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Irina N. Sokolik

CURRICULUM VITAE

Sokolik, Irina N.

Professor
School of Earth and Atmospheric Sciences
Georgia Institute of Technology
Atlanta, GA, 30332-0340
Ph.: 404-894-6180 Fax: 404-894-5638
E-mail: isokolik@eas.gatech.edu

PERSONAL DATA:

Born: January 1, 1961, Former USSR (Naturalized U.S. citizen)

EDUCATION:

1984	M.S.	Atmospheric physics	Moscow Institute of Physics and Technology
1989	Ph.D.	Atmospheric physics	Russian Academy of Sciences, Moscow

EMPLOYMENT HISTORY:

2003-present	Professor, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta, GA.
1999-2003	Associate Professor, Program in Atmospheric and Oceanic Sciences, University of Colorado at Boulder.
1997-1999	Research Associate, PAOS/LASP, University of Colorado at Boulder.
1996-1997	Research Scientist, Bay Area Environmental Research Institute, and NASA/Ames Research Center, Moffett Field, CA.
1993-1996	Research Associate, NASA/Ames Research Center, Moffett Field, CA
1991-1993	Visiting Scientist, CIRES, University of Colorado at Boulder.
1992-1993	Senior Scientist, Institute of Atmospheric Physics, Russian Academy of Sciences, Moscow.
1984-1992	Research Scientist, Institute of Atmospheric Physics, Russian Academy of Sciences, Moscow.

CURRENT FIELD OF INTEREST:

Radiative transfer, remote sensing science and applications; impacts of aerosol and clouds on the Earth radiation balance, hydrological cycle and terrestrial ecosystems; aerosol-land-atmosphere interactions; process-level understanding of the dynamics and properties of atmospheric aerosols and clouds and their effects on the environment, climate, air quality and atmospheric chemistry; integration of ground-based and satellite data with mesoscale transport models, and Earth system science.

Honors, Awards, and Recognitions:

- 2013 *Certificate of Appreciation* in recognition of valuable contribution and outstanding support to the In-Space Verification of Science Technology (InVEST) Program at the NASA Earth Science Division.
- 2013 *Georgia Institute of Technology 10-year Service Award*
- 2010 *Outstanding PhD Thesis Advisor Award*, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta.
- 2009 *Certificate of Appreciation* for valuable contributions that have helped make IPY2007-2008 a success and an enduring example of international collaboration. World Meteorological Organization and International Council for Science.
- 2008 *Certificate of Appreciation* in recognition of valuable contribution and outstanding support to the Instrument Incubator Program (IIP) and the NASA Earth Science Technology Office.
- 2008, 2009 *Thank A Teacher Certificates* for excellence in teaching, CETL Georgia Institute of Technology, Atlanta.
- 2008 *Outstanding Faculty Leadership for the Development of Graduate Research Assistants Award*, School of Earth and Atmospheric Sciences, Georgia Institute of Technology, Atlanta.
- 1991 - 1992 Visiting Scientist Fellowship, CIRES, University of Colorado at Boulder.
- 1993 - 1996 Research Associateship, National Research Council/NASA Ames Research Center.

TEACHING EXPERIENCE:

- Fall13 EAS8802 Special Topic: Satellite data analysis (1 student)
- Spring13 EAS8802 Clouds, aerosols and climate (6 students)
- Spring13 EAS6145 Remote sensing of the atmosphere and oceans (20 students)
- Spring12 EAS8803 Atmospheric radiative transfer (9 students)
- Spring11 EAS8802 Clouds, aerosols and climate (10 students)
- Spring11 EAS6145 Remote sensing of the atmosphere and oceans (20 students)
- Fall10 EAS8802 Special Topic: Mathematical methods in climate (1 student)
- Fall09 EAS8803 Atmospheric radiative transfer (9 students)
- Fall08: EAS6145 Remote sensing of the atmosphere and oceans (20 students)
- Spring08: EAS8803 Aerosol and Precipitation (7 students)
- Fall07: EAS8803 Atmospheric radiative transfer (11 students)
- Spring07: EAS6145 Remote sensing of the atmosphere and oceans (11 students)
- Spring06: EAS8802 Clouds, aerosols and climate (13 students)
- Fall05: EAS8803 Atmospheric radiative transfer (8 students)
- Spring05: EAS8803 Remote sensing of the atmosphere and oceans (8 students)
- Spring04: EAS8803 Remote sensing of the atmosphere and oceans (7 students)
- Spring04: ATOC6020 Modeling and measurements of atmospheric aerosols (10 students)
- Fall03: ATOC6020 Modeling and measurements of atmospheric aerosols (6 students)
- Spring03: ATOC5235 Remote sensing of the atmosphere and oceans (24 students)
- Spring03: ATOC6020 Modeling and measurements of atmospheric aerosols (5 students)
- Fall02: ATOC5560 Introduction to radiative transfer processes (16 students)
- Fall02: ATOC6020 Modeling and measurements of atmospheric aerosols (4 students)
- Spring02: ATOC5235 Remote sensing of the atmosphere and oceans (18 students)
- Spring02: ATOC6020 Modeling and measurements of atmospheric aerosols (4 students)
- Fall01: ATOC6020 Modeling and measurements of atmospheric aerosols (4 students)
- Fall00: ATOC/ASTR5560 Radiative transfer processes in planetary atmospheres (9 students)

PEER REVIEWED PUBLICATIONS (underscore indicates Sokolik students, post docs or researchers):

Xi, X. and I. N. Sokolik. "Seasonal dynamics of threshold friction velocity and dust emission in Central Asia." *Journal of Geophysical Research: Atmospheres* **120**(4): 1536-1564, 2015

Young, C. L., Dufek, J., and I.N. Sokolik, "Assessment of depositional ash loadings from the 2009 eruption of Mt. Redoubt." *Journal of Volcanology and Geothermal Research* **274**(0): 122-138, 2014

Lu, Z., and I.N. Sokolik, The effect of smoke emission amount on cloud properties and precipitation: A case study of Canadian boreal wildfires of 2007. *J.Geophys. Res.*, 118, doi:10.1002/2013JD019860, 2013.

