

DFD19-2019-002231

Abstract for an Invited Paper
for the DFD19 Meeting of
the American Physical Society

From Depicting to Deploying Fluids in Art.

ANDRZEJ HERCZYNSKI, Boston College

Water appears in ancient Greek and Roman art, on vases, in frescoes, and in mosaics of swimming fish or boats moving across the sea by oar or sail. Beginning in the Middle Ages, images of water in motion, waves, waterfalls, and wine or milk pouring from vessels, appear in landscapes and domestic scenes. Italian and Flemish Renaissance masters endeavored to render nature with the utmost attention to detail and were able, when their subject called for it, to capture fluid dynamics with astonishing precision. Including fluid effects has also allowed artists to convey motion in the static medium of painting or sculpture. Nevertheless, convincing representation of liquid flows, especially oscillatory or turbulent, has remained a challenge. The invention of non-figurative art proved liberating, leading Abstract Expressionist painters to adopt fluid phenomena themselves – jets, drips, sprays, and instabilities of liquid pigment – in the creative process. This talk offers a brief review of the quest to naturalistically depict fluids, and the alternative tactic of modern artists who learned to deploy fluids, endowing their abstractions with nature's own patterns.