Curriculum vitae

Diana V. T. Dugas, Ph.D.

Information and Communication Technologies
New Mexico State University
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Personal

Place of birth: Essen, Germany
Citizenship: Germany
Visa type: Permanent Resident

Education

2002 – 2008	Rice University, Houston, Texas Ph.D. in Biochemistry and Cell Biology
1999 – 2002	Southwestern University, Georgetown, Texas B.S. in Mathematics and Biology
1997 – 1999	University of North Texas, Denton, Texas Texas Academy of Mathematics and Science High School Degree

Research and Teaching Experience

Summer 2019 – present	Director of Instructional and Research Support; Department of Information and Communications; New Mexico State University, Las Cruces, NM
Fall 2017 – present	Cyber Infrastructure: Training and Mentorship Program Director; Department of Information and Communications; New Mexico State University, Las Cruces, NM
Summer 2016 – present	Cyber Infrastructure Architect; Department of Information and Communications; New Mexico State University, Las Cruces, NM
Spring 2014 – Summer 2016	Post-doctoral Associate; Department of Biology; New Mexico State University, Las Cruces, NM Advisor: Donovan Bailey, Ph.D. Study: *Leucaena de novo* transcriptome assembly and analysis
Fall 2011 – Spring 2013	Post-doctoral Associate; United States Department of Agriculture-Agricultural Research Services, College Station, TX

	Advisor: Robert R. Klein, Ph.D. Study: Whole genome Sorghum mitochondrial transcriptome profiling and editing
Spring 2009 – Fall 2011	Post-doctoral Associate; Department of Horticulture, Texas A&M University, College Station, TX Advisor: Patricia E. Klein, Ph.D. Study: Sorghum transcriptome profiling using whole genome sequencing
Fall 2007 – Spring 2009	Post-doctoral Assistant; Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX Advisor: Chad A. Shaw, Ph.D. Study: Gene profiling using microarrays
Spring 2007	Instructor, Freshman Seminar in Local Biology, Rice University, Houston, TX
Fall 2005	Research intern, Research and Development Department, Ambion Inc., Austin, TX Advisor: David Brown Study: Plant microRNA profiling techniques
Spring 2004	Teaching Assistant, Genetics, Rice University, Houston, TX
Summer 2002 – Fall 2007	Graduate Student, Department of Biochemistry and Cell Biology, Rice University, Houston, TX Advisor: Bonnie Bartel, Ph.D. Study: Genetic analysis of microRNA function in *Arabidopsis thaliana* development
Summer 1998	Independent study, Department of Mathematics, University of North Texas, Denton, TX Advisor: Neal Brand, Ph.D. Study: Optimizing Cellular Paging

Funding

Funded Grants

Diana V. Dugas, Phillip De Leon, Piyasat Nilkaew. CC*Compute: From classroom to the lab: NMSU responds to the changing HPC landscape in New Mexico (2019000) National Science Foundation. $399,869.00, July 1, 2020 – June 30, 2022

Dhruva Chakravorty, ***Diana V. Dugas***, Emily Hunt, Timothy Cockerill, JoAnn Browning. CC* Team: SWEETER -- SouthWest Expertise in Expanding, Training, Education and Research (1925764) National Science Foundation. $1,400,000, July 1, 2019 – June 30, 2022

Andreas Gross, ***Diana V. Dugas***, Carlo M. Henderson. Heterogeneous Computer System for Code Development, Large-Scale Simulations, and Data Post-Processing (W911NF1810454) Army Research Office. $199,851, Sept. 12, 2018 – Sept. 11, 2019

Diana V. Dugas, Satyajayant Misra, Abdel-Hameed Badawy. CyberTraining: CDL: Cyber Infrastructure Training and Mentoring (CI:TraM) (1730653) National Science Foundation. $467,170.00, Aug. 1, 2018 - July 31, 2020.