Sokolik I.N, Dust, in *Encyclopedia of Atmospheric Sciences*. Second Edition. Academic Press, London, 2013.

Lu, Z., and I.N. Sokolik, Examining the cloud buffering under smoke-laden conditions: A case study of the 2002 Yakutsk wildfire season. In: *Nucleation and Atmospheric Aerosols*. DeMott, P. (Ed.), American Institute of Physics, 2013.

Schrader, S., I.N. Sokolik, B. Vogel, H. Vogel, K. Schäfer, and S. Norra, Use of satellite data for air quality applications in Northern China. *SPIE-Remote Sensing*, 2013.

Sokolik I.N, K. Darmenova, J. Huang, O. Kalashnikova, Y. Kurosaki, and X. Xi, Examining changes in land cover and land use, regional climate and dust in dryland East Asia and their linkages within the Earth system. In: *Dryland East Asia (DEA): Land dynamics amid social and climate change*. Editors: Chen, J., Wan, S. Henebry, G., Qi, J., Gutman, G., Sun, G., Kappas, M. HEP – De Gruyter, pp. 185-213, 2013.

Xi, X., and I.N. Sokolik, Impact of Asian dust aerosol and surface albedo on photosynthetically active radiation and surface radiative balance in dryland ecosystems. *Advances in Meteorology*, 2012, doi:10.1155/2012/276207, 2012.

Young, C., I.N. Sokolik, and J. Dufek, Regional radiative impact of volcanic aerosol from the 2009 eruption of Mt. Redoubt *Atmos. Chem. Phys.*, 12, 3699-3715, doi:10.5194/acp-12-3699-2012, 2012.

Alston, E., I.N. Sokolik, and O. Kalashnikova, Seasonal and interannual variability of atmospheric aerosols in the U. S. Southeast from ground and space based measurements over the past decade. *Atmos. Meas. Techn.*, amt-2011-161, 2012.

Zhang, H., I. N. Sokolik, and J. A. Curry, Impact of Saharan dust as nucleating aerosols on Hurricane Helene's early development, *Atmos. Chem. Phys. Disc.*, acp-2011-246, 2011.

Karydis, V.A., P. Kumar, D. Barahona, I.N. Sokolik, and A. Nenes, On the effect of dust particles on global CCN and cloud droplet number. *J.Geophys. Res.*, doi: 2011JD016283R, 2011.

Kalashnikova, O.V. , Garay, M.J., Sokolik, I.N., Diner, D.J., Kahn, R.A., Martonchik, J.V., Davis, A.B., Lee, J.N., Torres, O., Marshak, A., Goetz, M., Kassabian, S., and M. Chodas,

Capabilities and limitations of MISR aerosol products in dust-laden conditions for dust study applications. *SPIE-Remote Sensing*, doi:10.1117/12.897773, 2011.

Kumar, P., I.N. Sokolik, and A. Nenes, Measurements of cloud condensation nuclei activity and droplet activation kinetics of wet processed regional dust samples and minerals. *Atmos. Chem. Phys.*, acp-2011-272, 2011.

Alston, E., I.N. Sokolik, and B. Doddridge, Investigation into the use of satellite data in aiding characterization of particulate air quality in the Atlanta, Georgia metropolitan area, *Journal of the Air & Waste Management Association*, 61:211–225, 2011.

Lathem, T.L., P. Kumar, A. Nenes, J. Dufek, I.N. Sokolik, M. Trail, and A. Russell, Hygroscopic properties of volcanic ash. *Geophys. Res. Lett.*, doi:10.1029/2011GL047298, 2011.

Kumar, P., I.N. Sokolik, and A. Nenes, Measurements of cloud condensation nuclei activity and droplet activation kinetics of fresh unprocessed regional dust samples and minerals. *Atmos. Chem. Phys.*, 11, 1-15, 2011.

Sokolik, I.N., J. A. Curry, and V. Radionov, Interactions of Arctic aerosols with land-cover and land-use changes in Northern Eurasia and their role in the Arctic climate system. In *Arctic land-cover and land-use in a changing climate: Focus on Eurasia*, G.Gutman and A. Reissell (Eds.), Springer, 2011.

Waggoner, D., and I.N. Sokolik, Seasonal dynamics and regional features of MODIS-derived land surface characteristics in dust source regions of East Asia, *Remote Sensing of Environment*, 114, 2126-2136, 2010.

Kumar, P., A. Nenes, and I.N. Sokolik, The importance of adsorption for CCN activity and hygroscopic properties of mineral dust aerosol. *Geophys. Res. Lett.*, 36, L24804, doi:10.1029/2009GL040827, 2009.

Darmenoy, A., and I.N. Sokolik, Spatial variability of satellite visible radiances in dust and dust-cloud mixed conditions: implications for dust detection. *Geophys. Res. Lett.*, doi:10.1029/2009GL038383, 2009.

Darmenova, K., I.N. Sokolik, Y. Shao, B. Marticorena, and G. Bergametti, Development of a physically-based dust emission module within the Weather Research and Forecasting (WRF) model: Assessment of dust emission parameterizations and input parameters for source regions in Central and East Asia. *J. Geophys. Res.*, 114, D14201, doi:10.1029/2008JD011236, 2009.

Groisman, P.Ya., E. A. Clark, V. M. Kattsov, D. P. Lettenmaier, I.N. Sokolik, et al., The Northern Eurasia Earth Science Partnership: An example of science applied to societal needs. *Bulletin of American Meteorological Society*, 5, 671-688, 2009.

Kumar, P., I.N. Sokolik, and A. Nenes, Parameterization of cloud droplet formation for global and regional models: including adsorption activation from insoluble CCN, *Atmos. Chem. Phys.*, 9, 2517-2532, 2009.

