



**EXECUTIVE**

**Sara Kudrle**  
Education Vice  
President

**John Belton**  
Chairman/Board  
of Editors

**Thomas Edwards**  
**James E. O'Neal**  
**Glen Pensinger**  
Associate Editors

**Barbara H. Lange**  
Executive Director

**JOURNAL  
STAFF**

**Joel Welch**  
Director of  
Education  
914-205-2379

**Dianne Purrier**  
Managing Editor,  
Digital and Print  
Publications  
914-205-2377

**Jeffrey Victor**  
Advertising Sales  
North America  
847-721-2730

**Phil Guy**  
Advertising EMEA  
O: +44 (0)  
1869 337688  
M: +44 (0)  
7785 234441

**SMPTE**  
**Motion  
Imaging** *Journal*

**JANUARY/FEBRUARY 2019:  
MACHINE LEARNING**

**TECHNICAL PAPERS**

**26** Defining Artificial Intelligence  
Richard Welsh

**33** How Artificial Intelligence and Machine  
Learning May Eventually Change Content  
Creation Methodologies  
Tom Ohanian

**41** Automatic Generation of Audio Descriptions  
for Sports Programs  
Kiyoshi Kurihara, Atsushi Imai, Nobumasa Seiyama,  
Toshihiro Shimizu, Shoei Sato, Ichiro Yamada, Tadashi Kumano,  
Reiko Tako, Taro Miyazaki, Manon Ichiki, Tohru Takagi, and  
Hideki Sumiyoshi

**48** A Scalable Distribution System  
for Broadcasting Over IP Networks  
Richard J. Bradbury

**55** Dynamic Field of View in a Tomographic  
Light Field Display  
Jason Ginsberg and Neil Movva

**EXCLUSIVE ARTICLE ONLINE: ABSTRACT**

**61** Realtime Semantic Enrichment of Video Streams  
in the Age of Big Data  
Maurizio Montagnuolo, Paolo Platter, Alessio Bosca,  
Nicolò Bidotti, and Alberto Messina

**DEPARTMENTS**

- 2** Officers
- 4** Sustaining Members
- 6** Message from the Executive Director
- 8** Update from the Standards Vice President
- 9** Section Meetings
- 18** SMPTE 2018 Annual Technical Conference and Exhibition at All-New Venue in Downtown Los Angeles
- 62** SMPTE Almanac

COVER CREDIT:  
©ISTOCKPHOTO.COM/METAMORWORKS

Digital Object Identifier 10.5594/JMI.2019.2892804  
Date of publication: 29 January 2019