3.2.1 Matrix Algebra

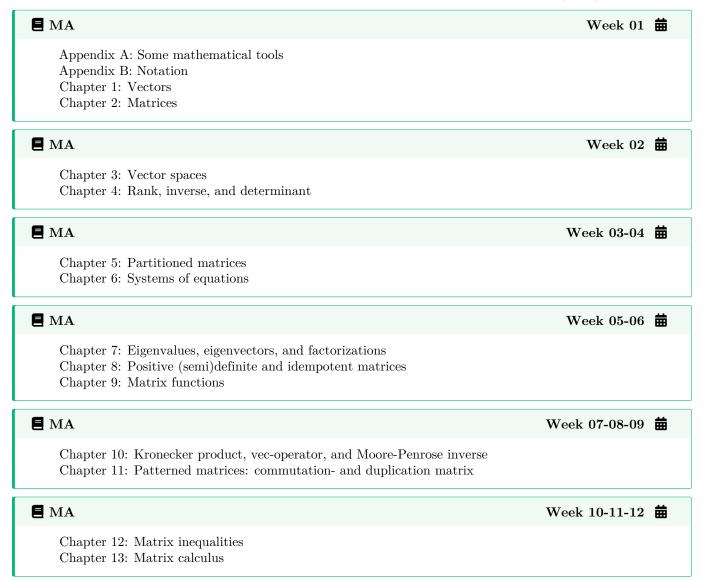
- Matrix Differential Calculus with Applications in Statistics and Econometrics Jan R. Magnus, Heinz Neudecker (3rd Edition, 2019)
- Econometric Theory William H. Greene (Appendix A, 8th Edition, 2020)
- matrixcalculus.org

#### 3.2.2 **Proof**

- Book of Proof Richard Hammack (3.3 Edition, 2022)
- Book of Proof Richard Hammack (3.3 Edition, 2022, Playlist by Jeremy Teitelbaum)
- Book of Proof Richard Hammack (3.3 Edition, 2022, Playlist by Michael Penn)

## 4 Reading Schedule

• MA is the abbreviation of Matrix Algebra - Karim M. Abadir, Jan R. Magnus (2005).



# 5 Further Readings (Optional)