Sokolik I.N., Global radiation balance. In *Encyclopedia of Ecology*, E. Jorgensen (Ed.), Elsevier, 2008.

Sokolik, I.N., and J. A. Curry, Impact of aerosols on the hydrological cycle in the Arctic. *GEWEX News*, v. 17, 11-12, 2007.

Groisman, P.Ya., I.N. Sokolik, G. Brasseur, K. Hibbard, and J. Katzenberger, Northern Eurasia land surface properties and change and its role in the Global Earth System. *EOS*, 88, 46, 2007.

Yang P., Q. Feng Q., G. Hong, G.W. Kattawar, W.J. Wiscombe, M.I. Mishchenko, O. Dubovik, I. Laszlo, and I.N. Sokolik, Modeling of the scattering and radiative properties of nonspherical dust-like aerosols. *J. of Aerosol Science*, 38, 995-1014, 2007.

Jeong, G., and I.N. Sokolik, The effect of mineral dust aerosols on photolysis rates in clean and polluted marine environments. *J. Geophys. Res.*, 112, D21308, doi:10.1029/2007JD008442, 2007.

Boer, G.J., I.N. Sokolik, and S.T. Martin, Infrared optical constants of aqueous sulfate-nitrate-ammonium multi-component tropospheric aerosols from attenuated total reflectance measurements: Part I. Results and Analysis of Spectral Absorbing Features. *J. Quant. Spectrosc. Radiat. Transfer*, doi:10.1016/j.jqsrt.2007.02.017, 2007.

Boer, G.J., I.N. Sokolik, and S.T. Martin, Infrared optical constants of aqueous sulfate-nitrate-ammonium multi-component tropospheric aerosols from attenuated total reflectance measurements: Part II. An examination of mixing rules. *J. Quant. Spectrosc. Radiat. Transfer*, doi:10.1016/j.jqsrt.2007.02.018, 2007.

Kampe, T. U., and I.N. Sokolik, Remote sensing retrievals of fine mode aerosol optical depth and impacts on its correlation with CO from biomass burning. *Geophys. Res. Lett.*, L12806, doi:10.1029/2007GL029805, 2007.

Groisman, P.Ya., H.H. Shugart, and I.N. Sokolik, Preface to Special Issue on Northern Eurasia Regional Climate and Environmental Change, *Global and Planetary Change*, 56, i-iv, 2007.

Darmenova K., and I.N. Sokolik, Assessing uncertainties in dust emission in the Aral Sea region caused by meteorological fields predicted with a mesoscale model, *Global and Planetary Change*, 56, 297-310, 2007.

Kim, S., L.G. Huey, R.E. Stickel, D.J. Tanner, J. H. Crawford, J.R. Olson, G. Chen, W. H. Brune, X. Ren, R. Leshner, P. J. Wooldridge, T. H. Bertram, A. Perring, R.C. Cohen, B., B. Lefer, R. E. Shetter, M. Avery, G. Diskin, and I.N. Sokolik, Measurement of HO₂NO₂ in the upper troposphere during INTEX-NA 2004, *J. Geophys. Res.*, D01102, doi:10.1029/2005JD007008, 2007.

Lafon S., I.N. Sokolik, J.L. Rajot, S. Caquineau, and A. Gaudichet, Characterization of iron oxides: implications to light absorption by mineral dust aerosols. *J. Geophys. Res.*, 111, D21207, doi:10.1029/2005JD007016, 2006.

Arimoto R., Y. J. Kim, Y. P. Kim, P. K. Quinn, T. S. Bates, T. Anderson, S. Gong, I. Uno, M. Chin, B. J. Huebert, A. D. Clarke, Y. Shinozuka, R. Weber, J. Anderson, S. A. Guazzotti, R. C. Sullivan, D. A. Sodeman, K. A. Prather, and I. N. Sokolik, Characterization of Asian Dust during ACE-Asia, *Global and Planetary Change*, 52, 23-56, 2006.

Hong, G., P. Yang, H.L. Huang, S. Ackerman, and I.N. Sokolik, Simulation of high-spectral-resolution infrared signature of overlapping cirrus clouds and mineral dust, *Geophys. Res. Lett.*, 33, L04805, doi:10.1029/2005GL024381, 2006.

Darmenov, A., and I.N. Sokolik, Identifying the regional thermal-IR radiative signature of mineral dust with MODIS, *Geophys. Res. Lett.*, 32, L16803, doi:10.1029/2005GL023092, 2005.

Miecznik G., R. Illing, S. Petroy, and I.N. Sokolik, Retrievals of aerosol properties from multi-angular and multi-spectral polarized radiances: Sensitivity study. *Applied Optics*, 44, 4186-4204, 2005.

Darmenova, K., I.N. Sokolik, and A. Darmenov, Characterization of East Asian dust outbreaks in Spring of 2001 using ground-based and satellite data. *J. Geophys. Res.*, doi:10.1029/2004JD004842, 2005.

Kalashnikova, O., R. Kahn, I.N. Sokolik, W.-H. Li, The ability of multi-angle remote sensing observations to identify and distinguish mineral dust types: Part 1. Optical models and retrievals of optically thick plumes. *J. Geophys. Res.*, 110, D18S14, doi:10.1029/2004JD004550, 2005.

Xuan, J., I.N. Sokolik, J. Hao, F. Guo, H. Mao, and G. Yang, Identification and characterization of sources of atmospheric mineral dust in east Asia. *Atmos. Envir.*, 38, 6239-6252, 2004.

Kalashnikova, O., and I.N. Sokolik, Modeling optical properties of nonspherical soil-derived dust aggregates. *J. Quant. Spectrosc. Radiative Transfer*, 87, 137-166, 2004.

Sokolik I.N, Dust, in Holton, J.P., J.A. Curry, and J. Doyle, (Eds.), *Encyclopedia of Atmospheric Sciences*. Academic Press, London, pp.668-672, 2003.

