

**Prof. John F. Vesecky**  
**Associate Chairman Electrical Engineering Department**  
**University of California at Santa Cruz**

**Recent Publications: 1990 - 2005**  
**Books, Journal Articles, Chapters in Books and Conference Papers**

**Books**

Bass, F. G. and I. M. Fuks, "**Wave Scattering from Statistically Rough Surfaces**", (translated from Russian and edited by C. B. and J. F. Vesecky), Pergamon Press, Oxford (1979).

**Archived Journal Articles**

Laws K., D. Lyzenga, D. Wiberg & J. Vesecky, Characterization of Errors in Vector Wind Retrievals from Satellite-Based Polarimetric Microwave Radiometer Measurements, **Geosci & Remote Sens Letts**, in press (2005)

Lettvin, E. E. and J. F. Vesecky, Estimation of wind friction velocity and direction at the ocean surface from physical models and space-borne radar scatterometer measurements, **J. Geophys. Res.** **106**, C10, 22,503-22,519 (Oct., 2001)

Teague, C. C., J. F. Vesecky and Z. R. Hallock, A comparison of multifrequency HF radar and ADCP measurements of near-surface currents during COPE-3, **J. Oceanic Engin.**, **26**, 3, 399-405 (2001)

Fernandez, D.M., J.F. Vesecky, C.C. Teague, J.D. Paduan, and D. E. Barrick, Detection of Ships with Multi-Frequency and CODAR Seasonde HF Radar Systems. **Canadian J. Remote Sens.**, **27**, 4, 277-290 (2001)

Fernandez, D.M., L.A. Meadows, J.F. Vesecky, C.C. Teague, J.D. Paduan, and P. Hansen, Surface current measurements by HF radar in fresh water lakes. **J. Oceanic Engin.**, **25**,4, 458-471 (2000)

Vesecky, J. F., C. C. Teague, D. M. Fernandez, J. D. Paduan, J. M. Daida, R. G. Onstott, K. Laws and P. E. Hansen, HF Radar Observations of Surface Currents on Monterey Bay California, **Backscatter** (Aug., 1998)

Teague, C. C., J. F. Vesecky and D. M. Fernandez, HF radar instruments, past to present, **Oceanography** **10**, 2, 40-48 (1997)

Fernandez, D. M., J. F. Vesecky and C. C. Teague, Measurements of upper-ocean surface current shear with high-frequency radar, **J. Geophys. Res.** **101**, C12, 28,615-28,625 (1996)

Lin, Q., J. F. Vesecky and H. Zebker, Comparison of elevation derived from INSAR data with DEM over large relief terrain, **Intl. J. Rem. Sensing** **15**, 9, 1775-1790 (1994)

Shkedy, Y., D. Fernandez, C. C. Teague, J. F. Vesecky and J. Roughgarden, Detecting upwelling along the central coast of California during an El-Nino year using HF radar, **Continental Shelf Res.**, **15**, 7, 803-814 (1995).

Lin, Q., J. F. Vesecky and H. K. Zebker, Phase unwrapping through fringe line detection in synthetic aperture radar interferometry, **Appl. Op.** **33**, 2, 201-208 (1994).

Wood, B. L., L. R. Beck, J. G. Lawless and J. F. Vesecky, Preliminary considerations for a small satellite to monitor environmental change associated with vector-borne disease, **J. Imag. Sci & Tech.** **36**, 5, 431-439 (1992).

Fernandez, D. M., J. F. Vesecky, D. J. Napolitano, B. T. Khuri-Yakub and J. A. Mann, "Computation of ripple wave parameters: A comparison of methods", **J. Geophys. Res.** **97**, C4, 5207 - 5214 (1992).

Lin, Q., J. F. Vesecky and H. Zebker, New approaches in interferometric SAR data processing, **IEEE Trans. Geosci. & Remote Sens.** **30**, 560-567 (1992).

Vesecky, J. F., M. P. Smith and R. Samadani, "Extraction of Lead and Ridge Feature Characteristics from SAR Images of Sea Ice", **IEEE Trans. Geosci. & Remote Sens.**, **28**, 740-745 (July, 1990).

