

# ZORAN MIKIĆ

## EDUCATION

University of California, Berkeley: Ph. D., Nuclear Engineering, 1985.

University of California, Berkeley: M. S., Nuclear Engineering, 1980.

University of London, Queen Mary College: B. Sc., Nuclear Engineering, 1979.

## EXPERIENCE

Dr. Mikić is a computational plasma physicist with experience in particle and magnetohydrodynamic (MHD) simulation of fusion and solar plasmas. His contributions in solar physics include large-scale MHD modeling of the solar corona, the eruption of coronal magnetic field arcades, coronal mass ejections, the three-dimensional structure of the solar corona, modeling of active-region coronal magnetic fields, coronal heating, and solar flares. Dr. Mikić is an accomplished numerical analyst, with interests in the implementation and development of implicit algorithms, and in the inversion of sparse matrices.

## APPOINTMENTS

Chief Scientist and Vice President, Predictive Science, Inc., San Diego, 2008–present.

Senior Research Scientist, Advanced Engineering and Applied Sciences Division, Technology Research and Integration Business Unit, Science Applications International Corporation, San Diego, 1985–2008.

## PROFESSIONAL SOCIETIES

American Physical Society (Plasma Physics Division).

American Astronomical Society (Solar Physics Division).

American Geophysical Union.

## RECENT COLLABORATIONS

Graduate Thesis Advisor:

Prof. Edward C. Morse, University of California, Berkeley

Collaborators:

Dr. Tahar Amari, École Polytechnique, Paris, France

Dr. Spiro Antiochos, NASA GSFC, Greenbelt, MD

Dr. Jon A. Linker, Predictive Science, Inc., San Diego, CA

Dr. Roberto Lionello, Predictive Science, Inc., San Diego, CA

Dr. Yung Mok, University of California, Irvine, CA

Dr. Dusan Odstreil, NASA GSFC, Greenbelt, MD

Dr. Pete Riley, Predictive Science, Inc., San Diego, CA

Dr. Dalton D. Schnack, University of Wisconsin, Madison, WI

Dr. Viacheslav Titov, Predictive Science, Inc., San Diego, CA

Dr. Tibor Török, Predictive Science, Inc., San Diego, CA

## PUBLICATIONS

- Z. Mikić and E. C. Morse, "The Use of a Preconditioned Bi-Conjugate Gradient Method for Hybrid Plasma Stability Analysis," *J. Comput. Phys.*, **61**, 154 (1985).
- E. C. Morse and Z. Mikić, "Ray Tracing in the Compact Torus," *Fusion Technology*, **7**, 311 (1985).
- D. D. Schnack, D. C. Barnes, Z. Mikić, D. S. Harned, E. J. Caramana, and R. A. Nebel, "Numerical Simulation of Reversed-Field Pinch Dynamics," *Comput. Phys. Comm.*, **43**, 17 (1986).
- D. D. Schnack, D. C. Barnes, Z. Mikić, D. S. Harned, and E. J. Caramana, "Semi-Implicit Magnetohydrodynamic Calculations," *J. Comput. Phys.*, **70**, 330 (1987).
- Z. Mikić and E. C. Morse, "Linear Stability Analysis of Compact Toroidal Plasmas Using Particle Simulation," *Phys Fluids*, **30**, 2806 (1987).
- Z. Mikić, D. C. Barnes, and D. D. Schnack, "Dynamical Evolution of a Coronal Magnetic Field Arcade," *Astrophys. J.*, **328**, 830 (1988).
- H. R. Lewis, D. C. Barnes, R. C. Bishop, N. A. Krall, Z. Mikić, R. D. Milroy, A. A. Mirin, A. G. Sgro, D. E. Shumaker, J. L. Staudenmeier, and R. B. Webster, "The Tilt Mode, Turbulence, and Transport in Field-Reversed Configurations," in *Proc. Twelfth Int. Conf. on Plasma Physics and Controlled Nuclear Fusion Research*, Nice, France, 12-19 October, IAEA Vienna (1988).
- Z. Mikić, D. D. Schnack, and G. Van Hoven, "Creation of Current Filaments in the Solar Corona," *Astrophys. J.*, **338**, 1148 (1989).
- Z. Mikić, D. D. Schnack, and G. Van Hoven, "Generation of Fine-Scale Structure in the Solar Magnetic Field," in *Turbulence and Nonlinear Dynamics in MHD Flows* (M. Meneguzzi, A. Pouquet, and P. L. Sulem, eds.), Elsevier, p. 113 (1989).
- D. S. Harned and Z. Mikić, "Accurate Semi-Implicit Treatment of the Hall Effect in Magnetohydrodynamic Computations," *J. Comput. Phys.*, **83**, 1 (1989).
- Z. Mikić, "Magnetohydrodynamic Modeling of the Solar Corona," *Phys. Fluids B*, **2**, 1450 (1990).
- Z. Mikić, D. D. Schnack, and G. Van Hoven, "Dynamical Evolution of Twisted Magnetic Flux Tubes: I. Equilibrium and Linear Stability," *Astrophys. J.*, **361**, 690 (1990).
- D. D. Schnack, Z. Mikić, D. C. Barnes, and G. Van Hoven, "Magnetohydrodynamic Simulation of Coronal Magnetic Fields," *Comput. Phys. Comm.*, **59**, 21 (1990).
- A. N. McClymont and Z. Mikić, "Thickness Variations along Coronal Loops Inferred from Vector Magnetograph Data," *Astrophys. J.*, **422**, 899 (1994).
- Z. Mikić and J. A. Linker, "Disruption of Coronal Magnetic Field Arcades," *Astrophys. J.*, **430**, 898 (1994).
- Z. Mikić and A. N. McClymont, "Deducing Coronal Magnetic Fields from Vector Magnetograms," in *Solar Active Region Evolution: Comparing Models with Observations* (K. S. Balasubramaniam and G. W. Simon, eds.), Astronomical Society of the Pacific Conference Series, Vol. **68**, p. 225 (1994).