Sokolik I.N (contributing author) Chapter 4. Tropospheric aerosols, in G.P. Brasseur, R.G. Prinn, A. P. Pszenny (Eds.), *Atmospheric chemistry in a changing world*. Springer, pp.125-155, 2003.

Xuan, J., and I.N. Sokolik, Characterization of sources and emission rates of mineral dust in Northern China. *Atmos. Envir.* 36, 4863-4876, 2002.

Kalashnikova, O., and I.N. Sokolik, Importance of shapes and composition of wind-blown dust particles for remote sensing at solar wavelengths. *Geophys. Res. Lett.*, **29**, No.10, 10.1029/2002GL014947, 2002.

Sokolik, I.N., The spectral radiative signature of wind-blown mineral dust: Implications for remote sensing in the thermal IR region. *Geophys. Res. Lett.*, 10.1029/2002GL105910, 2002.

Sokolik I.N., Dust, in *Encyclopedia of Global Environmental Change*. John Wiley&Sons Ltd, 2001.

Sokolik I.N., D. Winker, G. Bergametti, D. Gillette, G. Carmichael, Y. Kaufman, L. Gomes, L. Schuetz, and J. Penner. Introduction to special section on mineral dust: outstanding problems in quantifying the radiative impact of mineral dust, *J. Geophys. Res.*, 106, 18,015-18,028, 2001.

Quijano, A. L., I. N. Sokolik, and O.B. Toon. Radiative heating rates and direct radiative forcing by mineral dust in cloudy atmospheric conditions. *J. Geophys. Res.*, 105, 12,207-12,219, 2000.

Quijano, A.L., I.N. Sokolik, and O.B. Toon, Influence of the aerosol vertical distribution on the retrievals of aerosol optical depth from satellite radiance measurements. *Geophys. Res. Let.*, 27, 3457-3460, 2000.

Sokolik I.N. and O.B. Toon. Incorporation of mineralogical composition into models of the radiative properties of mineral aerosol from UV to IR wavelengths. *J. Geophys. Res.*, 104, 9423-9444, 1999.

Sokolik, I.N., Nuts and bolts of radiative forcing by mineral dust. *IGACTivities Newsletter*, Issue 17, 12-14, May 1999.

Sokolik, I.N., Challenges add up in quantifying radiative impact of mineral dust. *Eos*, 80, p.578, 1999.

Sokolik, I.N. and O.B. Toon. Modeling the radiative properties of mineral aerosols for climate studies and remote sensing applications. *J. Aerosol Sci.* 29, Suppl. 1, S1199-S1200, 1998.

Sokolik, I.N., O.B. Toon, and R.W. Bergstrom. Modeling the radiative characteristics of airborne mineral aerosols at infrared wavelengths. *J. Geophys. Res.* 103, 8813-8826, 1998.

Sokolik, I.N. and O.B. Toon. Regional direct radiative forcing by the airborne mineral aerosols. *J. Aerosol Sci.* 28, Suppl. 1, S655-S657, 1997.

Sokolik, I.N., F.P.J. Valero, and P. Pilewskie. Spatial and temporal variations of the radiative characteristics of the plume from the Kuwait oil fires. In "Biomass burning and global climate change", Levine J.S., Ed., MIT Press: Cambridge, MA, pp. 889-893, 1996.

Sokolik, I.N. and O.B. Toon. Direct radiative forcing by anthropogenic airborne mineral aerosols. *Nature* 381, 681- 683, 1996.

Sokolik, I.N. and O.B. Toon. Direct radiative forcing by airborne mineral dust. *J. Aerosol Sci.* 27, Supplement 1, S11, 1996.

Sokolik, I.N. and Golitsyn G.S. Investigation of optical and radiative properties of atmospheric dust aerosols. *Atmos. Envir.* 16, 2509-2517, 1993.

Panchenko, M.V., Terpugova S.A., Bodhaine B.A., Isakov A.A., Sviridenkov M.A., Sokolik I.N., Romashova E.V., Nazarov B.I., Shukurov A.K., Chistyakova and Jonhson T.C. Optical investigation of dust storms during U.S.S.R.-U.S. experiments in Tadzhikistan, 1989. *Atmos. Envir.* 16, 2503-2508, 1993.

Sviridenkov M.A., Gillettee D.A., Isakov A.A., Sokolik I.N., Smirnov V.V., Belan B.D., Panchenko M.V., Andronova A.V., Kolomiets S.M., Zhukov V.M., and Zhukovsky D.A. Size distribution of dust aerosol measured during the Soviet-American experiment in Tadzhikistan, 1989. *Atmos. Envir.* 16, 2518-2523, 1993.

Sokolik I.N., Andronova A.V., and Jonhson T.C. Complex refractive index of atmospheric dust aerosols. *Atmos. Envir.* 16, 2495-2502, 1993.

Sokolik I.N. Microphysical, optical and radiative properties of arctic aerosols. *Izvestiya Acad.Sci., Atmos. and Oceanic Physics*, 7, 675-688, 1992.

Sokolik I.N. and G.S. Golitsyn. Optical and radiative properties of dust aerosol. *Izvestiya Acad.Sci., Atmos. and Oceanic Physics*, 28, 787-797, 1992.

Andronova A.V., Belan B.D., Gillette D.A., Isakov A.A., Zhukov V.M., Zhukovsky D.A., Kolomiets S.M., Panchenko M.A., Sviridenkov M.A., Sokolik I.N., Microphysical characteristics of the dust aerosol by the results of the Soviet-American experiment. *Izvestiya Acad.Sci., Atmos. and Oceanic Physics*, 28, 798-804, 1992.

Isakov A.A., Nazarov B.I., Panchenko M.V., Pirogov S.M., Romashova E.V., Sviridenkov M.A., Sokolik I.N., Terpugova S.A., Fedorova E.K., Chistyakova E.I. and A.K. Shukurov, Optical properties of dust plumes. *Izvestiya Acad.Sci., Atmos. and Oceanic Physics*, 28, 805-812, 1992.