Leadership and Service

2021 (upcoming)	Student Volunteer Shift Coordinator: Supercomputing Conference 2021
2020	Proceedings co-Chair: Practice and Experience in Advanced Research Computing 2020 (PEARC2)
2020	Board Member at Large: Rocky Mountain Associated Computing Consortium
2019	Student Engagement Chair: Supercomputing Conference 2019
2019	Student Poster Chair: Practice and Experience in Advanced Research Computing 2019 (PEARC19)
Jan 2019-Dec 2019	Participation in Aggie Leadership Training Academy (ALTA) (completion date Dec 2019)
2019-present	Certified Carpentries instructor
2018-2020	Vice chair-elect: Rocky Mountain Associated Computing Consortium
2018-present	XSEDE Campus Champion Student Mentor
2018	Proceedings Chair: Practice and Experience in Advanced Research Computing 2018 (PEARC18)
2018	Inclusivity Committee Member: Supercomputing Conference 2018
2017	NSF panelist
2017-2018	Elected board member: Rocky Mountain Associated Computing Consortium
2017	Inclusivity Committee Member: Supercomputing Conference 2017
2017	Dinner with Interesting People Coordinating Committee Member: Supercomputing Conference 2017
2012	Invited teacher, Greens Point Elementary School
2012, 2011, 2010	Science Judge, Texas Junior Regional Science Bowl
2012, 2010	Science Judge, Texas Regional Science Bowl
2011	Science Volunteer, Expanding Your Horizons – Girls' Workshop

Memberships

2018 – present	Women in HPC member
2016 – present	XSEDE Campus Champion
2016 – present	Association for Computing Machinery
2002 – 2007	Rice University, Graduate Student Association
2000 – 2002	Member, Beta Beta Beta, Southwestern University

1999 – 2007 Member, Golden Key Honors Society

Publications

Dugas, D.V. and Ormand, D.B. 2019. Cyber Infrastructure: Training and Mentoring: A way to engage students in their technology future. In Practice and Experience in Advanced Research Computing (PEARC '19), July28-August 1, 2019, Chicago, IL, USA. ACM, New York, NY, USA, 7 pages.

Karapetrović, J., Šabić, E., and ***Dugas, D.V.*** 2019. Community Outreach and the Discovery HPC Cluster: An Analysis of User Profiles and Growth. In Practice and Experience in Advanced Research Computing (PEARC19), July 28-August 1, 2019, Chicago, IL, USA. ACM, New York, NY, USA, 4 pages.

Kovar, L., Nageswara-Rao, M., Ortega-Rodriguez, S., ***Dugas, D.V.***, Straub, S., Cronn, R., Strickler, S.R., Hughes, C.E., Hanley, K.A., Rodriguez, D.N., Langhorst, B.W., Dimalanta, E.T., and Bailey, C.D. (2018). A PacBio-based mitochondrial genome of *Leucaena trichandra* (Leguminosae) and an intrageneric assessment of mitochondrial RNA editing. Genome Biology and Evolution *10*(9):2501-2517.

Dugas, D.V., Hernandez, D., Koenen, E.J., Schwarz, E., Straub, S., Hughes, C.E., Jansen, R.K., Nageswara-Rao, M., Staats, M., Trujillo, J.T., *et al*. (2015). Mimosoid legume plastome evolution: IR expansion, tandem repeat expansions, and accelerated rate of evolution in clpP. Scientific reports *5*, 16958.

Klein, R.R., Miller, F.R., ***Dugas, D.V.***, Brown, P.J., Burrell, A.M., and Klein, P.E. (2015). Allelic variants in the PRR37 gene and the human-mediated dispersal and diversification of sorghum. TAG Theoretical and applied genetics Theoretische und angewandte Genetik *128*, 1669-1683.

Olsen, A., Klein, R.R., ***Dugas, D.V.***, Lu, Z., Regulski, M., Klein, P.E., Ware, D. (2014) Expanding and Vetting *Sorghum bicolor* Gene Annotations through Transcriptome and Methylome Sequencing. Plant Genome *7*, 2.

Dugas, D.V., Monaco, M.K., Olsen, A., Klein, R.R., Kumari, S., Ware, D., and Klein, P.E. (2011). Functional Annotation of the Transcriptome of Sorghum bicolor in Response to Osmotic Stress and Abscisic Acid. BMC Genomics *12*, 514.

Murphy, R.L., Klein, R.R., Morishige, D.T., Brady, J.A., Rooney, W.L., Miller, F.R., ***Dugas, D.V.***, Klein, P.E., and Mullet, J.E. (2011). Coincident light and clock regulation of pseudoresponse regulator protein 37 (PRR37) controls photoperiodic flowering in sorghum. Proc Natl Acad Sci U S A *108*, 16469-16474.

Sakai, Y., Shaw, C.A., Dawson, B.C., ***Dugas, D.V.***, Al-Mohtaseb, Z., Hill, D.E., and Zoghbi, H.Y. (2011). Protein interactome reveals converging molecular pathways among autism disorders. Sci Transl Med *3*, 86ra49.