- D. D. Schnack and Z. Mikić, "Current Filaments Induced in a Resistive Corona by Continuous Footpoint Motions," in *Solar Active Region Evolution: Comparing Models with Observations* (K. S. Balasubramaniam and G. W. Simon, eds.), Astronomical Society of the Pacific Conference Series, Vol. **68**, p. 180 (1994).
- G. Van Hoven, D. D. Schnack, Z. Mikić, and J. A. Linker, "The Generation of Solar Magnetic Activity," in *Solar Active Region Evolution: Comparing Models with Observations* (K. S. Balasubramaniam and G. W. Simon, eds.), Astronomical Society of the Pacific Conference Series, Vol. **68**, p. 211 (1994).
- J. A. Linker and Z. Mikić, "Evolution and Disruption of Magnetic Arcades," in *Solar Active Region Evolution: Comparing Models with Observations* (K. S. Balasubramaniam and G. W. Simon, eds.), Astronomical Society of the Pacific Conference Series, Vol. **68**, p. 251 (1994).
- J. A. Linker, Z. Mikić, and D. D. Schnack, "Modeling Coronal Evolution," in *Proc. Third SOHO Workshop—Solar Dynamic Phenomena and Solar Wind Consequences*, Estes Park, Colorado, USA, ESA SP-373, p. 249 (1994).
- J. A. Linker and Z. Mikić, "Disruption of a Helmet Streamer by Photospheric Shear," *Astrophys. J. Letters*, **438**, L45 (1995).
- G. Van Hoven, Y. Mok, and Z. Mikić, "Coronal Loop Formation Resulting from Photospheric Convection," *Astrophys. J. Letters*, **440**, L105 (1995).
- G. Van Hoven, J. A. Linker, and Z. Mikić, "The Evolution, Structure, and Dynamics of the Magnetized Solar Corona," *Gather/Scatter* (San Diego Supercomputer Center Newsletter), Vol. **11**, No. 3, p. 6 (1995).
- Z. Mikić and J. A. Linker, "The Large-Scale Structure of the Solar Corona and Inner Heliosphere," in *Solar Wind Eight: Proc. Eight Intl. Solar Wind Conf.* (D. Winterhalter, J. T. Gosling, S. R. Habbal, W. S. Kurth, and M. Neugebauer, eds.), AIP Conf. Proceedings **382**, AIP Press, NY, p. 104 (1996).
- J. A. Linker, Z. Mikić, and D. D. Schnack, "Global Coronal Modeling and Space Weather Prediction," in *Solar Drivers of Interplanetary and Terrestrial Disturbances* (K. S. Balasubramaniam, S. L. Keil, and R. N. Smartt, eds.), Astronomical Society of the Pacific Conference Series, Vol. **95**, p. 208 (1996).
- Z. Mikić, J. A. Linker, and D. D. Schnack, "Modeling of Active-Region Magnetic Fields," in *Solar Drivers of Interplanetary and Terrestrial Disturbances* (K. S. Balasubramaniam, S. L. Keil, and R. N. Smartt, eds.), Astronomical Society of the Pacific Conference Series Vol. **95**, p. 108 (1996).
- D. L. Hendrix, G. Van Hoven, Z. Mikić, and D. D. Schnack, "The Viability of Ohmic Dissipation as a Coronal Heating Source," *Astrophys. J.*, **470**, 1192 (1996).
- Z. Mikić and J. A. Linker, "The Initiation of Coronal Mass Ejections by Magnetic Shear," in *Coronal Mass Ejections* (N. Crooker, J. Joselyn, and J. Feynman, eds.), Geophysical Monograph **99**, American Geophysical Union, p. 57 (1997).
- J. A. Linker and Z. Mikić, "Extending Coronal Models to Earth Orbit," in *Coronal Mass Ejections* (N. Crooker, J. Joselyn, and J. Feynman, eds.), Geophysical Monograph **99**, American Geophysical Union, p. 269 (1997).

