Leslie D Galloway

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EXPERIENCE

University of Tennessee, Knoxville

The Institute for Environmental Modeling (TIEM) (1991 – present)

- Contracted to **Oak Ridge National Laboratory (ORNL/Environmental Sciences Division)** to perform statistical data analysis on environmental sampling data for the Oak Ridge Reservation (ORR). Duties include Oracle® database administration, software development, statistical analysis and modeling (SAS®), website administration, Linux software installation and maintenance, and various other tasks involved with the databases and tools developed for the Department of Energy (DOE) and Environmental Protection Agency (EPA). Original developer and designer for the Risk Assessment Information System (RAIS).
- Tasked to manage the Oracle® databases, develop statistical tools, and re-design the MuTrack husbandry and testing pipeline system website for the Tennessee Mouse Genome Consortium (TMGC). This project led to many other projects associated with the ORNL Mammalian Genetics Research Facility (Mouse House). Developed many statistical testing tools to distinguish genetic mutations from the breeding experiments.
- Course instructor for the Department of Statistics.
- Graduate teaching assistant for the Department of Statistics.

EDUCATION

University of Tennessee, Knoxville

- Bachelor of Science, Business Administration, Finance Cum Laude
- Master of Science, Statistics Cum Laude

SKILLS

- Programming languages: Perl, PHP, JSP, SAS, HTML, JavaScript, JQuery, SQL
- Database systems: Oracle, MySQL, SAS data warehouse
- Software management: Apache web server configuration, Oracle Cloud Control installation and configuration, Tomcat web server configuration, SAS configuration and license management, MySQL installation and configuration
- Operating systems: Sun Unix, SuSE linux, Ubuntu Linux, Mac OS X
- Student mentor: Guide HERE/SULI students through our systems to build tools, understand databases, become proficient with Linux OS, and create software
- Instructor/tutor: math, statistics

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CURRENT PROJECTS

- The Risk Assessment Information System – a system of tools, documents, and tutorials designed to assist human health and ecological risk assessors, project managers, and the public with environmental risk assessment. The system uses an Oracle database along with Perl and PHP web forms, guidance from the EPA, and SAS to look up information about chemicals and radionuclides as well as using that information to run various calculators and models. (https://rais.ornl.gov)
- BESC Laboratory Information Management System – web portal for the samples, shipments, tests and results for the ORNL BioEnergy Science Center. (http://besc-lims.ornl.gov:9090/BESC/home2.jsp)
- Radionuclide Decay Chain Activity Projection Tool - this tool can predict the activity after time-period (T) given a measurement of activity (A) for the entire chain, and get the resulting risk or dose to human health at that time-period, thus reducing the need for costly resampling. (https://rais.ornl.gov/cgi-bin/chain/chain.pl)
- Regional Screening Levels (RSLs) for Chemical Contaminants – repository and calculator for EPA's RSLs. This tool and the data tables are required usage at all Superfund chemical cleanup sites. (https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search)
- Health Effects Assessment Summary Tables (HEAST) - database of human health toxicity values developed for the EPA Superfund and Resource Conservation and Recovery Act (RCRA) hazardous waste programs. (https://epa-heast.ornl.gov)
- Provisional Peer-Reviewed Toxicity Values (PPRTVs) - currently represent the second tier of human health toxicity values for the EPA Superfund and Resource Conservation and Recovery Act (RCRA) hazardous waste programs. (https://hhpprtv.ornl.gov)
- Radionuclide Preliminary Remediation Goals for Radionuclides – repository and calculator for EPA's radionuclide PRGs. This tool and the data tables are required usage at all Superfund radiation cleanup sites. (https://epa-prgs.ornl.gov/radionuclides/)

Other tools developed for EPA –

- Preliminary Remediation Goals for Radionuclides in Buildings (BPRG)
- Preliminary Remediation Goals for Radionuclides in Outdoor Surfaces (SPRG)
- Dose Compliance Concentrations for Radionuclides (DCC)
- Dose Compliance Concentrations for Radionuclides in Buildings (BDCC)
- Dose Compliance Concentrations for Radionuclides in Outdoor Surfaces (SDCC)
- Vapor Intrusion Screening Levels for Chemicals (VISL)
- Radon Intrusion Screening Levels (RVISL)

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SELECTED PUBLICATIONS

Genetic analysis in the Collaborative Cross breeding population.
Philip VM, Sokoloff G, Ackert-Bicknell CL, Striz M, Branstetter L, Beckmann MA, Spence JS, Jackson BL, Galloway LD, Barker P, Wymore AM, Hunsicker PR, Durtschi DC, Shaw GS, Shinpock S, Manly KF, Miller DR, Donohue KD, Culiat CT, Churchill GA, Lariviere WR, Palmer AA, O'Hara BF, Voy BH, Chesler EJ.
Genome Res. 2011 Aug; 21(8):1223-38. doi: 10.1101/gr.113886.110.
PMID: 21734011

The Collaborative Cross at Oak Ridge National Laboratory: developing a powerful resource for systems genetics.
Chesler EJ, Miller DR, Branstetter LR, Galloway LD, Jackson BL, Philip VM, Voy BH, Culiat CT, Threadgill DW, Williams RW, Churchill GA, Johnson DK, Manly KF.
Mamm Genome. 2008 Jun;19(6):382-9. doi: 10.1007/s00335-008-9135-8.
PMID: 18716833

MuTrack: A genome analysis system for large-scale mutagenesis in the mouse.
Baker EJ[1], Galloway L, Jackson B, Schmoyer D, Snoddy J.
BMC Bioinformatics. 2004 Feb 3;5:11.

Genetic polymorphisms associated with the risk of concussion in college athletes: A multi-center prospective cohort study.
Terrell, Thomas; Abramson, Ruth; Barth, Jeffery ; Bennett, Ellen; Cantu, Robert; Sloane, Richard; Laskowitz, Daniel; Erlanger, David; McKeag, Douglas; Nichols, Gregory; Valentine, Verle; Galloway, Leslie
British Journal of Sports Medicine, submitted Feb 2017

Multicenter cohort study on association of genotypes with prospective sports concussion: methods, lessons learned, and recommendations.
Terrell TR, Bostick R, Barth J, Sloane R, Cantu RC, Bennett E, Galloway L, Laskowitz D, Erlanger D, McKeag D, Valentine V, Nichols G.
J Sports Med Phys Fitness. 2017 Jan-Feb;57(1-2):77-89. doi: 10.23736/S0022-4707.16.05092-1.
PMID: 25242101