Daida, J. M., R. Samadani and J. F. Vesecky, "Object-Oriented Feature-Tracking Algorithms for SAR Images of the Marginal Ice Zone", **IEEE Trans. Geosci. & Remote Sens.**, **28**, 573-589 (July, 1990).

Samadani, R. and J. F. Vesecky, "Finding curvilinear features in speckled images", **IEEE Trans. Geosci. & Remote Sens.**, **28**, 669-673 (July, 1990).

Durden, S. L. and J. F. Vesecky, "A numerical study of the separation wavenumber in the two-scale scattering approximation", **IEEE Trans. Geosci. & Remote Sens.** **28**, 271-272 (1990).

### **Chapters in Books**

Lyzenga, D. R. and J. F. Vesecky, Two-scale polarimetric emissivity model: efficiency improvements and comparisons with data, Ch. 8 (pp. 206-220) in **Progress in Electromagnetics Research: Polarimetric Microwave Remote Sensing of Wind-Driven Ocean Environment**, eds. J. A. Kong, Y. Zhang & T. M. Grzegorzcyk, EMW Publishing, Cambridge, MA (2003).

Daida, J. M., J. D. Hommes, T. F. Tommaso, S. J. Ross and J. F. Vesecky, "Algorithm discovery using the genetic programming paradigm: Extracting low-

contrast curvilinear features from SAR images of arctic ice," Ch. 21 in **Advances in Genetic Programming**, Vol. II, 417-442, MIT Press, Cambridge MA (1996)

### **Papers at Professional Meetings**

Vesecky, J. F. J. A. Drake, K. E. Laws, F. L. Ludwig, C. C. Teague, J. D. Paduan and L. A. Meadows, Using Multifrequency HF Radar to Estimate Ocean Wind Fields, **Proc. International Geoscience and Remote Sensing Symposium 2005**, IEEE Press, Piscataway NJ (2005).

Vesecky, J. F. J. A. Drake, K. E. Laws, F. L. Ludwig, C. C. Teague and L. A. Meadows , Ocean Wind Fields from Multifrequency HF Radar: Nonlinear Retrieval and Integration into Coastal Wind Fields, **Proc. 8<sup>th</sup> International Conference on Remote Sensing for Marine and Coastal Environments**, Halifax Nova Scotia, May 17-19 (2005)

Laws, K. E., J. A. Drake, R. Harris, C. C. Teague and J. F. Vesecky, HF Radar Systems: A Comparison of Advantages, Limitations and Performance of Different Radar Systems and Data Processing Methods, **8<sup>th</sup> International Conference on Remote Sensing for Marine and Coastal Environments**, Halifax Nova Scotia, May 17-19 (2005)

Vesecky, J. F. J. A. Drake, K. E. Laws, F. L. Ludwig, C. C. Teague, J. D. Paduan and L. A. Meadows, Wind field Measurements by HF radar & their Integration into Regional Wind Field Estimates, 5<sup>th</sup> Radio Oceanography Workshop, Costanoa CA (2005)

Vesecky, J. F., K. E. Laws and R. Fay, Ship Detection and Monitoring Using Multi-frequency HF Radars on Monterey Bay, California, **Proc. Dept. of Homeland Security: Working Together Conference**, Boston MA, April (2005)

Vesecky, J. F. J. A. Drake, K. E. Laws, L. A. Meadows, C. C. Teague, S. J. Jacobs, F. L. Ludwig, J. D. Paduan and K. Davidson, Multifrequency HF Radar Mapping of Surface Current, Friction Velocity and Vector Wind Fields, **Invited Presentation at CITRIS Groundbreaking**, University of California at Berkeley, Oct. 29 (2004).

Vesecky, J. F. J. A. Drake, K. E. Laws, F. L. Ludwig, C. C. Teague, J. D. Paduan and L. A. Meadows, Using Multifrequency HF Radar to Estimate Ocean Wind Fields, **Proc. International Geoscience and Remote Sensing Symposium 2004**, IEEE Press, Piscataway NJ (2004).