- T. Amari, J. F. Luciani, J. J. Aly, and Z. Mikić, "Opening Solar Magnetic Fields: Some Analytical and Numerical MHD Aspects," in *Coronal Mass Ejections* (N. Crooker, J. Joselyn, and J. Feynman, eds.), Geophysical Monograph **99**, American Geophysical Union, p. 101 (1997).
- A. N. McClymont, L. Jiao, and Z. Mikić, "Problems and Progress in Computing Three-Dimensional Coronal Active Region Magnetic Fields from Boundary Data," *Solar Phys.*, **174**, 191 (1997).
- L. Jiao, A. N. McClymont, and Z. Mikić, "Reconstruction of the Three-Dimensional Coronal Magnetic Field," *Solar Phys.*, **174**, 311 (1997).
- T. Amari, J. J. Aly, J. F. Luciani, T. Boulmezaoud, and Z. Mikić, "Reconstructing The Solar Coronal Magnetic Field as a Force-Free Magnetic Field," *Solar Phys.*, **174**, 129 (1997).
- Y. Mok, G. Van Hoven, and Z. Mikić, "The Emergence of Current-Carrying Magnetic Loops into the Solar Corona," *Astrophys. J. Letters*, **490**, L107 (1997).
- A. Ruzmaikin, J. D. Anderson, S. Asmar, M. Bird, A. Cacciani, W. Coles, J. Feynman, J. Harvey, K. Harvey, J. Hollweg, J. Linker, Z. Mikić, M. Patzold, and E. J. Smith, "A Spacecraft Going Behind the Sun will Support SOHO," in *The Corona and Solar Wind Near Minimum Activity* (Proceedings of the Fifth SOHO Workshop), ESA SP-404, 653 (1997).
- R. Lionello, Z. Mikić, and D. D. Schnack, "Magnetohydrodynamics of Solar Coronal Plasmas in Cylindrical Geometry," *J. Comput. Phys.*, **140**, 172 (1998).
- R. Lionello, M. Velli, G. Einaudi, and Z. Mikić, "Nonlinear Magnetohydrodynamic Evolution of Line-Tied Coronal Loops," *Astrophys. J.*, **494**, 840 (1998).
- J. Lee, A. N. McClymont, Z. Mikić, S. M. White, and M. R. Kundu, "Coronal Currents, Magnetic Fields, and Heating in a Solar Active Region," *Astrophys. J.*, **501**, 853 (1998).
- M. Neugebauer, R. J. Forsyth, A. B. Galvin, K. L. Harvey, J. T. Hoeksema, A. J. Lazarus, R. P. Lepping, J. A. Linker, Z. Mikić, J. T. Steinberg, R. von Steiger, Y.-M. Wang, and R. Wimmer-Schweingruber, "Spatial Structure of the Solar Wind and Comparisons with Solar Data and Models," *J. Geophys. Res.*, **103**, 14587 (1998).
- J. Lee, S. M. White, M. R. Kundu, Z. Mikić, and A. N. McClymont, "Microwave Mode Coupling above Active Regions as a Coronal Density Diagnostic," *Solar Phys.*, **180**, 193 (1998).
- D. D. Schnack, I. Lottati, Z. Mikić, and P. Satyanarayana, "A Finite-Volume Algorithm for Three-Dimensional Magnetohydrodynamics on an Unstructured, Adaptive Grid in Axially Symmetric Geometry," *J. Comput. Phys.*, **140**, 71 (1998).
- N. U. Crooker, A. H. McAllister, R. J. Fitzenreiter, J. A. Linker, D. E. Larson, R. P. Lepping, A. Szabo, J. T. Steinberg, A. J. Lazarus, Z. Mikić, and R. P. Lin, "Sector Boundary Transformation by an Open Magnetic Cloud," *J. Geophys. Res.*, **103**, 26859 (1998).
- J. Lee, S. M. White, M. R. Kundu, Z. Mikić, and A. N. McClymont, "A Test for Coronal Magnetic Field Extrapolations," *Astrophys. J.*, **510**, 413 (1999).
- J. Lee, S. M. White, M. R. Kundu, and Z. Mikić, "Active Region Emissions and Coronal Field Extrapolations," in *Solar Physics with Radio Observations*, Proc. Nobeyama Symp., held in Kiyosato, Japan, Oct. 27–30, 1998 (T. S. Bastian, N. Gopalswamy and K. Shibasaki, eds.), NRO Report No. 479, p.65–70 (1999).

