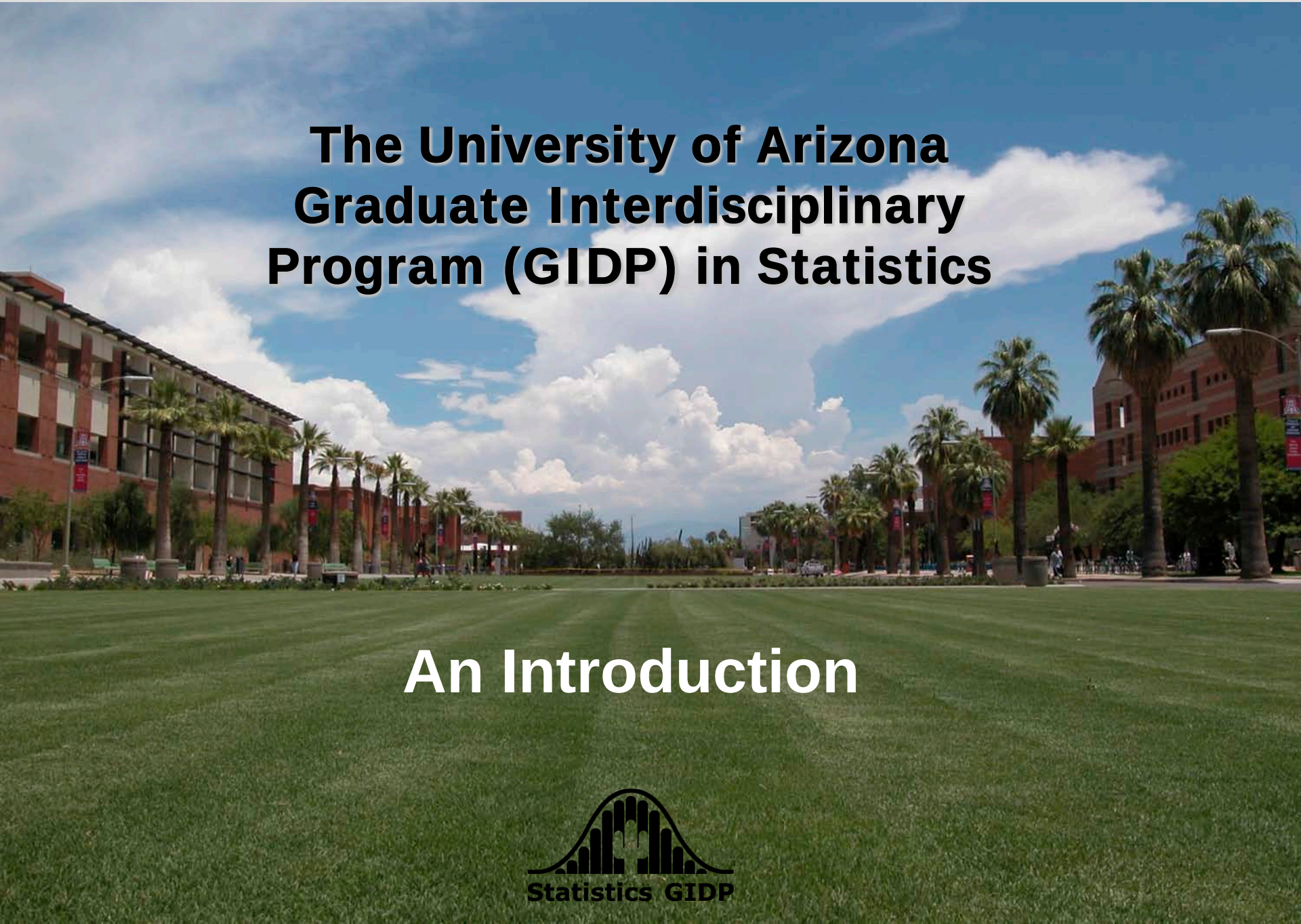


The University of Arizona Graduate Interdisciplinary Program (GIDP) in Statistics

An Introduction

Statistics GIDP

UA GIDPs

The University of Arizona has a long and successful tradition in Graduate Interdisciplinary Research & Training:

- → **15 current GIDPs, facilitating cutting-edge research at the interface of traditional disciplines.**
- → **GIDPs produced over 10% of all Ph.D. degrees at UA in 2008.**
- → **Programs span a broad range, from American Indian Studies, to Genetics, to Remote Sensing & Spatial Analysis.**

Our GIDP involves

Interdisciplinary Statistics

→ **The program was chartered by the Arizona Board of Regents in Spring 2006.**

→ **Important support comes from UA's BIO5 Institute.**

→ **Statistics is a growing field: Statistician was rated as the 3rd "best job in the U.S." in a *Wall Street Journal* report (http://online.wsj.com/article/SB10001424052748703467304576255272876354910.html)**

Statistics Faculty

- **The Statistics GIDP has over 40 faculty members with wide interests in quantitative, interdisciplinary research.**
- **Core program faculty are housed in the Department of Mathematics and in the Division of Epidemiology & Biostatistics.**
- **Other contributing depts. include Computer Science, Ecology & Evolutionary Biology, Economics, Educational Psychology, Geography, Natural Resources, and many others.**

Degrees Offered

The GIDP currently offers interdisciplinary curricula leading towards:

a. **The Ph.D. in Statistics.**

   → **A Ph.D. minor is available for doctoral students in other disciplines.**

b. **The M.S. in Statistics.**

c. **A 12-unit Graduate Certificate in Statistics.**

Ph.D. Curriculum

The Ph.D. in Statistics requires 71-72 units past the Baccalaureate degree.

