

Curriculum Vitae

Kaoru Kitajima

Professor

Tropical Forest Resources and Environments

Division of Forest and Biomaterial Science, Graduate School of Agriculture

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Professional Positions

2013– Professor, Kyoto University

2012–2013 Professor, University of Florida

2004–2012 Associate Professor, University of Florida

1997–2004 Assistant Professor, University of Florida

1996 Lecturer, University of Missouri - St. Louis

1994–1996 Postdoctoral research fellow, Smithsonian Tropical Research Institute

1992–1994 Postdoctoral research associate, University of Minnesota

Education

Ph.D. in Plant Biology, University of Illinois, Champaign-Urbana, U.S.A., October 1992

M.S. in Plant Biology, University of Illinois, Champaign-Urbana, U.S.A., August 1987

B.S. in Botany, University of Tokyo, Tokyo, Japan, March 1984

Research Interests

Functional plant ecology

- Ecophysiology of upper canopy of tropical forests, in particular carbon balance in response to environmental factors and climate change
- Seedling regeneration ecology of tropical tree species
- Ecology and evolution of functional trait diversity of plants in tropical forests
- Functional basis for competitiveness of invasive exotic plants
- Functional ecology of coupled human-natural systems

Fellowships and Grants (2000-current)

2014 Pioneering research on silicon utilization by tropical tree species. Japanese Society of Promotion of Science. 4030,000 JPY for 4/1/14- 3/31/16. Kitajima, K. (PI), Kanehiro Kitayama (co-PI).

2011 Temperature responses of leaf dark respiration and their implications for tropical forest carbon balance, National Science Foundation, Division of Biological

- Sciences, Integrative Organismal Biology. \$444,698 for 2/15/11–2/14/14, Kitajima, K. (PI), Bohlman, S. A. (co-PI), Lichstein, J. W. (co-PI), Muller-Landau, H. (co-PI) Wright, S. J. (co-PI).
- 2010 Faculty Enhancement Opportunity request, University of Florida Provost's Office, \$9,780 for 5/1/10-7/5/10 and 8/25/10-10/6/10.
- 2010 Singer Biology Fund – Preliminary data collection towards strengthening NSF proposals “Temperature responses of dark respiration in the canopy of a tropical forest”, and Partnership for International Research and Education (PIRE), “Predicting temperature responses of ecosystem carbon balance in Bolivian tropical forests along a rainfall gradient”. Kitajima, K. (PI) \$18,000
- 2009 Center for Tropical Forest Sciences, Functional Trait Initiatives, supported by F. H. Levinson Fund, subcontract for analysis of leaf fiber contents. \$4,000.
- 2008 Visiting Scientist Grant, The C.T. de Wit Graduate School for Production Ecology and Resource Conservation (PE&RC), Wageningen University, the Netherlands. 2200 euros.
- 2005 NSF - ROA Supplement PI. (Co-PI: Jose-Luis Machado, Swarthmore College). \$23,149 for 6/2005-12/2005.
- 2005 South Florida Water Management District. “*Lygodium* growth.” Co-PI. (PI: John Volin, Florida Atlantic University). \$250,000 for 4/2005-4/2007.
- 2002 Florida Department of Environmental Protection. "An evaluation of *Ruellia brittoniana* in natural areas." Co-PI (PI: Alison Fox, Department of Agronomy, UF); \$25,210 for 8/2002-6/2004.
- 2001 NSF CAREER Award. “Functional bases for the trade-off between growth and survival of tree seedlings.” PI. \$386,487 for 5/2001-5/2006. National Science Foundation, Ecological and Evolutionary Physiology Panel.
- 2000 Florida Department of Environmental Protection. “*An evaluation of the life-histories of invading populations of Ardisia crenata in North Florida to improve our understanding of their invasive impacts and management.*” Co-PI(PI: Alison Fox, Department of Agronomy, UF), \$52,600 for 4/2000-5/2002.