- Z. Mikić, J. A. Linker, D. D. Schnack, R. Lionello, and A. Tarditi, “Magnetohydrodynamic Modeling of the Global Solar Corona,” *Phys. Plasmas*, **6**, 2217 (1999).
- J. A. Linker, Z. Mikić, D. A. Biesecker, R. J. Forsyth, S. E. Gibson, A. J. Lazarus, A. Lecinski, P. Riley, A. Szabo, and B. J. Thompson, “Magnetohydrodynamic Modeling of the Solar Corona During Whole Sun Month,” *J. Geophys. Res.*, **104**, 9809 (1999).
- A. R. Breen, Z. Mikić, J. A. Linker, A. J. Lazarus, B. J. Thompson, D. A. Biesecker, P. J. Moran, C. A. Varley, P. J. S. Williams, and A. Lecinski, “Interplanetary Scintillation Measurements of the Solar Wind During Whole Sun Month: Comparisons with Coronal and *In-Situ* Observations,” *J. Geophys. Res.*, **104**, 9847 (1999).
- A. Posner, V. Bothmer, B. J. Thompson, H. Kunow, B. Heber, R. Müller-Mellin, A. J. Lazarus, A. Szabo, Z. Mikić, and J. A. Linker, “In-Ecliptic CIR-Associated Energetic Particle Events and Polar Coronal Hole Structures: SOHO/COSTEP Observations for the Whole Sun Month Campaign,” *J. Geophys. Res.*, **104**, 9881 (1999).
- S. E. Gibson, D. A. Biesecker, M. Guhathakurta, J. T. Hoeksema, A. J. Lazarus, J. A. Linker, Z. Mikić, Y. Pisanko, J. T. Steinberg, B. J. Thompson, and X. P. Zhao, “The Three-Dimensional Coronal Magnetic Field During Whole Sun Month,” *Astrophys. J.*, **520**, 871 (1999).
- A. R. Breen, D. Biesecker, R. A. Fallows, A. Lecinski, Z. Mikić, P. J. Moran, P. J. S. Williams, “Interplanetary Scintillation Measurements of High-Speed Flow in the Low-Latitude,” in *Solar Wind Nine: Proc. Ninth Intl. Solar Wind Conf.* (S. R. Habbal, R. Esser, J. V. Hollweg, and P. A. Isenberg, eds.), AIP Conf. Proceedings **471**, AIP Press, NY, p. 317 (1999).
- R. Lionello, Z. Mikić, and J. A. Linker, “Stability of Algorithms for Waves with Large Flows,” *J. Comput. Phys.*, **152**, 346 (1999).
- T. Amari, J. F. Luciani, Z. Mikić, and J. A. Linker, “Three-Dimensional Solutions of Magnetohydrodynamic Equations for Prominence Magnetic Support: Twisted Magnetic Flux Rope,” *Astrophys. J. Letters*, **518**, L57 (1999).
- T. Amari, T. Z. Boulmezaoud, and Z. Mikić, “An Iterative Method for the Reconstruction of the Solar Coronal Magnetic Field: I. Method for Regular Solutions,” *Astron. Astrophys.*, **350**, 1051 (1999).
- T. Amari, J. F. Luciani, Z. Mikić, “On the Role of Magnetic Flux Ropes for Helicity Injection and Ejection in the Solar Corona,” in *Third Advances in Solar Physics Euroconference: Magnetic Fields and Oscillations* (B. Schmieder, A. Hofmann, and J. Staude, eds.), Astronomical Society of the Pacific Conference Series Vol. **184**, p. 70 (1999).
- R. Lionello, J. A. Linker, and Z. Mikić, “Magnetohydrodynamics of the Solar Corona and the Transition Region,” in *Proc. of the 9th European Meeting on Solar Physics: Magnetic Fields and Solar Processes*, Florence, Italy, Sept. 12–18, 1999, ESA SP-448, p. 1181 (1999).
- T. Amari, J. F. Luciani, and Z. Mikić, “Magnetohydrodynamic Models of Solar Coronal Magnetic Fields,” *Plasma Phys. Control. Fusion*, **41**, A779 (1999).
- A. Balogh, V. Bothmer, N. U. Crooker, R. J. Forsyth, G. Gloeckler, A. Hewish, M. Hilchenbach, R. Kallenbach, B. Klecker, J. A. Linker, E. Lucek, G. Mann, E. Marsch, A. Posner, I. G. Richardson, J. M. Schmidt, M. Scholer, Y.-M. Wang, R. F. Wimmer-Schweingruber, M. R. Aellig, P. Bochsler, S. Hefti, and Z. Mikić, “The Solar Origin of Corotating Interaction Regions and Their Formation in the Inner Heliosphere,” *Space Science Reviews*, **89**, 141 (1999).

