Science Societies

2021 CSSA Division Awards for Outstanding Paper

January 27, 2022

Several CSSA divisions have begun recognizing outstanding papers published in *Crop Science*. Below are the winners for 2021. Articles published in the preceding calendar year are considered for the current year's award (e.g., articles from 2020 are considered for the 2021 award). In general, the selection is based on evaluation of how the article has advanced knowledge in the profession, the effectiveness of communication, and its originality and impact.

Crop Breeding and Genetics (C-1)

Mark Cooper

James Holland

Sirjan Sapkota

"Integrating Genetic Gain and Gap Analysis to Predict Improvements in Crop Productivity" by Mark Cooper, Tom Tang, Carlo Gho, Tim Hart, Graeme Hammer, and Carlos Messina. See https://doi.org/10.1002/csc2.20109

"Genomic Prediction for Resistance to Fusarium Ear Rot and Fumonisin Contamination in Maize" by James B. Holland, Thiago P. Marino, Heather C. Manching, and Randall J. Wisser. See https://doi.org/10.1002/csc2.20163

"Impact of Sorghum Racial Structure and Diversity on Genomic Prediction of Grain Yield Components" by Sirjan Sapkota, Richard Boyles, Elizabeth Cooper, Zachary Brenton, Matthew Myers, and Stephen Kresovich. See https://doi.org/10.1002/csc2.20060

"Genomewide Selection Utilizing Historic Datasets Improves Early Stage Selection Accuracy and Selection Stability" by Joshua A. Sleper, Patrick K. Sweet, Shreyartha Mukherjee, Min Li, Kari L. Hugie, and Todd L. Warner. See https://doi.org/10.1002/csc2.20017

Joshua Sleper

"Complementarity-Based Selection Strategy for Genomic Selection" by Saba Moeinizade, Megan Wellner, Guiping Hu, and Lizhi Wang. See https://doi.org/10.1002/csc2.20070 *(no photo available)*

Honorable Mention

Felix Sattler

Margaret Krause

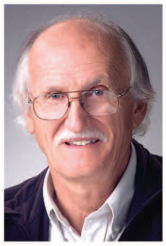
"A Unified Strategy for West African Pearl Millet Hybrid and Heterotic Group Development" by Felix T. Sattler and Bettina I.G. Haussmann. See https://doi.org/10.1002/csc2.20033

"Aerial High-Throughput Phenotyping Enables Indirect Selection for Grain Yield at the Early Generation, Seed-Limited Stages in Breeding Programs" by Margaret R. Krause, Suchismita Mondal, José Crossa, Ravi P. Singh, Francisco Pinto, Atena Haghighattalab, Sandesh Shrestha, Jessica Rutkoski, Michael A. Gore, Mark E. Sorrells, and Jesse Poland. See https://doi.org/10.1002/csc2.20259

DOI: 10.1002/csan.20680

"Relative Utility of Agronomic, Phenological, and Morphological Traits for Assessing Genotype-By-Environment Interaction in Maize Inbreds" by Celeste M. Falcon, Shawn M. Kaeppler, Edgar P. Spalding, Nathan D. Miller, Nicholas Haase, Naser AlKhalifah, Martin Bohn, Edward S. Buckler, Darwin A. Campbell, Ignacio Ciampitti, Lisa Coffey, Jode Edwards, David Ertl, Sherry Flint-Garcia, Michael A. Gore, Christopher Graham, Candice N. Hirsch, James B. Holland, Diego Jarquín, Joseph Knoll, Nick Lauter, Carolyn J. Lawrence-Dill, Elizabeth A. Lee, Aaron Lorenz, Jonathan P. Lynch, Seth C. Murray, Rebecca Nelson, M. Cinta Romay, Torbert Rocheford, Patrick S. Schnable, Brian Scully, Margaret Smith, Nathan Springer, Mitchell R. Tuinstra, Renee Walton, Teclemariam Weldekidan, Randall J. Wisser, Wenwei Xu, and Natalia de Leon. See https://doi.org/10.1002/csc2.20035

Celeste Falcon



D. Brian Fowler

"Modeling Winter Survival in Cereals: An Interactive Tool" by Brook M. Byrns, Ken J. Greer, and D. Brian Fowler. See https://doi.org/10.1002/csc2.20246

"Image-Based Phenotyping and Genetic Analysis of Potato Skin Set and Color" by Maria V. Caraza-Harter and Jeffrey B. Endelman. See https://doi.org/10.1002/csc2.20093

Maria Caraza-Harter

Crop Physiology and Metabolism (C-2)

