# Modeling and Simulation in Medicine (MSM 2019)

2019 Spring Simulation Multi-Conference (SpringSim'19)

Simulation Series Volume 51 Number 5

Tucson, Arizona, USA
29 April – 2 May 2019

ISBN: 978-1-5108-8477-9

**Printed from e-media with permission by:**

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com


Some format issues inherent in the e-media version may also appear in this print version.



Printed by Curran Associates, Inc. (2019)



**Additional copies of the Proceedings are available from:**

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
curran@proceedings.com
www.proceedings.com/0128.html

or

The Society for Modeling
and Simulation International
11315 Rancho Bernardo Road, Suite 139
San Diego, CA 92127 USA
www.scs.org

ISBN: 978-1-5108-8477-9
PRINTED IN THE UNITED STATES

# TABLE OF CONTENTS