

# LINEAR ALGEBRA

## LICENSE, DISCLAIMER OF LIABILITY, AND LIMITED WARRANTY

By purchasing or using this book (the “Work”), you agree that this license grants permission to use the contents contained herein, but does not give you the right of ownership to any of the textual content in the book or ownership to any of the information or products contained in it. *This license does not permit uploading of the Work onto the Internet or on a network (of any kind) without the written consent of the Publisher.* Duplication or dissemination of any text, code, simulations, images, etc. contained herein is limited to and subject to licensing terms for the respective products, and permission must be obtained from the Publisher or the owner of the content, etc., in order to reproduce or network any portion of the textual material (in any media) that is contained in the Work.

MERCURY LEARNING AND INFORMATION (“MLI” or “the Publisher”) and anyone involved in the creation, writing, or production of the companion disc, accompanying algorithms, code, or computer programs (“the software”), and any accompanying Web site or software of the Work, cannot and do not warrant the performance or results that might be obtained by using the contents of the Work. The author, developers, and the Publisher have used their best efforts to insure the accuracy and functionality of the textual material and/or programs contained in this package; we, however, make no warranty of any kind, express or implied, regarding the performance of these contents or programs. The Work is sold “as is” without warranty (except for defective materials used in manufacturing the book or due to faulty workmanship).

The author, developers, and the publisher of any accompanying content, and anyone involved in the composition, production, and manufacturing of this work will not be liable for damages of any kind arising out of the use of (or the inability to use) the algorithms, source code, computer programs, or textual material contained in this publication. This includes, but is not limited to, loss of revenue or profit, or other incidental, physical, or consequential damages arising out of the use of this Work.

The sole remedy in the event of a claim of any kind is expressly limited to replacement of the book, and only at the discretion of the Publisher. The use of “implied warranty” and certain “exclusions” vary from state to state, and might not apply to the purchaser of this product.

# LINEAR ALGEBRA

**Li-Yong Shen, PhD**

*(University of the Chinese Academy of Sciences)*

**Haohao Wang, PhD**

*(Southeast Missouri State University)*

**Jerzy Wojdylo, PhD**

*(Southeast Missouri State University)*



**MERCURY LEARNING AND INFORMATION**

Dulles, Virginia  
Boston, Massachusetts  
New Delhi

Copyright ©2019 by MERCURY LEARNING AND INFORMATION LLC. All rights reserved.

Original Title and Copyright: *Linear Algebra*. Copyright ©2018 by.  
Overseas Press India Private Limited. All rights reserved.

*This publication, portions of it, or any accompanying software may not be reproduced in any way, stored in a retrieval system of any type, or transmitted by any means, media, electronic display or mechanical display, including, but not limited to, photocopy, recording, Internet postings, or scanning, without prior permission in writing from the publisher.*

Publisher: David Pallai  
MERCURY LEARNING AND INFORMATION  
22841 Quicksilver Drive  
Dulles, VA 20166  
info@merclearning.com  
www.merclearning.com  
(800) 232-0223

Li-Yong Shen, H. Wang, J. Wojdylo. *Linear Algebra*.  
ISBN: 978-1-683923-76-3

The publisher recognizes and respects all marks used by companies, manufacturers, and developers as a means to distinguish their products. All brand names and product names mentioned in this book are trademarks or service marks of their respective companies. Any omission or misuse (of any kind) of service marks or trademarks, etc. is not an attempt to infringe on the property of others.

Library of Congress Control Number: 2018962730

181920321 This book is printed on acid-free paper in the USA.

Our titles are available for adoption, license, or bulk purchase by institutions, corporations, etc.  
For additional information, please contact the Customer Service Dept. at 800-232-0223(toll free).

All of our titles are available in digital format at [authorcloudware.com](http://authorcloudware.com) and other digital vendors. The sole obligation of MERCURY LEARNING AND INFORMATION to the purchaser is to replace the book, based on defective materials or faulty workmanship, but not based on the operation or functionality of the product.