"Comparative Phenomics of Annual Grain Legume Root Architecture" by James D. Burridge, Harini Rangarajan, and Jonathan P. Lynch. See https://doi.org/10.1002/csc2.20241

James Burridge

Crop Ecology, Management and Quality (C-3)

"Soft Winter Wheat Outyields Hard Winter Wheat in a Subhumid Environment: Weather Drivers, Yield Plasticity, and Rates of Yield Gain" by Romulo Lollato, Kraig Roozeboom, Jane F. Lingenfelser, Cristiano Lemes da Silva, and Gretchen Sassenrath. See https://doi.org/10.1002/csc2.20139

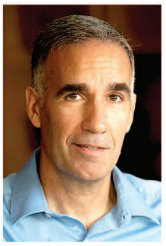
Romulo Lollato

"Effect of Temperature on Survival and Yield Components of Field-Acclimated Soft Red Winter Wheat" by Douglas Alt, Alexander Lindsey, R. Mark Sulc, and Laura E. Lindsey. See https://doi.org/10.1002/csc2.20087

"Spatiotemporal Trends in Crop Yields, Yield Variability, and Yield Gaps Across the USA" by Christopher Kucharik, Tanjona Ramiadantsoa, Jien Zhang, and Anthony Ives. See https://doi.org/10.1002/csc2.20089

"Early High-Moisture Wheat Harvest Improves Double-Crop System: I. Wheat Yield and Quality" by Md. Rasel Parvej, David L. Holshouser, Robert J. Kratochvil, Cory M. Whaley, E. James Dunphy, Gregory W. Roth, and Giovani S. Faé. See https://doi.org/10.1002/csc2.20172

Douglas Alt



Christopher Kucharik

Md. Rasel Parvej

Crop Science
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Turfgrass Science (C-5)

"Biosolids Amendments Improve an Anthropogenically Disturbed Urban Turfgrass System" by Mike J. Badzmierowski, Gregory K. Evanylo, and Erik H. Ervin. See https://doi.org/10.1002/csc2.20151

Mike Badzmierowski

Forage and Grazinglands (C-6)

"Trade-Off Between Nutritive Value Improvement and Crop Water Use for an Alfalfa–Grass System" by Madhav Dhakal, Charles P. West, Carlos Villalobos, Jhones O. Sarturi, and Sanjit K. Deb. See https://doi.org/10.1002/csc2.20159

"Forage Accumulation and Nutritive Value of Bermudagrass and Alfalfa–Bermudagrass Mixtures When Harvested for Baleage" by Taylor J. Hendricks, Jennifer J. Tucker, Dennis W. Hancock, M. Kimberly Mullenix, Lisa L. Baxter, Robert L. Stewart Jr., Jacob R. Segers, and John K. Bernard. See https://doi.org/10.1002/csc2.20222

"Rhizoma Peanut Herbage and Root–Rhizome Responses to Extended Regrowth Periods" by Katie D. Cooley, Lynn E. Sollenberger, Marta M. Kohmann, Ann S. Blount, Jose C.B. Dubeux Jr., Maria L. Silveira, Liliane S. da Silva, and Parmeshwor Aryal. See https://doi.org/10.1002/csc2.20236

Madhav Dhakal

Taylor Hendricks

Katie Cooley

"Effect of Deficit Irrigation on Physiology and Forage Yield of Forage Sorghum, Pearl Millet, and Corn" by Bishwoyog Bhattarai, Sukhbir Singh, Charles P. West, Glen L. Ritchie, and Calvin L. Trostle. See https://doi.org/10.1002/csc2.20171

"Recurrent Selection for Improved Seed Germination Results in Greater Seedling Growth Potential" by Kundan Dhakal and Tim L. Springer. See https://doi.org/10.1002/csc2.20182

Plant Genetic Resources (C-8)

"Resistance to Wheat Rusts Identified in Wheat/*Amblyopyrum muticum* Chromosome Introgressions" by John P. Fellers, Angie Matthews, Allan K. Fritz, Matthew N. Rouse, Surbhi Grewal, Stella Hubbart-Edwards, Ian P. King, and Julie King. See https://doi.org/10.1002/csc2.20120

"Enhancing the Searchability, Breeding Utility, and Efficient Management of Germplasm Accessions in the USDA-ARS Rice Collection" by Anna M. McClung, Jeremy D. Edwards, Melissa H. Jia, Trevis D. Huggins, Harold E. Bockelman, M Liakat Ali, and Georgia C. Eizenga. See https://doi.org/10.1002/csc2.20256

Bishwoyog Bhattarai

Kundan Dhakal

John Fellers

Anna McClung

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