- J. Lee, S. M. White, M. R. Kundu, and Z. Mikić, “Active Region Emissions and Coronal Field Extrapolations,” in *Solar Physics with Radio Observations: Proc. Nobeyama Symposium*, Kiyosato, Japan, Oct. 27–30, 1998 (T. Bastian, N. Gopalswamy, and K. Shibasaki, eds.), Nobeyama Radio Observatory Report **479**, p. 65 (1999).
- T. Amari, J. F. Luciani, Z. Mikić, and J. A. Linker, “A Twisted Flux Rope Model for Coronal Mass Ejections and Two-Ribbon Flares,” *Astrophys. J. Letters*, **529**, L49 (2000).
- Z. Mikić, J. A. Linker, P. Riley, and R. Lionello, “Predicting the Structure of the Solar Corona During the 11 August 1999 Total Solar Eclipse,” in *The Last Total Solar Eclipse of the Millennium* (W. Livingston and A. Özgüç, eds.), Astronomical Society of the Pacific Conference Series, Vol. **205**, p. 162 (2000).
- S. Vainshtein, Z. Mikić, R. Rosner, and J. A. Linker, “Evidence for Topological Nonequilibrium in Magnetic Configurations,” *Phys. Rev. E*, **62**, 1245 (2000).
- A. R. Breen, P. J. Moran, P. J. S. Williams, A. Lecinski, B. J. Thompson, L. K. Harra-Murnion, Z. Mikić, and J. A. Linker, “Interplanetary Scintillation Measurements of the Solar Wind Above Low-Latitude Coronal Holes,” *Adv. Space Res.*, **26**, 789 (2000).
- A. Posner, V. Bothmer, H. Kunow, J. T. Gosling, B. Heber, A. J. Lazarus, J. A. Linker, R. G. Marsden, Z. Mikić, R. Muller-Mellin, T. R. Sanderson, A. Szabo, and B. J. Thompson, “Energetic Particle Signatures of a Corotating Interaction Region from a High Latitude Coronal Hole: SOHO, Wind and Ulysses Observations,” *Adv. Space Res.*, **26**, 865 (2000).
- A. R. Breen, B. J. Thompson, M. Kojima, D. A. Biesecker, A. Canals, R. A. Fallows, J. A. Linker, A. J. Lazarus, A. Lecinski, Z. Mikić, P. J. Moran, and P. J. S. Williams, “Measurements of the Solar Wind Over a Wide Range of Heliocentric Distances — a Comparison of Results from the First Three Whole Sun Months,” *J. Atmos. Solar-Terrestrial Phys.*, **62**, 1527 (2000).
- R. Lionello, J. A. Linker, and Z. Mikić, “Including the Transition Region in Models of the Large-Scale Solar Corona,” *Astrophys. J.*, **546**, 542 (2001).
- Y. Mok, Z. Mikić, and J. A. Linker, “Interaction of Two Magnetic Loops in the Solar Corona,” *Astrophys. J.*, **555**, 440 (2001).
- P. Riley, J. A. Linker, and Z. Mikić, “An Empirically-Driven Global MHD Model of the Solar Corona and Inner Heliosphere,” *J. Geophys. Res.*, **106**, 15889 (2001).
- P. Riley, J. A. Linker, Z. Mikić, and R. Lionello, “MHD Modeling of the Solar Corona and Inner Heliosphere: Comparison with Observations,” in *Space Weather* (P. Song, H. J. Singer, and G. L. Siscoe, eds.), Geophysical Monograph **125**, American Geophysical Union, p. 159 (2001).
- A. Posner, T. H. Zurbuchen, N. A. Schwadron, L. A. Fisk, G. Gloeckler, J. A. Linker, Z. Mikić, and P. Riley, “Nature of the Boundary Between Open and Closed Magnetic Field Line Regions at the Sun Revealed by Composition Data and Numerical Models,” *J. Geophys. Res.*, **106**, 15869 (2001).
- J. A. Linker, R. Lionello, Z. Mikić, and T. Amari, “Magnetohydrodynamic Modeling of Prominence Formation Within a Helmet Streamer,” *J. Geophys. Res.*, **106**, 25165 (2001).
- J. A. Linker, R. Lionello, Z. Mikić, and P. Riley, “Quiet Sun, Active Sun: Modeling the Solar Corona and Inner Heliosphere,” *EnVision* (San Diego Supercomputer Center Newsletter), Vol. **17**, No. 2, p. 10 (2001).