Vesecky, John, Jessica Drake, Kenneth Laws. Lorelle A. Meadows, Calvin Teague & Frank Ludwig, Multifrequency HF Radar Measurements of Wind Vector and Wind Stress, **Radio Oceanography Workshop 4**, Mystic Island, Australia (April, 2004)

Vesecky, J. F., J. A. Drake, K. E. Laws, L. A. Meadows, S. J. Jacobs, C. C. Teague, F. L. Ludwig, J. D. Paduan & K. Davidson, Multifrequency HF Radar Mapping of Friction Velocity and Vector Wind Field, **The Oceanography Society Conference**, Honolulu HI (Feb., 2004)

- Vesecky, J. F., J. Drake, K. Laws, C. C. Teague and F. L. Ludwig, HF radar measurements of surface wind field, **Oceans 2003**, San Diego CA (Sept., 2003)
- Fernandez, D. M., J. F. Vesecky & C. C. Teague, Calibration of HF Radar Systems with Ships of Opportunity, **Proc. IGARSS 2003**, IEEE Press, Piscataway NJ (July, 2003)
- Vesecky, J. F., K. E. Laws, J. A. Drake, C. C. Teague, D. M. Fernandez & J. D. Paduan, Merging Surface Current Data from HF Radars Operating at Different Frequencies, **Proc. IGARSS 2003**, IEEE Press, Piscataway NJ (July, 2003)
- Drake, J., John Vesecky, Kenneth Laws, Calvin Teague, Frank Ludwig & Jeff Paduan, Vector wind field measurements using multifrequency HF radar, **Radio Oceanography Workshop 3**, Trieste, Italy (April, 2003)
- Vesecky, J. F., Jessica Drake, Kenneth Laws, Calvin Teague, Dan Fernandez & Jeff Paduan, Constructing Surface Current Maps from HF Radars with Different Operating Frequencies, **Radio Oceanography Workshop 3**, Trieste, Italy (April, 2003)
- Drake, J., John Vesecky, Kenneth Laws, Calvin Teague, Frank Ludwig and Jeff Paduan, Vector wind field measurements using multifrequency HF radar, **Proc. 7th IEEE/OES Working Conference on Current Measurement Technology**, IEEE Press, Piscataway NJ (2003)
- Meadows, L. A., S. Jacobs and J. F. Vesecky, High Frequency Radar Measurements of Friction Velocity In The Marine Boundary Layer, **Proc. 7th IEEE/OES Working Conference on Current Measurement Technology**, IEEE Press, Piscataway NJ (2003)
- Vesecky, J. F., Jessica Drake, Kenneth Laws, Calvin Teague, Dan Fernandez and Jeff Paduan, Constructing Surface Current Maps from HF Radars with Different Operating Frequencies, **Proc. 7th IEEE/OES Working Conference on Current Measurement Technology**, IEEE Press, Piscataway NJ (2003).
- Teague, C. C., J. F. Vesecky and P. E Hansen, Multifrequency Coastal Radar System Overview, **Proc. Radiowave Oceanography: The First International Workshop** (eds. H. Graber and J. Paduan), 36-41, University of Miami, Miami FL (2003)
- Teague, C. C. and J. F. Vesecky, Effective depth of HF radar current measurements from COPE-3 observations, **Proc. Radiowave Oceanography: The First International Workshop** (eds. H. Graber and J. Paduan), 62-67, University of Miami, Miami FL (2003)
- Hyland, D. J. and J. F. Vesecky, Basic advances in system architecture for interferometric imaging formations, **Proc. International Symposium on Formation Flying: Missions and Technologies**, Toulouse France, Oct. 29-31 (2002)