Pirogov S.M., Romashova E.V. and I.N. Sokolik, Measurements of optical and radiative characteristics of dust aerosol. In: *Joint Soviet-American experiment on arid aerosol: Tadzhikistan, USSR, September 1989*, Ed. Golitsyn G.S., Hydrometeoizdat, Leningrad, 21-26, 1992.

Andronova A.V. and I.N. Sokolik, Optical constants of atmospheric dust aerosols. In : *Joint Soviet-American experiment on arid aerosol: Tadzhikistan, USSR, September 1989*. Ed. Golitsyn G.S., Hydrometeoizdat, Leningrad, 45-52, 1992.

Sokolik I.N. Parameterization of the optical characteristics of a polydispersed aerosol system. *Atmos. Optics* 2, 472-476, 1989.

Ginzburg A.S. and I.N. Sokolik, Transmission and reflection of light by a uniform layer of absorbing aerosol. *Izvestiya Acad.Sci., Atmos. and Oceanic Physics* v.25, 9, 700-704, 1989.

Sokolik I.N. Investigation of optical and radiative-climatic effects of absorbing aerosols. Ph.D. thesis, Ins. of Atmos. Physics, USSR Acad.Sci., Moscow, 116 p., 1989.

Sokolik I.N. Investigation and parameterization of optical characteristics of polydispersive absorbing aerosols. Publications of the Ins. of Atmos. Physics, USSR Acad.Sci., Moscow, 46 p., 1989.

Sokolik I.N. Interpretation of the measurements of optical characteristics of smoke aerosol. *Izvestiya Acad.Sci., Atmos. and Oceanic Physics* 24, 200-204, 1988.

Sokolik I. N., Tarasova T.A., and Feigelson E.M. Optical characteristics of smoked atmosphere and radiative heating. *Meteorology and Gidrologiya*, 11, 53-61, 1986.

MEETINGS AND SYMPOSIA (underscore indicates Sokolik students, post docs or researches):

Invited:

Sokolik, I.N., et al., Understanding the linkages between climate, land use, and land degradation in Central Asia, 2014 Fall Meeting, AGU, San Francisco, CA, Dec. 15-19, 2014

Sokolik, I.N., et al., Understanding the linkages between climate, land use, and land degradation in Central Asia. 2013 Fall Meeting, AGU, San Francisco, CA, Dec. 9-13, 2013.

Sokolik, I.N., Roles of atmospheric dust in the Earth system, Ninth Santa Fe Conference on Rock Magnetism, Santa Fe, NM, June 21-24, 2012.

Sokolik, I.N., Towards an improved understanding of processes and multiscale variability of dust aerosol through the integration of a regional fully-coupled dust modeling system WRF-Chem-DuMo and multi-satellite, multi-sensor data. NASA/Goddard, April 19, 2012.

Kalashnikova, O.V., M. A. Garay, I. N. Sokolik, R. Kahn, A. Lyapustin, D. J. Diner, J. Lee, O. Torres, G. G. Leptoukh, and M. de la Torre Juarez' MISR decadal observations of mineral dust: property characterization, and climate applications. 2011 Fall Meeting, AGU, San Francisco, CA, Dec. 5-9, 2011.

Sokolik, I.N., Characterization of morphology of mineral dust particles for remote sensing applications and atmospheric transport models. A44C-05, 2010 Fall Meeting, AGU, San Francisco, CA, Dec. 13-19, 2010.

Sokolik, I.N., G. Boer, H. Choi, A. Darmenov, O. Kalashnikova, and D. M. Winker, Towards an integrated framework for characterizing mineral dust aerosol from multi-satellite, multi-sensor observations and regional transport model data, EOS Trans. AGU, 90(52), Fall Meet. Suppl. 2009.

Sokolik, I.N., Mineral dust, AAAR tutorial, 26 Oct., Minneapolis, MN, 2009.

Sokolik, I.N., Progress and challenges in dust radiative modeling for passive/active remote sensing and climate models. Third International Dust Workshop, Leipzig, Germany, September, 2008.

Sokolik, I.N., A. Darmenov, K. Darmenova, Characterization of atmospheric mineral dust with remote sensing and the regional transport model WRF-DuMo. EOS Trans. AGU, Joint Assembly, Suppl.2008.

Sokolik, I.N., Atmospheric aerosols in high altitudes. NEESPI Regional Science Team Meeting devoted to the High Latitudes/ iLEAPS , Helsinki, Finland, 2-6 June, 2008.

Sokolik, I.N., Overview of radiation and arctic aerosol interactions with LCLUC. NASA LCLUC Science Team meeting, 28 April – May2, Adelphi, MD, 2008.

Sokolik, I.N., Aerosols and land interactions. NASA LCLUC Science Team meeting, 4-6 April, Adelphi, MD, 2007.

Sokolik, I.N., Atmospheric Aerosols and Air Pollution, Northern Eurasia Earth Partnership Initiative Summit, 3-4 May, Helsinki, Finland, 2007.

Sokolik, I.N., Impacts of atmospheric aerosols and air pollution in Northern Eurasia and their dynamics, Aspen Climate Change Institute, 12-16 August 2007, Aspen, CO, 2007.

Sokolik, I.N., Remaining and emerging challenges in measuring and modeling mineral dust aerosol, EUFAR Experts Workshop, 13- 15 September, Paris, 2006.

Sokolik, I.N., Towards developing improved treatments of mineral dust aerosol for climate and remote sensing studies, Global Warming and the Next Ice Age and Aerosol Workshop, 17- 21 July, Santa Fe, 2006.

Sokolik, I.N., Climatic impacts of aerosols in Northern Eurasia, Institute of Geography/ NEESPI, 7-8 November, Beijing, China, 2006.

Sokolik, I.N., Impact of atmospheric mineral dust on the surface energy balance and PAR in the NEESPI study domain. AGU, Fall Meeting, 2006.