Dugas, D. V., and Bartel, B. (2008). Sucrose induction of Arabidopsis miR398 represses two Cu/Zn superoxide dismutases. *Plant Mol. Biol. 64*, 403-417.

Dugas, D.V., and Bartel, B. (2004). MicroRNA regulation of gene expression in plants. Curr Opin Plant Biol *7*, 512-520.

Mallory, A.C., ***Dugas, D.V.***, Bartel, D.P., and Bartel, B. (2004). MicroRNA regulation of NAC-domain targets is required for proper formation and separation of adjacent embryonic, vegetative, and floral organs. Curr Biol *14*, 1035-1046.

Scholarships and Awards

2018	Practice and Experience in Advanced Research Computing (PEARC) 2018: Best Student Poster Award Mohammed Tanash, Jelena Karapetrovic, Matt Henderson, PoChou Su, Tracey Fernandez, Robert Kelly, and ***Diana V. Dugas***
2017	Rocky Mountain Associated Computing Consortium (RMACC) HPC Symposium 2018: Best Student Poster Award Mohammed Tanash, Matt Henderson, PoChou Su, Tracey Fernandez, Z. M. Saifullah, Robert Kelly, Jelena Karapetrovic, and ***Diana V. Dugas***
2017	XSEDE travel grant to attend PEARC17
2006	16th Penn State Symposium on Plant Physiology Travel Grant
2003 – 2005	National Institute of Health Biotechnology Training Grant – Rice University
2000	Dean's List – Southwestern University
1999	Southwestern Scholar – Southwestern University
1998	Dean's List – University of North Texas
1997	Dean's List – University of North Texas

Conferences and Lectures

May 20-22, 2020	Rocky Mountain Associated Computing Consortium (RMACC) HPC Symposium 2018 Workshop: User Support Panelist
Jul 28–Aug 1, 2019	Practice and Experience in Advanced Research Computing (PEARC) 2019 Presentation: Cyber Infrastructure: Training and Mentoring - A way to engage students in their technology future
Aug. 7-9, 2018	Rocky Mountain Associated Computing Consortium (RMACC) HPC Symposium 2018 Workshop Lead: HPC Carpentry
July 22-27, 2018	Practice and Experience in Advanced Research Computing (PEARC) 2018

	Best Student Poster Award: The Influence of Cyber-Infrastructure on Scientific Computing at NMSU
Nov. 12-17, 2017	Supercomputing 2017 Panelist: Students@SC Careers in HPC
Aug. 15-17, 2017	Rocky Mountain Associated Computing Consortium (RMACC) HPC Symposium 2018 Best Student Poster Award: Evolution of HPC Use at NMSU Speaker: Training and Outreach Opportunities in HPC
Nov. 2-4, 2016	New Mexico Technology In Education Symposium 2016 Panelist: Cyber Infrastructure
July 20-24, 2012	Plant Biology 2012 Poster: Expanding and Vetting *Sorghum bicolor* Gene Annotations through Transcriptome and Methylome Sequencing
Aug. 6-8, 2012	Plant Biology 2011 Poster: The *Sorghum bicolor* Transcriptome Functionally Annotated in Response to Exogenous Abscisic Acid and Osmotic Stress
Feb. 15, 2011	St. Edward's University Invited Lecture: Tiny and noncoding microRNAs: Yesterday's trash is today's treasure
Jan. 18-20, 2007	Gene Silencing: The Biology of Small RNAs and the Epigenome Poster: MicroRNA regulation of lateral organ separation in Arabidopsis
May 18-20, 2006	16th Penn State Symposium on Plant Physiology- RNA Biology: Novel Insights from Plant Systems Poster: MicroRNA regulation of lateral organ separation in Arabidopsis
April 6-8, 2006	Texas Genetics Society 33rd Annual Meeting Invited Lecture: miRNA regulation of lateral organ separation in Arabidopsis
Jan. 26-31, 2006	Keystone Symposia: RNAi and Related Pathways Poster: Plant microRNA expression profiling
July11-14, 2004	15th International Conference on Arabidopsis Research Invited Lecture: miRNA regulation of lateral organ separation in Arabidopsis Poster: MicroRNA regulation of lateral organ separation in Arabidopsis
April 14-19, 2004	Keystone Symposia: siRNAs and miRNAs Poster: MicroRNA regulation of lateral organ separation in Arabidopsis

June 20-24, 2003 14th International Conference on Arabidopsis Research