- Vesecky, J. F., J. A. Drake, C. C. Teague, F. L. Ludwig, K. Davidson & J. D. Paduan, Measurement of Wind Speed and Direction using Multifrequency HF Radar, **Proc. IGARSS 2002**, IEEE Press, Piscataway NJ (2002)
- Vesecky, J. F., J. A. Drake, M. A. Plume, L. A. Meadows, C. C. Teague, F. L. Ludwig, D. M. Fernandez and C. Whalen, MCR-SeaSonde Comparisons on Monterey Bay, **Radio Oceanography Workshop 2**, Brest, France (April, 2002)
- Vesecky, J. F., J. A. Drake, M. A. Plume, P. E. Hansen, L. A. Meadows, C. C. Teague, F. L. Ludwig, D. M. Fernandez and C. Whalen, Vector Winds from HF Radar, **Radio Oceanography Workshop 2**, Brest, France (April, 2002)
- Vesecky, J. F., Jessica Drake, Michal Plume, L. Meadows, Y. Fernandez, P. Hansen, Calvin C. Teague, Dan Fernandez, K. Davidson and Jeff Paduan, Multifrequency HF Radar Observations of Surface Currents: Measurements from different systems and environments, **Proc. Oceans 2001 Conf.**, IEEE Press, Piscataway NJ (Nov., 2001).
- Vesecky, J. F., Ricardo Torres, Ajay Bharadwaj, Gabriel Loya, Nicholas Avlas and Scott Molton, Earth View – Third Millennium: A Student Designed 1 ft. Resolution, Interferometric Imaging Spacecraft, Paper AIAA 2001-4771, **Proc. American Institute of Aeronautics and Astronautics National Conference**, Albuquerque NM (Aug. 2001)
- Vesecky, J. F., Y. Fernandez, K. Davidson, J. D. Paduan, C. C. Teague, J. Drake and M. A. Plume, Air-sea interaction observed by HF radar on Monterey Bay, **Proc. IGARSS 2001**, IEEE Press, Piscataway NJ (July, 2001)
- Vesecky, J. F., L. A. Meadows, C.C. Teague, P. E. Hansen, M. A. Plume and Y. Fernandez, Surface current observations by HF radar during EEGLE 2000, **Proc. IGARSS 2001**, (July, 2001)
- Teague, C. C., J. F. Vesecky & Z. R. Hallock, Effective depth of HF current measurements: Observations from COPE-3, **Proc. IGARSS 2001**, IEEE Press, Piscataway NJ (July, 2001)
- Wang, N-Y, D. Lyzenga and J. F. Vesecky, Ocean surface wind vector estimation using passive microwave remote sensing, **IGARSS '01**, Sydney, Australia, July (2001)
- Lyzenga, D., J. Vesecky and N-Y Wang, An analytical two-scale model for the microwave emissivity of the ocean surface, **2001 IEEE AP-S/URSI Symposium**, Boston MA, July (2001)
- Vesecky, J. F., Multi-frequency and single-frequency surface current measurement comparison, **ONR Radio Oceanography Workshop**, Timberline Lodge OR (April 2001)