- → **Core courses (32 units) involve basic material in the Theory and Methods of Statistics, and include the core 15 units from the M.S. degree (next slide).**
- → **9 units (minimum) are required for an external minor, used to build a foundation for transdisciplinary research in each individual student's plan of study.**
- → **12 units of topical statistics electives are used to extend the minor into an individualized, interdisciplinary curriculum.**
- → **18 units comprise the Ph.D. dissertation, whose focus is taken from the 21 minor/elective units.**

M.S. Curriculum

The M.S. in Statistics requires 30 units past the Baccalaureate degree.

- → **Core courses (15 units) involve Regression Analysis, Expt. Design, Theory of Probability & Statistics, and Statistical Consulting.**
- → **12 units of topical statistics electives are used to build an interdisciplinary focus in each individual student's curriculum.**
- → **3 units are devoted to the M.S. thesis (a non-thesis option is available).**

Graduate Certificate

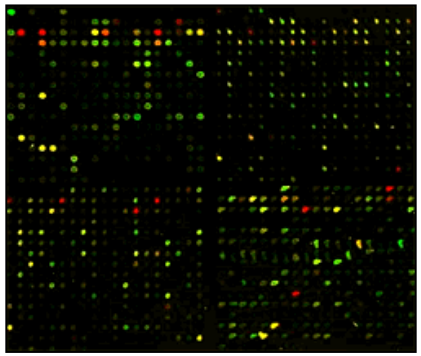
The Graduate Certificate in Statistics requires 12 units past the Baccalaureate degree.

- → **3 required units in the (post-calculus) Theory of Statistics.**
- → **9 additional units of topical statistics electives are used to build an inter-disciplinary focus in each individual student's curriculum.**

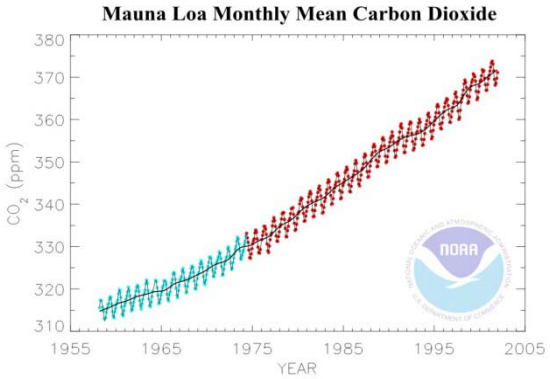
Statistics Across Campus

Statistics GIDP

Analyzing genetic microarray data

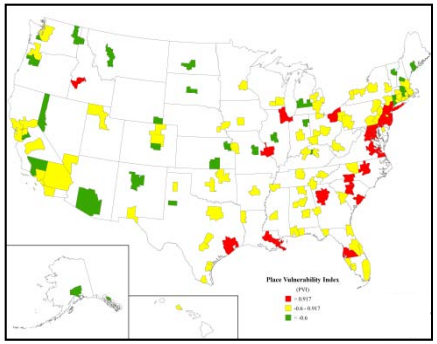


Environmental build-up of CO_2

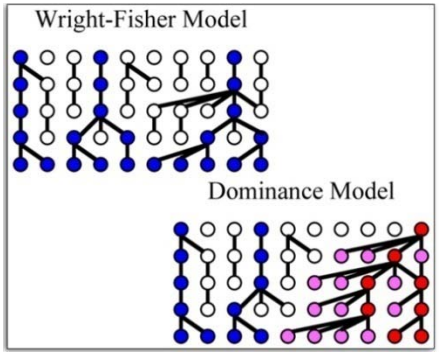


Measuring luminosity of stars

Geographic hazard analysis



Chromosome haplotype analysis



Recent Statistics Faculty Publications

Dall'erba, S., Percoco, M., and Piras, G. Service industry and cumulative growth in the regions of Europe. *Entrepreneurship and Regional Development* 21, 333-349 (2009).

Eliason, S.R. and Stryker, R. Goodness-of-fit tests and descriptive measures in fuzzy-set analysis. *Sociological Methods & Research* 38, 102-146 (2009).

Harwood, J. The contact space: A novel framework for intergroup contact research. *Journal of Language and Social Psychology* 29, 147-177 (2010).

Hirano, K. and Hahn, J.Y. Design of randomized experiments to measure social interaction effects. *Economics Letters* 106, 51-53 (2010).

Recent Statistics Faculty Publications (cont'd)

Kersting, N.B., Givvin, K.B., Sotelo, F.L. and Stigler, J.W. Teachers' analyses of classroom video predict student learning of mathematics: Further explorations of a novel measure of teacher knowledge. ***Journal of Teacher Education*** **61, 172-181 (2010).**

Shaked, M., Sordo, M.A. and Suarez-Llorens, A. A class of location-independent variability orders, with applications. ***Journal of Applied Probability*** **47, 407-425 (2010).**

Piegorsch, W.W. Translational benchmark risk analysis. ***Journal of Risk Research*** **13, 653-667 (2010).**

Watkins, J.C. Convergence time to the Ewens sampling formula in the infinite alleles Moran model. ***Journal of Mathematical Biology*** **60, 189-206 (2010).**