Sokolik, I.N., Aerosol impacts on climate of Northern Eurasia, IGBP/NEESPI Workshop, San Francisco, CA, 5-7 Dec., 2005.

Sokolik, I.N., Radiative forcing by dust and black carbon, The Aspen Global Change Institute, Experts meeting on Aerosols and the Hydrological Cycle, Aspen, CO, July, 2004.

Sokolik, I.N., Nuts and bolts of radiative forcing by mineral dust. NOAA/CMDL, Boulder, 2 May 2003.

Sokolik, I.N., Recent advances and remaining challenges in predicting radiative properties of mineral dust, Second International Workshop on Mineral Dust, September 10-12, Paris, France, 2003.

Sokolik, I.N., Dust effects: An overview. International Workshop on Validation Data Sets for Modeling Mineral Aerosols in Global Climate Cycles. Max-Planck-Institute for Biogeochemistry, Jena, Germany, May 1-5, 2002.

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Darmenova, K., and I.N. Sokolik, Constraining dust sources in Central and East Asia with satellite and ground-based observations. EOS Trans. AGU, Spring Meeting, Suppl. 2004.

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Miecznik, G., R. Illing, S. Petroy, and I.N. Sokolik, Retrievals of aerosol properties from multi-angular and multi-spectral polarized radiances: Sensitivity study. IGARSS, IEEE International Geoscience and Remote Sensing Symposium, July 21-25, Toulouse, France, 2003.

Boer, G. and I.N. Sokolik, Developing the high spectral resolution aerosol models for remote sensing in the thermal IR, IGARSS, IEEE International Geoscience and Remote Sensing Symposium, July 21-25, Toulouse, France, 2003.

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Kampe, T.U., and I. N. Sokolik, The Impact of aerosols on near-IR radiances: Implications for CO Retrievals. EOS Trans. AGU, Fall Meeting, Suppl. 2003.

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Quijano, A.L., and I. N. Sokolik, Remote sensing of wind-blown dust at ultraviolet wavelengths: the capability of collocated satellite and ground-based radiation measurements. AMS Conference on Atmospheric Radiation, Utah, June 3-7, 2002.

Kalashnikova, O., and I.N. Sokolik, Modeling optical properties of nonspherical mineral dust particles for remote sensing at solar wavelengths. AMS Conference on Atmospheric Radiation, Utah, June 3-7, 2002.

Pougatchev, N.S., Sokolik, I.N., W.L. Smith, and D. Zhou, Atmospheric trace gases and aerosol remote sensing by nadir viewing thermal emission Fourier transform spectrometer. AMS Conference on Atmospheric Radiation, Utah, June 3-7, 2002.

Sokolik, I.N., N.S. Pougatchev, W.L. Smith, and D. Zhou, Identifying the spectral radiative signature of mineral dust: implications for remote sensing in the IR region. AMS Conference on Atmospheric Radiation, Utah, June 3-7, 2002.

Xuan, J., and I.N. Sokolik, Sources of wind-blown dust in Northern China: Towards developing an Asian dust databank. Fifth International Conference on Aeolian Research and the Global Change and Terrestrial Ecosystems-Soil Erosion Network (Wind), Lubbock, Texas, July 22-25, 2002.

Sokolik, I.N., Radiative impacts of Asian dust. 6th International Aerosol Conference. Taipei, Taiwan, September 8-13, 2002.

Murayama, T., N. Sugimoto, A. Shimizu, H. Fukushima, M. Toratani, H. Kobayashi, I. Uno, N. Kagawa, S.-C. Yoon, S.-W. Kim, T. Shibata, E.J. Welton, and I.N. Sokolik, Lidar network observation of Asian dust events during the Ace-Asia intensive observation period. Sixth International Aerosol Conference. Taipei, Taiwan, September 8-13, 2002.

Sokolik, I.N., Remote sensing of mineral dust aerosols in the UV/visible and IR regions. SPIE 3th International Asia-Pacific Environmental Remote Sensing Symposium, October 23-27, China, 2002.

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Pougachev, N.S., W.L. Smith, F.W. Harrison, A.M. Larar, C.P. Rinsland, D.J. Jacob, I. Bey, B.D. Field, R.M. Yantosca, A. Kuang, S.R. Nolf, S.V. Kireev, I.N. Sokolik, and P. Kasibhalta. Tropospheric chemistry study from geosynchronous orbit-GIFTS-IOMI mission. SPIE's 46th Annual Meeting, San Diego, 2001.

Sokolik, I.N., J. Xuan, and O. Kalashnikova, Seasonal variations of the direct radiative forcing of Asian dust. Annual Conference of American Association for Aerosol Research, Oregon, October 15-19, 2001.

Xuan, J., and I.N. Sokolik, Chinese sources of yellow sand. 7th International Joint Seminar on the Regional Deposition Processes in the Atmosphere, Tsukuba, Japan, Nov. 20-23, 2001.

Kalashnikova, O., and I.N. Sokolik, Modeling optical properties of irregular dust aggregates using the discrete dipole approximation. 5th Conference on Light Scattering by Nonspherical Particles, Halifax, Canada, 2000.

Sokolik, I.N., What we need to know about dust properties to adequately predict dust radiative impact. International Workshop on Mineral Dust, Boulder, June 9-11, pp.56-57, 1999.

Sokolik, I.N. and O.B. Toon, How the evolution of the chemical and physical properties of mineral dust may affect its radiative impact. In Proceedings of the Sixth IGAC Scientific Conference, Bologna, Italy, Sep. 13-17, 1999.

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Quijano, A.L., I. N. Sokolik, and O. B. Toon. Modeling the radiative properties of dust in cloudy atmospheric conditions. IGAC Symposium, Seattle, WA, August 16-25, 1998.

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Sokolik, I.N., Toon O.B. and R.W. Bergstrom. Direct radiative forcing by airborne mineral aerosols: regional heating or cooling? The 16th Annual Conference of American Association for Aerosol Research, Denver, CO, October 13-17, 1997.

