David Christopher Collins

Professional Preparation

University of California, San Diego	Physics, PhD, 2009
University of Cincinnati	Physics, BS, 2001
University of Cincinnati	Mathematics, BA, 2001

Appointments

Florida State University, Associate Professor	2019-present
Florida State University, Assistant Professor	2013-2019
Los Alamos National Laboratory, Metropolis Postdoctoral Fellow	2011-2013
University of California San Diego, Postdoctoral Scholar	2009-2011

Publications

- "The Power Spectra of Polarized, Dusty Filaments", Huffenberger, K.; Rotti, A., Collins, D. C., 2019, arXiv 1906.10052

- "Magnetohydrodynamical Effects on Nuclear Deflagration Fronts in Type Ia Supernovae" Hristov, Boyan; Collins, David C.; Hoeflich, Peter; Weatherford, Charles A.; Diamond, Tiara R., ApJ, 2018, 858, 13

- "Observational Diagnostics of Self-Gravitating MHD Turbulence in Giant Molecular Clouds", Burkhart, B., Collins, D. DC., Lazarian, A. Astrophysical Journal, 2015, 808, 48

- "The Two States of Star Forming Clouds", Collins, D. C., Kritsuk, A., Padoan, P., Li, H., Xu, H., Ustyugov, S., Norman, M. L., Astrophysical Journal, 2012, 750, 13

- "Self-Generated Turbulence in Magnetic Reconnection", Oishi, J. S., Mac Low, M., Collins, D. C., Tamura, M. Astrophysical Journal Letters, 2015, 120

- "Cosmological AMR MHD with Enzo", Collins, D. C., Xu, H., Norman, M. L., Li, H., Li., S., Astrophysical Journal Suppliment, 2010, 186, 308

- "Enzo: An Adaptive Mesh Refinement Code for Astrophysics", The Enzo Collaboration Bryan, G. L., Norman, M. L.l, O'Shea, B. W., Abel, T., Wise, J. H., Turk, M. J., Reynolds, D. R., Collins, D. C., Wang, P., Skillman, S. W., Smith, B., Harkness, R. P., Bordner, J., Kim, J., Kuhlen, M., Xu, H., Goldbaum, N., Hummels, C., Kritsuk, A. G., Tasker, E., Skory, S., Simpson, C. M., Hahn, O., Oishi, J. S., So, G. C., Zhao, F., Cen, R., Li, Y. Astrophysical Journal Suppliment, 2014, 19

- "The Razor's Edge of Collapse: The Transition Point from Lognormal to Power-Law Distributions in Molecular Clouds," Burkhart, B., Stalpes, K., Collins, D. C., ApJ, 2017, 834,1

- "Local Support Against Gravity in Magnetoturbulent Fluids", Schmidt, W., Collins, D. C., Kritsuk, A. G., Monthly Notices of the Royal Astronomical Society, 2013, 43,

- "Comparing Numerical Methods for Isothermal Magnetized Supersonic Turbulence", Kritsuk, A., Nordlund, Å, Collins, D. C., Padoan, P., Norman, M. L., Abel, T., Banerjee, R., Federrath, C., Flock, M., Lee, D., Li, P. S., Müller, W.-C., Teyssier, R., Ustyugov, S. D., Vogel, C., Xu, H. Astrophysical Journal, 2011, 737, 13

Synergistic Activities

Development of MHD modules for Enzo

Development and maintenance of Enzo infrastructure (2003-present)

Community support of new and existing users for `yt` and Enzo (2003-present)

Tallahassee's *Ask A Scientist* connecting current science with the public

Saturday Morning Physics, bringing physics to middle- and high-school students (2013-present)

Identification of Potential Conflicts of Interest or Bias in Selection of Reviewers

Advisors———

Paolo Padoan (UCSD; PhD advisor), Michael L. Norman (UCSD; PhD advisor), Alexei G. Krituk (UCSD; Postdoc Mentor), Hui Li (LANL; Postdoc Mentor), James Cooley (LANL; Postdoc Mentor)

Advisees——

PhD students: Hristov, B.; Stalpes, K.; Le, D.; Jimenez, L.; Rabatin, B.;
Postdoc Advisees: Malinen, P. J.; Hristov, B.

Collaborators———————————————————————————————————————

The Enzo Collaboration, Abel, T. (Stanford), Bordner, J. (UCSD), Bryan, G. L. (Columbia), Goldbaum, N. (UCSC), Goodman, A. A. (Harvard), Juvela, M. (Helsinki), Kritsuk, A. G. (UCSD), Li, H. (LANL), Li., S. (LANL), Lunttila, T. (Helsinki), Malinen, J. (Helsinki), Nordlund, Å(Neils Borh Institute), Norman, M. L. (UCSD), O'Shea, B. W (Michigan State University), Oishi, J. S. (AMNH) Padoan, P. (University of Barcelona), Rosolowsky, E. W. (UBC), Schmidt, W. (Univ Göttingen), Shetty, R. (Heidelburg), Skillman, S. W. (Stanford), Smith, B. (University of Edinburgh), So, G. C. (UCSD), Turk, M. J. (NCSA), Ustyugov, S. D. (Keyldish Institute), Xu, H. (UCSD)
Co-editors: none
Members of The Enzo Collaboration without frequent contact have been omitted