

PHYSICS

REFEREED PUBLICATIONS

- Fatuzzo, M.** & Melia, F. (2005). Primary versus secondary leptons in the EGRET supernova remnants. *Astrophysical Journal*, 630, 321-331.
- Crocker, R. M., **Fatuzzo, M.**, Jokipii, R., Melia, F., & Volkas, R. R. (2005). The AGASA/SUGAR anisotropies and TeV gamma rays from the Galactic Center: A possible signature of extremely high-energy neutrons. *Astrophysical Journal*, 622, 892-909.
- David, E. M., Quintana, E. V., **Fatuzzo, M.**, & Adams, F. C. (2003). Dynamical stability of earth-like planetary orbits in binary systems. *Publications of the Astronomical Society of the Pacific*, 115, 825-836.
- Fatuzzo, M.**, & Melia, F. (2005). Primary versus secondary leptons in the EGRET supernova remnants. *Astrophysical Journal*, 630, 321-331.
- Fatuzzo, M.**, Adams, F. C., & Myers, P. C. (2004). Generalized collapse solutions with nonzero initial velocities for star formation in molecular cloud cores. *Astrophysical Journal*, 615, 813-831.
- Fatuzzo, M.**, & **Toepker, T.** (2004). More track and field. *Physics Teacher*, 42, 351-353.
- Fatuzzo, M.**, & Adams, F. C. (2002). Enhancement of ambipolar diffusion rates through field fluctuations. *Astrophysical Journal*, 570, 210-221.
- Fatuzzo, M.**, Melia, F., & Rafelski, J. (2001). Electron-positron annihilation radiation from Sgr A East at the Galactic Center. *Astrophysical Journal*, 549, 293-302.
- Fatuzzo, M.**, & Melia, F. (2003). A kinship between the EGRET supernova remnants and Sagittarius A East. *Astrophysical Journal*, 596, 1035-1043.
- Meliz, F., Liu, S., & **Fatuzzo, M.** (2002). Is thermal expansion driving the initial gas ejection in NGC6251? *Astrophysical Journal*, 567, 811-816.
- Holzer, J., Newrock, R. S., Lobb, C. J., Aouaroun, T., & **Herbert, S. T.** (2001). Finite-size effects and dynamical scaling in two-dimensional Josephson junction arrays. *Physical Review B*, 63, Art. No. 184508.
- Schmid, K., Frins, E., **Schmitzer, H.** & Dultz, W. (2005). Beam mixing with a pinhole. *Journal of Optical Society of America A*, 22, 2672-2676.
- Schmitzer, H.**, Wagner, H. P., Dultz, W., & Kuehnelt, M. (2002). Phasematched third harmonic generation in mercury-(1)-chloride. *Applied Optics*, 41, 470-474.
- Siebert, K. J., **Schmitzer, H.**, & Dultz, W. (2002). Measurement of the helicity of photon pairs using the optical Berry phase. *Physics Letters, Section A: General, Atomic and Solid State Physics*, 300, 341-347.
- Toepker, T. P.** (2004). Center of mass of a suspended slinky. *Physics Teacher*, 42, 16-17.

- Arjmandi, S., Brinkman, J., & **Toepker, T. P.** (2003). Physical push-ups. *Physics Teacher*, 41, 323-324.
- Toepker, T. P.** (2003). A center of gravity demonstration. *Physics Teacher*, 41, 549.