- P. Riley, J. A. Linker, and Z. Mikić, “Modeling the Heliospheric Current Sheet: Solar Cycle Variations,” *J. Geophys. Res.*, **107**, 1136, 10.1029/2001JA000299 (2002).
- P. Riley, J. A. Linker, Z. Mikić, D. Odstrcil, V. J. Pizzo, and D. F. Webb, “Evidence of Post-Eruption Reconnection Associated with Coronal Mass Ejections in the Solar Wind,” *Astrophys. J.*, **578**, 972 (2002).
- R. Lionello, Z. Mikić, J. A. Linker, and T. Amari, “Magnetic Field Topology in Prominences,” *Astrophys. J.*, **581**, 718 (2002).
- D. Odstrcil, J. A. Linker, R. Lionello, Z. Mikić, P. Riley, V. J. Pizzo, and J. G. Luhmann, “Merging of Coronal and Heliospheric Numerical 2-D MHD Models,” *J. Geophys. Res.*, **107**, 1493, 10.1029/2002JA009334 (2002).
- A. R. Breen, P. Riley, A. J. Lazarus, A. Canals, R. A. Fallows, J. Linker, and Z. Mikić, “The Solar Wind at Solar Maximum: Comparisons of EISCAT IPS and *in situ* Observations,” *Annales Geophysicae*, **20**, 1291 (2002).
- D. Odstrcil, J. A. Linker, R. Lionello, Z. Mikić, P. Riley, V. J. Pizzo, and J. G. Luhmann, “3-D MHD Simulations of CMEs by Coupled Coronal and Heliospheric Models,” in *Solar Variability: From Core to Outer Frontiers* (A. Wilson, ed.), ESA SP-506, ESA Publications Division, Noordwijk, Vol. 1, pp. 95–98 (2002).
- R. Lionello, J. A. Linker, and Z. Mikić, “Three-Dimensional Magnetohydrodynamics of the Solar Corona and of the Solar Wind with Improved Energy Transport,” in *Solar Wind Ten: Proc. Tenth Intl. Solar Wind Conf.* (M. Velli, R. Bruno, and F. Malara, eds.), AIP Conf. Proceedings **679**, AIP Press, NY, pp. 222–225 (2003).
- P. Riley, Z. Mikić, J. A. Linker, and T. H. Zurbuchen, “Understanding the Solar Sources of *in situ* Observations,” in *Solar Wind Ten: Proc. Tenth Intl. Solar Wind Conf.* (M. Velli, R. Bruno, and F. Malara, eds.), AIP Conf. Proceedings **679**, AIP Press, NY, pp. 79–82 (2003).
- J. A. Linker, Z. Mikić, P. Riley, R. Lionello, and D. Odstrcil, “Models of Coronal Mass Ejections: A Review with a Look to the Future,” in *Solar Wind Ten: Proc. Tenth Intl. Solar Wind Conf.* (M. Velli, R. Bruno, and F. Malara, eds.), AIP Conf. Proceedings **679**, AIP Press, NY, pp. 703–710 (2003).
- P. Riley, J. A. Linker, Z. Mikić, D. Odstrcil, T. H. Zurbuchen, D. A. Lario, and R. P. Lepping, “Using an MHD Simulation to Interpret the Global Context of a Coronal Mass Ejection Observed by Two Spacecraft,” *J. Geophys. Res.*, **108**, 1272, 10.1029/2002JA009760 (2003).
- P. Riley, Z. Mikić, and J. A. Linker, “Dynamical Evolution of the Inner Heliosphere Approaching Solar Activity Maximum: Interpreting Ulysses Observations Using a Global MHD Model,” *Annales Geophysicae*, **21**, 1347 (2003).
- J. A. Linker, Z. Mikić, R. Lionello, P. Riley, T. Amari, and D. Odstrcil, “Flux Cancellation and Coronal Mass Ejections,” *Phys. Plasmas*, **10**, 1971 (2003).
- T. Amari, J. F. Luciani, J. J. Aly, Z. Mikić, and J. A. Linker, “Coronal Mass Ejections: Initiation, Magnetic Helicity, and Flux Ropes: I. Boundary-Motion Driven Evolution,” *Astrophys. J.*, **585**, 1073 (2003).
- T. Amari, J. F. Luciani, J. J. Aly, Z. Mikić, and J. A. Linker, “Coronal Mass Ejections: Initiation, Magnetic Helicity, and Flux Ropes: II. Turbulent Diffusion-Driven Evolution,” *Astrophys. J.*, **595**, 1231 (2003).

