

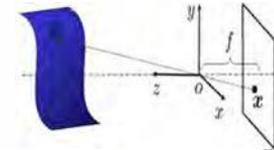
# Statistical Image and Biomedical Analyses

## Presently Funded Research Interests

- Topological Data Analysis
- Oriented projective shape analysis
- Nash embedding-based inference
- Procrustes distance-based inference

## Biomedical Research Interests and Experience

- Adjunct Associate Professor of Biostatistics, Department of Surgery, Texas Tech University Health Science Center School of Medicine (2008-2010) (**Biostatistician on Numerous Clinical Trials and Observation Studies**)
- Designed and taught at S&T (i) Causal Data Science; (ii) Clinical Trials; (iii) Epidemiology; (iv) Computational Bayes Methods; (v) Statistical Learning; (vi) Topological Data Analysis, and (vii) Statistical Shape Analysis
- Numerous statistical publications that are directly applicable to biomedical research.



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National Science Foundation  
National Security Agency

## Keywords: Non-Euclidean Data Analysis; Biomedical Research

### Representative Publications:

- Patrangenaru, V., Bubenik, P., Paige, R.L., et al. (2019). Challenges in Topological Data Analysis on Object Spaces. *Sankhya A* 81 (1), 244-271.
- Qiu, M., Paige, R.L. and Patrangenaru, V. (2019) A Nonparametric Approach to 3D Shape Analysis from Digital Camera Images -II., *Journal of Applied Statistics*, 46 (15), 2677-2699.
- Paige, R.L. Chapman, P. and Butler, B. (2011) Small Sample LD50 Confidence Intervals Using Saddlepoint Approximations. *Journal of the American Statistical Association*, 106 (493), 334-344.
- Brismee, J.M., Paige, R.L., et al. (2007) Group and Home-Based Tai Chi in Elderly Subjects with Knee Osteoarthritis: A Randomized Controlled Trial, *Clinical Rehabilitation*, 21(2), 99-111.