Sokolik, I.N. and O.B. Toon. Modeling the radiative properties of airborne mineral aerosols. IGAC Symposium, Nagoya, Japan, November 11-13, 1997.

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Sokolik I.N., Bergstrom R. W. and O.B.Toon. Modeling of optical and radiative characteristics of the airborne mineral aerosol in infrared region. AMS Ninth Conference on Atmospheric Radiation, Long Beach, California, February 2-7, 1997.

Sokolik, I.N., Toon O.B. and R.W. Bergstrom. Regional direct radiative forcing by airborne mineral aerosols. AGU Spring Meeting, Baltimore, MA, 27-30 May, 1997.

Bergstrom, R.W., Mlaver E., Clough A., Sokolik I., Toon O.B., and S. Kinne. Solar radiative transfer under cloud-free conditions. Conference on Visual Air Quality, Aerosols and Global Radiation Balance, Bartlett, NH, September 9-12, 1997.

Sokolik, I.N. and O.B. Toon. Regional direct radiative forcing by the airborne mineral aerosols. European Aerosol Conference, Hamburg, Germany, September 15-19, 1997.

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Bergstrom, R., S. Kinne, I. Sokolik, B. Toon, E. Mlawer, T. Clough, and T. Ackerman. A fast accurate radiative transfer model for use in climate codes. International Radiation Conference, Fairbanks, Alaska, August 16-21, 1996.

Bergstrom, R.W., Sokolik I.N. and O.B. Toon. Effects of airborne mineral aerosol on solar and infrared radiative forcing. The 15th Annual Conference of American Association for Aerosol Research, Orlando, Florida, October 14-18, 1996.

Valero, F.P.J, Sokolik I.N. and P. Pilewskie Airborne measurements of the radiative and optical properties of smoke produced by the biomass burning during the SCAR-C field mission. AGU Chapman Conference on Biomass Burning and Global Change, Williamsburg, Virginia, March 13-17 1995.

Sokolik, I.N., F.P.J. Valero, and P. Pilewskie. Variability of radiation characteristics of the plume from the Kuwait oil fires AGU Chapman Conference on Biomass Burning and Global Change, Williamsburg, Virginia, March 13-17 1995.

Professional Activities (past 5 years):

Science Team/Committee Membership:

Member, USRA Earth Science Council, 2009-present

Northern Eurasia Earth Science Partnership Initiative (NEESPI), 2003-present

NASA CALIPSO/CloudSat Science Team, 2005-present

NASA LCLUC Science Team, 2003-present
GOSAT (Greenhouse Gases Observing Satellite), Japan Aerospace Exploration Agency,
2008-present
IPY Activity #140, The Hydrologic Impacts of Arctic Aerosol (HIAA), 2007-2009

Organization of workshop, conferences or AGU Sessions:

Co-Convener, Bringing Together Environmental, Socioeconomic, and Climatic Change Studies in Northern Eurasia. AGU, Fall Meeting, 2010.
Co-Convener, Session on Environmental, socio-economic and climatic changes in Northern Eurasia and their feedbacks to the Global Earth System, EGU General Assembly, Vienna, Austria, May, 4-7, 2010.
Co-Convener, Environmental, Socioeconomic, and Climatic Changes in Northern Eurasia and Their Feedbacks to the Global Earth System: How Far Have We Advanced in Our Ability to Describe Them? AGU, Fall Meeting, 2009.
Co-Convener, Session on Land-Atmosphere-Cryosphere Interactions in Northern Eurasia, EGU General Assembly, Vienna, Austria, Apr. 14-19, 2009.
Co-Convener, Session on Land-Atmosphere-Cryosphere Interactions in Northern Eurasia, AGU, Fall Meeting, 2008.
Chair, Third International Workshop on Mineral Dust, Leipzig, Germany, Sep. 14-17, 2008.
Co-Organizer, International Workshop on Environmental and Climate Change Problems in High Latitudes of Northern Eurasia, Finland, June 2-6, 2008.
Co-Convener, Session on Northern Eurasia Earth Science Partnership Initiative (NEESPI): Integrated Approach to Regional Climate and Environment Change Studies, AGU, Fall Meeting, 2007.
Co-Organizer, Workshop on Northern Eurasia land surface properties and change and its role in the Global Earth System, Aspen Climate Change Institute, Aspen, CO, Aug., 2007.
Co-Convener, Session on Northern Eurasia Regional Climate and Environmental Change, AGU, Fall Meeting, 2006.
Co-Convener, Session on Northern Eurasia Regional Climate and Environmental Change, AGU, Fall Meeting, 2004.
Chair, Second International Workshop on Mineral Dust, Paris, France, Sep. 10-12, 2003.

Invited Editor:

Organizer, Special issue on Mineral Dust: Review of recent progress and remaining challenges (collection review papers) in *Atmospheric Physics and Chemistry* (present)
Special issue on Northern Eurasia Regional Climate and Environmental Change in *Journal of Global and Planetary Change* (published in 2007)
Co-Organizer, Special issue on Quantifying the Radiative and Biogeochemical Impacts of Mineral Dust in *Journal of Geophysical Research- Atmosphere* (published in 2005)

Committees –Georgia Institute of Technology:

Member, Institute RPT Committee, 2010-present
Member, College of Sciences, Young Faculty Mentoring Program, 2010-2011
Member, College of Sciences, Associate Dean Search Committee, 2009-2010
Member, College of Sciences Dean Advisory Committee, 2004-2007

Member, EAS Social Committee, 2010-present

Member, EAS Chair Search Committee, 2012-present
Chair, EAS School Advisory Committee, 2011-2012
Chair, EAS Graduate Studies Committee, 2006- 2009
Member, EAS Graduate Studies Committee, 2009-present
Member, EAS Faculty Search Committee, 2009-2010
Member, EAS Chair Review Committee, 2007-2008
Member, EAS Graduate Studies Committee, 2004- 2006
Member, EAS Faculty Search Committee, 2004-05
Member, EAS Graduate Admissions Committee, 2003-04