- D. Odstrcil, P. Riley, J. A. Linker, R. Lionello, Z. Mikić, and V. J. Pizzo, “3-D Simulations of ICMEs by Coupled Coronal and Heliospheric Models,” in *Solar Variability as an Input to the Earth's Environment* (A. Wilson, ed.), ESA SP-535, ESA Publications Division, Noordwijk, pp. 541–546 (2003).
- W. P. Abbett, Z. Mikić, J. A. Linker, J. M. McTiernan, T. Magara, and G. H. Fisher, “The Photospheric Boundary of Sun-to-Earth Coupled Models,” *J. Atmos. Solar-Terrestrial Phys.*, **66**, 1257 (2004).
- D. Odstrcil, V. J. Pizzo, J. A. Linker, P. Riley, R. Lionello, and Z. Mikić, “Initial Coupling of Coronal and Heliospheric Numerical Magnetohydrodynamic Codes,” *J. Atmos. Solar-Terrestrial Phys.*, **66**, 1311 (2004).
- J. G. Luhmann, S. C. Solomon, J. A. Linker, J. G. Lyon, Z. Mikić, D. Odstrcil, W. Wang, and M. Wiltberger, “Coupled Model Simulation of a Sun-to-Earth Space Weather Event,” *J. Atmos. Solar-Terrestrial Phys.*, **66**, 1243 (2004).
- P. Riley, J. A. Linker, R. Lionello, Z. Mikić, D. Odstrcil, M. A. Hidalgo, Q. Hu, R. P. Lepping, B. J. Lynch, and A. Rees, “Fitting Flux Ropes to a Global MHD Solution: A Comparison of Techniques,” *J. Atmos. Solar-Terrestrial Phys.*, **66**, 1321 (2004).
- P. Riley, J. A. Linker, Z. Mikić, and D. Odstrcil, “Magnetohydrodynamic Modeling of Interplanetary CMEs,” *IEEE Trans. Plasma Sci.*, **32**, 1415, (2004).
- Y. Mok, Z. Mikić, R. Lionello, and J. A. Linker, “Calculating the Thermal Structure of Solar Active Regions in Three Dimensions,” *Astrophys. J.*, **621**, 1098 (2005).
- R. Lionello, P. Riley, J. A. Linker, and Z. Mikić, “The Effects of Differential Rotation on the Magnetic Structure of the Solar Corona: Magnetohydrodynamic Simulations,” *Astrophys. J.*, **625**, 463 (2005).
- J. A. Linker, R. Lionello, Z. Mikić, and P. Riley, “Time-Dependent Response of the Large-Scale Solar Corona,” *Proc. Intl. Scientific Conf. on Chromospheric and Coronal Magnetic Fields* (D. E. Innes, A. Lagg, and S. K. Solanki, eds.), ESA SP-596, p. 28 (2005).
- R. Lionello, J. A. Linker, Z. Mikić, and P. Riley, “The Latitudinal Excursion of Coronal Magnetic Field Lines in Response to Differential Rotation: MHD Simulations,” *Astrophys. J.*, **642**, 69L (2006).
- Z. Mikić and M. A. Lee, “An Introduction to Theory and Models of CMEs, Shocks, and Solar Energetic Particles,” *Space Sci. Rev.*, **123**, 57 (2006).
- N. Gopalswamy, Z. Mikić, *et al.*, “The Pre-CME Sun,” *Space Sci. Rev.*, **123**, 303 (2006).
- T. G. Forbes, ..., Z. Mikić, *et al.*, “CME Theory and Models,” *Space Sci. Rev.*, **123**, 251 (2006).
- M. Pick, ..., Z. Mikić, *et al.*, “Multi-Wavelength Observations of CMEs and Associated Phenomena,” *Space Sci. Rev.*, **123**, 341 (2006).
- M. J. Aschwanden, ..., Z. Mikić, *et al.*, “Theoretical Modeling for the Stereo Mission,” *Space Sci. Rev.*, DOI:10.1007/s11214-006-9027-8 (2006).
- P. Riley, J. A. Linker, Z. Mikić, and D. Odstrcil, “Modeling Interplanetary Coronal Mass Ejections,” *Adv. Space Res.*, **38**, 535 (2006).
- P. Riley, J. A. Linker, Z. Mikić, R. Lionello, S. A. Ledvina, and J. G. Luhmann, “A Comparison between Global Solar Magnetohydrodynamic and Potential Field Source Surface Model Results,” *Astrophys. J.*, **653**, 1510 (2007).

