Aizelle Abelgas, Francis Lam, John Palacios* (john.palacios@email.ucr.edu) and David Weisbart. Buffon’s Needle on the Sphere and the Poincaré Disk.

An inaugural problem of the field of geometric probability, the Buffon needle problem has been significantly generalized over the last two hundred and fifty years. We generalize this problem to the sphere and the Poincaré disk. We study the relationship between the classical problem on the Euclidean plane and these generalizations to non-flat geometries. (Received September 03, 2019)