Geophysical Research Abstracts
Vol. 16, EGU2014-1404, 2014
EGU General Assembly 2014

Reproducibility in Science: How Video Journals Increase Research Validity and Productivity

Val Buntrock
Journal of Visualized Experiments, JoVE United States (val.buntrock@jove.com)

Several high-impact studies indicate that an astoundingly low 11-30% of published scientific research is reproducible. The media has implied that scientists are actively practicing poor conduct and falsifying data under the pressure of career considerations. We reject this speculation and instead question the traditional, text-based format of scientific communication. As research methods incorporate new technologies and become increasingly complex, the platform for sharing new techniques remains relatively unchanged. Researchers currently present their dynamic methods as static snapshots manipulated to fit within the limitations of text-based journals. A new generation of science journals is changing that - it employs video technology to capture and share complex research techniques in a dynamic format. Here, we present an overview of the growing field of video publication and discuss its technical challenges, implications for scholarly communication and its adoption by the scientific community. Results from recently conducted case studies will be shared, such as the experiences of research groups at Purdue University and University of Alaska, which indicate that video publications can save a lab up to $15,000 per experiment.