- Meadows, L. A., J. F. Vesecky, C. C. Teague & P. R. Hanzen, Multifrequency radar observations of near-shore zone in Lake Michigan, EEGLE'99, **Proc. IGARSS'2000**, IEEE, Piscataway NJ (2000)
- Teague, C.C., L. A. Meadows, J. F. Vesecky and Y. Fernandez, HF radar observations of surface currents during EEGLE 1999, **Proc. IGARSS'2000**, IEEE Press, Piscataway NJ (2000)
- Vesecky, J. F., L. A. Meadows, M. A. Plume, P. E. Hansen et al., HF radar measurements of surface currents in fresh water, **Proc. IGARSS'2000**, IEEE Press, Piscataway NJ (2000)
- Wang, N-Y, J. F. Vesecky, and D. R. Lyzenga, Ocean surface wind estimation using passive polarimetric microwave observations, **Proc. IGARSS '00** (2000)
- Vesecky, J. F., M. A. Plume, C. C. Teague, L. A. Meadows, P. E. Hansen, D. M. Fernandez and J. D. Paduan, Ship Detection with Decameter (HF) Groundwave and Skywave Radar Systems: A Brief Overview, **AMRS Ship Detection Workshop Proceedings**, Website: [www.amrs.org](http://www.amrs.org). Invited Paper (2000)
- Fernandez, D. M., J. F. Vesecky & C. C. Teague, Ship location measurements with CODAR & multifrequency HF radar, **Proc. AMRS Ship Detection Workshop**, Website: [www.amrs.org](http://www.amrs.org). (2000).
- Vesecky, J. F., L. A. Meadows, C. C. Teague and P. E. Hansen, HF Radar Measurements of Surface Currents and Circulation in Lake Michigan, **NOAA EEGLE/KITE Workshop**, Traverse City MI (Nov. 1999)
- Teague, C. C., J. F. Vesecky and Z. R. Hallock, Multifrequency HF Radar Observations of the Vertical Structure of Near-Surface Currents during COPE-3, **IGARSS'99 Conference Proceedings**, IEEE Press, Piscataway NJ (1999)
- Vesecky, J. F., L. A. Meadows, D. M. Fernandez, C. C. Teague, J. M. Daida, J. R. Paduan, R. R. Delgado and P. E. Hansen, HF Radar Observations of Wind-Current Relationships at the Air-Sea Boundary, **IGARSS'99 Conference Proceedings**, IEEE Press, Piscataway NJ (1999)
- Wang, N-Y and J. F. Vesecky, Sea Surface Temperature Estimation using Active/Passive Microwave Remote Sensing, **IGARSS'99 Conference Proceedings**, IEEE Press, Piscataway NJ (1999)
- Fernandez, D. M., J. F. Vesecky, C. C. Teague, J. D. Paduan and K. E. Laws, Ship Detection with High-Frequency Phased-Array and Direction-Finding Radar Systems, **IGARSS'98 Conference Proceedings**, IEEE Press, Piscataway NJ (1998)

Laws, K. E., D. M. Fernandez, J. D. Paduan, C. C. Teague and J. F. Vesecky, Simulation Studies of Errors in HF Radar Ocean Surface Current Measurements, **IGARSS'98 Conference Proceedings**, IEEE Press, Piscataway NJ (1998)

Teague, C. C., D. M. Fernandez, K. E. Laws, J. D. Paduan and J. F. Vesecky, Comparison of Multifrequency Phased-Array and Direction-Finding Systems during COPE-3, **IGARSS'98 Conference Proceedings**, IEEE Press, Piscataway NJ (1998)

Vesecky, J. F., C. C. Teague, J. M. Daida, D. M. Fernandez, R. G. Onstott, P. E. Hansen, K. E. Laws and M. A. Plume, Observations of Currents from the Near-Surface to 50 m depth using a new Multifrequency HF Radar and ADCP located in the Observational Area, **IGARSS'98 Conference Proceedings**, IEEE Press, Piscataway NJ (1998)

Lettvin, E. E. and J. F. Vesecky, An Evaluation of Cost Functions Applied to Scatterometer-Based Wind Retrieval, **IGARSS'98 Conference Proceedings**, IEEE Press, Piscataway NJ (1998)

Vesecky, J. F., F. L. Ludwig, C. C. Teague, W. Nuss, R. G. Onstott, P. E. Hansen, D. M. Fernandez, J. M. Daida and K. Fischer, Estimating the surface wind field over coastal oceans using multifrequency high frequency radar and in situ observations, **Proceedings of the Second Conference on Coastal Atmospheric and Oceanic Prediction Processes**, 115-121, American Meteorological Society, Boston MA (1998)

Bersano-Begey, T.F., J.M. Daida, J.F. Vesecky, F.L. Ludwig, "A Java Collaborative Interface for Genetic Programming Applications: Image Analysis for Scientific Inquiry," 477-482, **Proc. IEEE International Conference on Evolutionary Computation 1997**, IEEE Press, Piscataway NJ (1997)

Bertram, R.R., J.M. Daida, J.F. Vesecky, G.A. Meadows, and C. Wolf, Reconstructing Incomplete Signals Using Nonlinear Interpolation and Genetic Algorithms, Late Breaking Papers at the **Genetic Programming 1997 Conference**, J.R. Koza (ed.), 19-27, Stanford University Bookstore, Stanford CA (1997)

