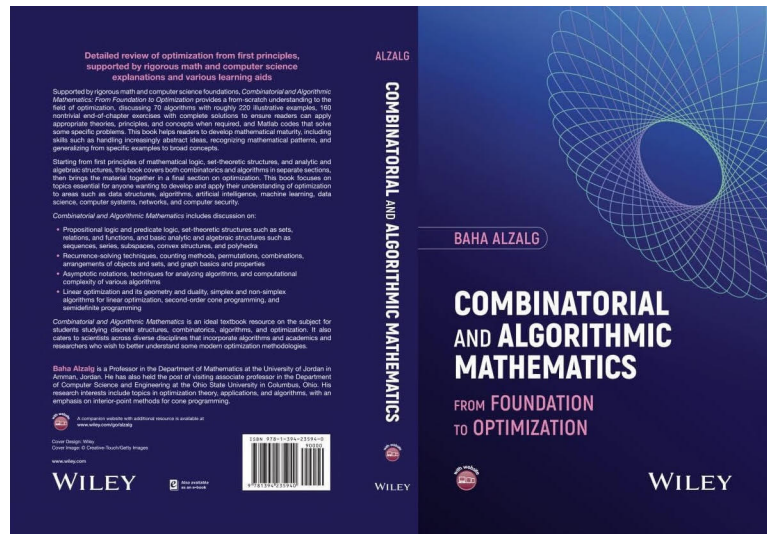


ERRATA SHEET



Book Title, Subtitle, ISBN, DOI:

Combinatorial and Algorithmic Mathematics (Title)
From Foundation to Optimization (Subtitle)
978-1-394-23596-4 (ISBN)
10.1002/9781394235971 (DOI)

Author and Publisher:

Baha Alzalg (Author)
John Wiley & Sons, Ltd (Publisher)

Publication Date:

August 2024

For comments, errors or typos, please contact
b.alzalg@ju.edu.jo

Department of Mathematics
The University of Jordan
Amman
September, 2024

Location: Property 12.7.

Error: Let A and B be symmetric matrices and $A \succ 0$. Then

$$\begin{bmatrix} A & B^\top \\ B^\top & C \end{bmatrix} \succeq 0 (\succ 0) \iff C - B^\top A^{-1} B \succeq 0 (\succ 0).$$

The matrix $C - B^\top A^{-1} B$ is called the Schur complement of the submatrix A .

Correction: Let A and C be symmetric matrices and $A \succ 0$. Then

$$\begin{bmatrix} A & B \\ B^\top & C \end{bmatrix} \succeq 0 (\succ 0) \iff C - B^\top A^{-1} B \succeq 0 (\succ 0).$$

The matrix $C - B^\top A^{-1} B$ is called the Schur complement of the submatrix A .

Websites consulted

- Instructor Companion Site – <https://bcs.wiley.com/he-bcs/Books?action=index&itemId=1394235941&bcsId=12845>
- Author Book Site – <https://sites.ju.edu.jo/sites/Alzalg/Pages/camfobook.aspx>