Committees –University of Colorado at Boulder:

Chair, Committee on Academic Community and Diversity, Univ. of CO, Fall 2002/Spring03
Member, Art and Science Council, Univ. of CO, Fall2001/Spring03
Member, Personnel Committee, Univ. of CO, Fall2001/Spring02
Member, Executive Committee, Univ. of CO, Fall 2002
Chair, PAOS, Admission Committee, Fall 2002/Spring03
Member, PAOS Executive Committee, Fall2002/Spring03
Member, Post Tenure Review Committee for Prof. Webster, Fall2001
Member, PAOS Admission Committee, Fall2000/Spring01
Member, PAOS Laboratory and Facilities Committee, Fall2000/ Spring01
Member, Tenure committee for Prof. Lynch, Fall2000
Member, PAOS Strategic Plan Committee, Fall2000

Membership in Professional and Honor Societies:

American Geophysical Union (AGU)

Graduate and Undergraduate Students Supervised/Principal Advisor:

Ana Lia Quijano (Ph.D. 2001), University of Oxford, UK
Olga Kalashnikova (Ph.D. 2002), Jet Propulsion Laboratory, Pasadena, CA
Kremena Darmenova (Ph.D. 2006), Northrup Grumman
Bryan Karpowicz (M.S. 2006), NEON/NSF
Gill-Ran Jeong (Ph.D. 2007), EPA
Thomas Kampe (Ph.D. 2008), NEON/NSF
Anton Darmenov (Ph.D. 2008), NASA Goddard
Gregory Boer (Ph.D. 2009), NGA
Hyung-Jin Choi (Ph.D. 2011), Military Academy, South Korea
Prashant Kumar (PhD. 2011), SABIC
Erica Alston ((PhD. 2012), NASA Langley
Mehmet Ozdes (M.S. 2012), PhD student at FSU
Drexel Waggoner (Ph.D. student, 2004-2012)
Cindy Young (Jackson) (Ph.D. 2014), Emory University
Xi Xin (PhD., 2014), NASA AMES

Zheng Lu (PhD. student, 2007-present)
Longlei Li (PhD student (2013- present)
Yu Hee Park (PhD student (2014- present)

Postdoctoral Fellows and Researchers Supervised:

Dr. Aleks Karabanov (2008-2012)

Dr. Henian Zhang (2008-2012)
Dr. Anton Darmenov (2009-2010)
Dr. Kremena Darmenova (2006-2009)
Dr. Yasunori Kurosaki (2006-2008)
Dr. Sandra Lafon (2004- 2006)
Dr. Jie Xuan (2000-2003)

Dissertation/Thesis Committee or Ph.D. Qualifying Examination Committee:
Georgia Institute of Technology:

Chair, Ph.D. Qualifying Examination Committee for:

Zefeng Li, EAS
Jia He, EAS
Marilee Roel, EAS
Changsub Shim, EAS
Wenxian Zhang, EAS
Dasa Gu, EAS

Member, Ph.D. Qualifying Examination Committee for:

Benpei Cao, EAS
Xiaoxu Sun, EAS
Joshua Mendez, EAS
Ozge Karakas, EAS
Zack Lifton, EAS
Ricardo Morales, EAS
Kathleen Salome, EAS
Andrew Davis, EAS
Terry Lathem, EAS
Xin Xi, EAS
Zheng Lu, EAS
Huyng-Jin Choi, EAS
Manuel Zuluaga, EAS
Erica Alston, EAS
Alisa Holley, EAS
Shekhar Chandra, EAS
Drexel Waggoner, EAS
Khara Lombardi, EAS
Kremena Darmenova, EAS
Greg Boer, EAS
Gill-Ran Jeong, EAS.
Anton Darmenov, EAS.
Bryan Karpowicz, EAS.

Chair, Ph.D. Dissertation Committee for:

Erica Alston, EAS
Hyung-Jin Choi, EAS
Prashant Kumar, ChBE
Kremena Darmenova, EAS
Gill-Ran Jeong, EAS
Anton Darmenov, EAS
Gregory Boer, EAS
Tom Kampe, CU

Member, Ph.D. Dissertation Committee for:

Ludovic Hivin, Aerospace Engineering
Alisa Young, EAS
Manuel Zuluaga, EAS
Wenxian Zhang, EAS
Donifan Barahona, ChBE
Kurcak Kaynak, CEE
Yaping He, EAS
Jerald Estupinan, EAS
Aleksandr Karabanov, EAS
Saiwung Kim, EAS
Chair, M.S. Committee for:
Mehmet Ozdes, EAS
Member, M.S. Committee for:
Alexia Payan, Aerospace Engineering
Brandon Strellis, Civil and Environmental Engineering
Cindy Jackson, EAS

University of Paris VII/XII, France:

Member, Dissertation Committee for Sandra Lafon

University of Colorado:

Chair, Master Committee for James McCreight, PAOS

Chair, Ph.D. Qualifying Examination Committee for:

Olga Kalashnikova, PAOS.

Lansing Madry, PAOS.

Member, Ph.D. Qualifying Examination Committee for:

Ana Lia Quijano, PAOS

Tom Kampe, PAOS

Daria Halkides, PAOS

Janet Intieri, ASEN

Teresa Segura, ASEN

Peter Colarco, PAOS.

Member, Dissertation Committee for:

Ana Lia Quijano, Ph.D. Candidate in PAOS

Sandy Starkweather, Ph.D. Candidate in Geography

Hugh Morrison, Ph.D. Candidate in PAOS

Janet Intieri, Ph.D. Candidate in ASEN

Peter Colarco, Ph.D. Candidate in PAOS

Teresa Segura, Ph.D. Candidate in PAOS

Timothy Benner, Ph.D. Candidate in PAOS