Vesecky, J. F., C. C. Teague, R. G. Onstott, J. M. Daida, P. E. Hansen, D. M. Fernandez, N. Schnepf and K. Fischer, Surface current response, to land-sea breeze circulation in Monterey Bay, California as observed by a new multifrequency HF radar, **Proc. Oceans'97 Conf.**, IEEE Press, Piscataway NJ (1997)

Wang, N-Y and J. F. Vesecky, Active/Passive Microwave Method for Sea Surface Temperature Estimation, **Proc. Oceans'97 Conf.**, IEEE Press, Piscataway NJ (1997)

Lettvin, E. and J. F. Vesecky, An Aggregate Spectral Model for ERS-1 Wind Retrieval, **IGARSS '97 Conf. Proc.**, IEEE Press, Piscataway NJ (1997)

Teague, C. C., J. F. Vesecky, P. E. Hansen, N. G. Schnepf, J. M. Daida, R. G. Onstott, K. Fischer and D. M. Fernandez, Initial observations of ocean currents, current shears and wind direction using multi-frequency HF radar, **IGARSS '97 Conf. Proc.**, IEEE Press, Piscataway NJ (1997)

Vesecky, J. F., C. C. Teague, R. G. Onstott, P. E. Hansen, N. Schnepf, D. M. Fernandez, J. M. Daida and K. Fischer, Observations of near-surface ocean currents at varying depths using a new multifrequency HF radar, **IGARSS '97 Conf. Proc.**, IEEE Press, Piscataway NJ (1997)

Bersano-Begey, T.F., J.M. Daida, J.F. Vesecky, and F.L. Ludwig, A Platform-Independent Collaborative Interface for Genetic Programming Applications: Image Analysis for Scientific Inquiry, Late Breaking Papers at the **Genetic Programming 1996 Conference**, J.R. Koza (ed.), 1–8, Stanford University Bookstore, Stanford CA (1996)

Daida, J.M., T.F. Bersano-Begey, S.J. Ross, and J.F. Vesecky, Computer-assisted design of image classification algorithms: dynamic and static fitness evaluations in a scaffolded genetic programming environment, **Genetic Programming 1996: Proceedings of the First Annual Conference**, J.R. Koza, D.E. Goldberg, D.B. Fogel, and R.L. Riolo (eds.), 279–284, MIT Press, Cambridge MA (1996)

Daida, J. M., R. R. Bertram, D. R. Lyzenga, C. Wolf, D. T. Walker, S. A. Stanhope, G. A. Meadows, J. F. Vesecky and D. E. Lund, Measuring small-scale water surface waves: Nonlinear interpolation and integration techniques for slope-image data, **IGARSS '96 Conf. Proc.**, 2219-2221, IEEE Press, Piscataway NJ (1996)

Daida, J. M., T. F. Bersano-Begey, S. J. Ross and J. F. Vesecky, Evolving feature-extraction algorithms: adapting genetic programming for image analysis in geoscience and remote sensing, **IGARSS '96 Conf. Proc.**, 2077-2079, IEEE Press, Piscataway NJ (1996)

Daida, J. M., R. G. Onstott, T. F. Bersano-Begey, S. J. Ross and J. F. Vesecky, Ice roughness classification and ERS SAR imagery of Arctic sea ice: Evaluation of feature-extraction algorithms by genetic programming, 1520-1522, **IGARSS '96 Conf. Proc.**, 891-892, IEEE Press, Piscataway NJ (1996)

Vesecky, J. F. and J. M. Cornwall, Integrated design of synthetic aperture radars for unmanned aircraft, **IGARSS '96 Conf. Proc.**, 2347-2348, IEEE Press, Piscataway NJ (1996)

Vesecky, J. F., F. L. Ludwig, J. M. Daida, N. Chinchilla and G. Kimbrea, Seagulls and SAR: Atmospheric convection effects in SAR images over the ocean, **IGARSS '96 Conf. Proc.**, 891-892, IEEE Press, Piscataway NJ (1996)