PRESENTATIONS AT ACADEMIC CONFERENCES

- Fatuzzo, M.**, Adams, F. C., & Myers, P. C. (2005). *Generalized collapse solutions with initial velocities for star formation in molecular cloud cores*. Paper presented at the American Astronomical Society Meeting, Minneapolis, MN.
- Prozkow, E. M., Adams, F. C., **Fatuzzo, M.**, & Myers, P. C. (2005). *Early evolution of stellar groups and clusters: Environmental effects on forming planetary systems*. Paper presented at the Prostars and Planets V Meeting, Kona, HI.
- Fatuzzo, M.** (2004). *A kinship between Sgr A East and the EGRET SNR's*. Paper presented at the Physics Department Colloquium, Northern Kentucky University, Highland Heights, KY.
- David, E. M., Quintana, E., **Fatuzzo, M.**, & Adams, F. C. (2003). *Dynamical stability of earth-like orbits in binary systems*. Paper presented at the American Astronomical Society Meeting, Seattle, WA.
- David, E. M., Quintana, E., **Fatuzzo, M.**, & Adams, F. C. (2003). *Dynamical stability of earth-like orbits in binary systems*. Paper presented at the National Council on Undergraduate Research Posters on the Hill Session, Washington, DC.
- Fatuzzo, M.**, & Melia, F. (2003). *A kinship between the EGRET SNR's and Sgr A East*. Paper presented at the American Astronomical Society, Nashville, TN.
- Fatuzzo, M.**, & Adams, F. C. (2002). *Enhancement of ambipolar diffusion rates through field fluctuations*. Paper presented at the American Astronomical Society, Albuquerque, NM.
- Fatuzzo, M.**, & Adams, F. C. (2002). *Enhancement of ambipolar diffusion rates through field fluctuations*. Paper presented at the American Astronomical Society Meeting, Albuquerque, NM.
- Fatuzzo, M.**, Melia, F., & Rafelski, J. (2001). *Electron-positron annihilation radiation from Sgr A East*. Paper presented at the American Astronomical Society Meeting, San Diego, CA.
- Liu, S., Melia, F., Fromerth, M., & **Fatuzzo, M.** (2001). *X-ray emitting supermassive nuclei of the local group*. Paper presented at the American Astronomical Society Meeting, Pasadena, CA.
- Herbert, S. T.**, & Hinton, M. (2004). *Square orbits*. Paper presented at the American Association of Physics Teachers, Albuquerque, NM.
- Schuster, A., **Herbert, S. T.**, & **Toepker, T.** (2002). *Infrared, fibert optic, Michelson interferometer using LabView*. Paper presented at the American Association of Physics Teachers, Philadelphia, PA.

- Frankenhoff, M., & **Herbert, S. T.** (2001). *Using LabView to collect electrical transport data on superconductors*. Paper presented at the American Association of Physics Teachers, San Diego, CA.
- Witting, J., Link, J., Frankenhoff, M., & **Herbert, S. T.** (2001). *Fabrication and measurement of Josephson junction arrays*. Paper presented at the American Association of Physics Teachers, San Diego, CA.

PROCEEDINGS

- Endorf, R.J., Koenig, K.M. & **Braun, G.A.** (2005). A preliminary study of the effectiveness of different recitation teaching methods. *Proceedings of the Physics Education Research Conference, AIP Proceedings 818, 89-92.*
- Schmitzer, H.** (2004). Angular velocity oscillations of birefringent platelets from spin angular transfer of photon flux. *Proceedings of the International Conference of the Sciences, Waikiki, HI.*
- Schmitzer, H.** (2004). Applications for small pinholes in polarisation-and quantum optics. *Proceedings of the Spring Meeting of the German Society of Applied Optics*
- Schmitzer, H.** (2004). Optically controlled rotation of PTCDA crystals in optical tweezers. *Proceedings of the International Conference on the Physics of Semiconductors, Flagstaff, AZ.*

OTHER

- Herbert, S. T.** (2004). *Manatee acoustical responses to generated frequencies in the audible range and associated avoidance behaviors*. Poster presented at the Ohio Fish and Wildlife Service Conference, Fawcett Center, Ohio State University, Columbus, OH.
- Herbert, S. T.** (2002). *Finite-size (i.e. real) samples and the two-dimensional superconducting transition*. Invited lecture presented to the Miami University physics department, Miami, OH.
- Schmitzer, H.** (2004). *Light with a twist*. Invited lecture presented at the Colloquium at Northern Kentucky University, Highland Heights, KY.
- Schmitzer, H.** (2004). *The angular momentum of light*. Invited lecture presented at the Colloquium at the University of Cincinnati, Cincinnati, OH.
- Schmitzer, H.** (2004). *The angular momentum of light*. Invited talk presented at the Colloquium at the University of Cincinnati, Cincinnati, OH.
- Schmitzer, H., & Dultz, W.** (2004). *The angular momentum transfer from light to birefringent particles modeled on the Poincare sphere*. Seminar presented at the Optical Science Center, Tucson, AZ.

Toepker, T. (2004). *Conservation, motion, energy*. Paper presented at the Workshop for Cincinnati Public Schools, Mayerson Center, Cincinnati, OH.

Toepker, T. (2004). *Nuclear fuel cycle*. Presentation given at Mount Notre Dame High School, Cincinnati, OH.