- P. Riley, R. Lionello, Z. Mikić, J. A. Linker, E. Clark, J. Lin, and Y.-K. Ko, “Bursty Reconnection Following Solar Eruptions: MHD Simulations and Comparison with Observations,” *Astrophys. J.*, **655**, 591 (2007).
- Z. Mikić, J. A. Linker, R. Lionello, P. Riley, and V. Titov, “Predicting the Structure of the Solar Corona for the Total Solar Eclipse of March 29, 2006,” in *Solar and Stellar Physics Through Eclipses* (O. Demircan, S. O. Selam, and B. Albayrak, eds.), Astronomical Society of the Pacific Conference Series, Vol. **370**, p. 299 (2007).
- S. K. Antiochos, C. R. DeVore, J. T. Karpen, and Z. Mikić, “Structure and Dynamics of the Sun’s Open Magnetic Field,” *Astrophys. J.*, **671**, 936 (2007).
- T. Amari, J. J. Aly, Z. Mikić, and J. A. Linker, “Coronal Mass Ejection Initiation and Complex Topology Configurations in the Flux Cancellation and Breakout Models,” *Astrophys. J. Letters*, **671**, L189 (2007).
- P. Riley, R. Lionello, Z. Mikić, and J. A. Linker, “Using Global Simulations to Relate the Three-Part Structure of Coronal Mass Ejections to In Situ Signatures,” *Astrophys. J.*, **672**, 1221 (2008).
- V. S. Titov, Z. Mikić, J. A. Linker, and R. Lionello, “1997 May 12 Coronal Mass Ejection Event. I. A Simplified Model of the Preeruptive Magnetic Structure,” *Astrophys. J.*, **675**, 1614 (2008).
- Y. Mok, Z. Mikić, R. Lionello, and J. A. Linker, “The Formation of Coronal Loops by Thermal Instability in Three Dimensions,” *Astrophys. J. Letters*, **679**, L161 (2008).
- D. Odstrcil, V. J. Pizzo, C. N. Arge, M. M. Bisi, P. P. Hick, B. V. Jackson, S. A. Ledvina, J. G. Luhmann, J. A. Linker, Z. Mikić, and P. Riley, “Numerical Simulations of Solar Wind Disturbances by Coupled Models” in *Numerical Modeling of Space Plasma Flows: Astronom-2007* (N. V. Pogorelov, E. Audit, and G. P. Zank, eds.), Astronomical Society of the Pacific Conference Series, Vol. **385**, p. 167 (2008).
- R. Lionello, J. A. Linker, and Z. Mikić, “Multispectral Emission of the Sun During the First Whole Sun Month: MHD Simulations,” *Astrophys. J.*, **690**, 902 (2009).
- V. S. Titov, T. G. Forbes, E. R. Priest, Z. Mikić, and J. A. Linker, “Slip-Squashing Factors as a Measure of Three-Dimensional Magnetic Reconnection,” *Astrophys. J.*, **693**, 1029 (2009).
- D. J. Schmit, S. Gibson, G. de Toma, M. Wiltberger, W. J. Hughes, H. Spence, P. Riley, J. A. Linker, and Z. Mikić, “A Novel Metric for Coronal MHD Models,” *J. Geophys. Res.*, **114**, A06101 (2009).
- V. Abramenko, V. Yurchyshyn, J. A. Linker, Z. Mikić, J. Luhmann, and C. O. Lee, “Low-Latitude Coronal Holes at the Minimum of the 23rd Solar Cycle,” *Astrophys. J.*, **712**, 813 (2010).
- V. Rušin, M. Druckmüller, P. Aniol, M. Minarovjech, M. Saniga, Z. Mikić, J. A. Linker, R. Lionello, P. Riley, and V. S. Titov, “Comparing Eclipse Observations of the 2008 August 1 Solar Corona with an MHD Model Prediction,” *Astron. Astrophys.*, **513**, A45 (2010).
- P. Riley, Z. Mikić, R. Lionello, J. A. Linker, N. A. Schwadron, and D. J. McComas, “On the Relationship Between Coronal Heating, Magnetic Flux, and the Density of the Solar Wind,” *J. Geophys. Res.*, **115**, A06104 (2010).
- S. K. Antiochos, Z. Mikić, V. S. Titov, R. Lionello, and J. A. Linker, “A Model for the Sources of the Slow Solar Wind,” submitted to *Astrophys. J.* (2010).
- J. A. Linker, R. Lionello, Z. Mikić, V. S. Titov, and S. K. Antiochos, “The Evolution of Open Magnetic Flux: MHD Simulations,” submitted to *Astrophys. J.* (2010).

V. S. Titov, Z. Mikić, J. A. Linker, R. Lionello, and S. K. Antiochos, “Magnetic Topology of Coronal Hole Linkages,” submitted to *Astrophys. J.* (2010).