Daida, J.M., J.D. Hommes, S.J. Ross, A.D. Marshall, & J.F. Vesecky, Extracting curvilinear features from SAR images of arctic ice: algorithm discovery using the genetic programming paradigm, **IGARSS'95 Conf. Proc.**, T. Stein (ed.), 673-675, IEEE Press, Piscataway NJ (1995)

Daida, J.M., D.E. Lund, C. Wolf, G.A. Meadows, K. Schroeder, J.F. Vesecky, D.R. Lyzenga, and R. Bertram, Measuring topography of small-scale water surface waves, **IGARSS'95 Conf. Proc.**, T. Stein (ed.), 1881-83, IEEE Press, Piscataway NJ (1995)

Daida, J. M., R. R. Bertram, B. C. Hannan, C. Wolf, D. R. Lyzenga, D. E. Lund, G. A. Meadows and J. F. Vesecky, Nonlinear surface reconstruction: imaging topography of small-scale water waves, **IEEE Intl. Conf. on Image Processing (ICIP-95)**, IEEE Press, Piscataway NJ (1995)

de la Sierra, R. U., J. F. Vesecky, and W. Drake, A preliminary approach to the examination of population-environment dynamics in the United States/Mexico border region using integrated remote sensing and field data, **IGARSS '95 Conf. Proc.**, 1545-48, IEEE Press, Piscataway NJ (1995)

Wang, N-Y, J. F. Vesecky, K. Fischer, R. G. Onstott and R. A. Shuchman, Sea surface temperature estimation using active/passive microwave remote sensing: outdoor experiment and model comparison, **IGARSS '95 Conf. Proc.**, 1375-77, IEEE Press, Piscataway NJ (1995)

Vesecky, J. F., Surface film effects on the radar cross section of the ocean surface, **IGARSS '95 Conf. Proc.**, 1381-83, IEEE Press, Piscataway NJ (1995)

Daida, J. M., N. H. F. French, R. G. Onstott, F. J. Tanis and J. F. Vesecky, Extracting seasonal parameters of sea ice morphology from SAR imagery: Size distribution of first-year ice, in press, **IGARSS '94 Conf. Proc.**, IEEE Press, Piscataway NJ (1994)

Daida, J. M., P. B. Russel, T. L. Crawford and J. F. Vesecky, An unmanned aircraft vehicle system for boundary-layer flux measurements over forest canopies, in press, **IGARSS '94 Conf. Proc.**, IEEE Press, Piscataway NJ (1994)

Vesecky, J. F., R. G. Onstott, N-Y Wang, E. Lettvin, J. Slawski and R. A. Shuchman, Water surface temperature estimates using active and passive microwave remote sensing: Preliminary results from an outdoor wind-wave tank, **IGARSS '94 Conf. Proc.**, IEEE Press, Piscataway NJ (1994)

Vesecky, J. F., Radar cross section of the ocean surface when surface films are present: A model calculation using Marangoni wave damping theory, **IGARSS '94 Conf. Proc.**, IEEE Press, Piscataway NJ (1994)

Jensen, G. A., and J. F. Vesecky, Non-Fourier spectral characterizations of the ocean surface: New theoretical models of ocean surface radar scattering, II-19 to II-24, **Oceans '93 Conf. Proc.**, IEEE Press, Piscataway NJ (1993)

Daida, J.M., J.F. Vesecky, P.B. Russell, and T. Crawford, A remote sensing unmanned aircraft vehicle system for flux measurements over forest canopies, **Proceedings of the Topical Symposium on Combined Optical-Microwave Earth and Atmosphere Sensing**, 126–129, IEEE Press, Piscataway NJ (1993)

Fernandez, D. M., C.C. Teague, J. F. Vesecky and J. Roughgarden, HF radar observations of coastal currents and upwelling near Monterey CA, 1931-1933, **IGARSS '93 Conf. Proc.**, IEEE Press, Piscataway NJ (May, 1993)

Vesecky, J. F., M. P. Smith, J. M. Daida and R. Samadani, Measurement of pressure ridges in SAR images of sea ice: Scattering Theory and Comparison with Observations, 955-997, **IGARSS '92 Conf. Proc.**, Houston, Texas (May, 1992)

Vesecky, J. F., J. Slawski, B. Stottlemeyer, de la Sierra, R., J. Daida, B. Wood and J. Lawless, MEDSAT: A remote sensing satellite for malaria early warning and control, 28-30, **IGARSS '92 Conf. Proc.**, Houston, Texas (May, 1992)

Jensen, G. A. and J. F. Vesecky, Diffraction from sharply peaked waves as an ocean surface scattering mechanism, 1771-1773, **IGARSS '92 Conf. Proc.**, Houston, Texas (May, 1992)

Lin, Q., J. F. Vesecky and H. A. Zebker, Registration of interferometric SAR images, 1579-1581, **IGARSS '92 Conf. Proc.**, Houston, Texas (May, 1992)

Daida, J. M. and J. F. Vesecky, Robustness of Spann-Wilson segmentation on SAR imagery, 881-883, **IGARSS '92 Conf. Proc.**, Houston, Texas (May, 1992)

Lin, Q., J. F. Vesecky and H. A. Zebker, Comparison of interferometric SAR data with a digital terrain model over large relief terrain, **Proc. International Space Year Conference on Earth and Space Science Information Systems**, Pasadena CA (Feb., 1992)

Lin, Q., J. F. Vesecky and H. A. Zebker, Phase unwrapping through least squares approximation, **Proc. SPIE/IS&T Symposium on Electronic Imaging: Science and Technology**, San Jose CA (Feb., 1992).

Slawski, J. J., J. F. Vesecky, B. Wood and J. Lawless, MEDSAT: A small satellite for malaria early warning and control, **Proc. of the AIAA/Utah St. Univ. 5th Annual Conf. on Small Satellites**, (Aug. 1991).

Daida, J. M. and J. F. Vesecky, Mathematical morphology for automated analysis of remotely sensed objects in radar images, **IGARSS '91 Conf. Proc.**, 1795-1799 , Espoo, Finland (June, 1991).

Lin, Q., J. F. Vesecky and H. A. Zebker, Topography estimation with interferometric SAR data processing, **IGARSS '91 Conf. Proc.**, 2173-2176, Espoo, Finland (June, 1991).

Samadani, R. and J. F. Vesecky, A finite mixtures algorithm for finding classes in images, **IGARSS '91 Conf. Proc.**, 1835-1838 , Espoo, Finland (June, 1991).

Vesecky, J. F., M. P. Smith, R. Samadani, J. M. Daida and J. C. Camiso, Automated extraction of pressure ridges from SAR images of sea ice: Comparison with surface truth, **IGARSS '91 Conf. Proc.**, 421-424 , Espoo, Finland (June, 1991).

Daida, J.M., R. Samadani, and J.F. Vesecky, Adaptive image segmentation applied to extracting the auroral oval from satellite images, **IGARSS '90 Conf. Proc.**, 1649, IEEE Press, Piscataway NJ (1990)

Daida, J.M. and J.F. Vesecky, Object-Oriented Techniques for SAR Images of the Marginal Ice Zone, **IGARSS '90 Conf. Proc.**, 1885, IEEE Press, Piscataway NJ (1990)

Vesecky, J. F., M. P. Smith and R. Samadani, "Remote Sensing of Pressure Ridge and Lead Characteristics Using SAR Images of Sea Ice", **IGARSS '90 Conf. Proc.**, IGARSS '90, in press, College Park MD, (May, 1990).

Fernandez, D. M., J. F. Vesecky, J. Roughgarden, C. C. Teague and D. J. Napolitano, "Use of High Frequency Radar for the Measurement of Ocean Surface Currents", **IGARSS '90 Conf. Proc.**, IGARSS '90, College Park MD, (May, 1990).

Samadani, R. and J. F. Vesecky, "Using optimally pruned decision trees to find objects in speckled images", **IGARSS '90 Conf. Proc.**, IGARSS '90, College Park MD, (May, 1990).