Invited Seminars at Other Institutions

Forest and Forest Product Research Institute of Japan	January, 2015
Tung Hai University, Taichung, Taiwan	November, 2013
Dong Hwa University, Hwalein, Taiwan	November 2013
Tohoku University, Sendai, Japan	October 2013
Smithsonian Tropical Research Institute, Panama City, Panama	November, 2011
Institute of Ecology, National Autonomous University of Mexico, Mexico City, Mexico	September 2010.
School of Natural Resource and Environment, University of Connecticut, Storrs	October 2009
School of Integrative Biology, University of Illinois, Champaign-Urbana	November 2008.
Utrecht University, Utrecht, Netherlands	June 2008
Japan-US special symposium, “ <i>Phenotypic plasticity in relation to environmental changes: scaling from molecular to ecosystem levels</i> ”, Nikko, Japan	October 2007

Center for Tropical Forest Science, <i>Strategy Workshop on Applied Tropical Forest Ecology</i> , Panama City, Panama	May 2007.
Department of Forestry, <i>Hanover Forest Science Seminar Series</i> , Michigan State University, East Lansing	February 2007
Department of Biological Sciences, University of Tokyo, Tokyo, Japan	December 2006.
Department of Biology, University of Uberlandia, Uberlandia, Brazil.	July 2005
Department of Biology, Macquaire University, Sydney, Australia	April 2005
Department of Integrative Biology, University of California, Berkeley	November 2004
Dept of Biological Sciences, Washington State University, Pullman	September 2003
Department of Integrative Biology, University of Texas, Austin.	September 2002
Institute of Ecosystem Studies, Millbrook, New York.	September 2000
Department of Organismal & Evolutionary Biology, Harvard University	April 1999
Department of Biological Sciences, University of South Florida	April 1999
Department of Biology, University of Miami	March 1999
Department of Biological Sciences, Florida Atlantic University	March 1998
Department of Biology, Tokyo City University	November 1997

Presentations at Academic Meetings (2011-)

- Kitajima, K. 2016. Latitudinal and altitudinal of silicon accumulation by forest trees: the potential importance of plants in silicon cycling in lowland tropical forests. 63rd Annual Meeting of the Ecological Society of Japan, Sendai, Japan. March 2016
- Kitajima, K. 2015. Sustainable growth is inevitably slow: lessons from plant carbon allocation strategies for structural defense and storage in tropical forests. Plenary Lecture at the Annual Meeting of the Association for Tropical Biology and Conservation, Honolulu, Hawaii, July 2015.
- Kitajima, K. and Ewel, J. J. 2015. Silicon cycling via leaf litterfall in experimental tropical forest stands. Annual Meeting of the Association for Tropical Biology and Conservation, Honolulu, Hawaii, July 2015.
- Kitajima, K. 2015. Frontier of plant functional ecology in the tropics: from understanding biodiversity to sustainable forest use. Plenary Lecture at the Asia-Pacific Chapter Meeting of the Association for Tropical Biology and Conservation, Phnom Penh, Cambodia. March 2015.
- Kitajima, K. 2015. Plant functional trait ecology: history and current status (in Japanese) 62nd Annual Meeting of the Ecological Society of Japan, Kagoshima, Japan. March 2015
- Kitajima, K. 2014. Forest dynamics and functional traits in evergreen broadleaf forests. Taiwan-Japan Ecology Workshop, Hualien, Taiwan. November 2014.
- Kitajima, K and Wright, S. J. 2014. Ontogenetic shifts and concordance of functional traits and their association with tree demography in Panama. Annual Meeting of the Association for Tropical Biology and Conservation, Cairns, Australia, July 2014.

- Kitajima, K., Augspurger, C. K., Jansen, P. A., Bolker, B. M. 2014. Janzen-Connell effects in a common shade tolerant tree manifested in 25 years of cohort demography. Annual Meeting of the Association for Tropical Biology and Conservation, San Jose, Costa Rica, June 2013.
- Kitajima, K., Slot, M., Wright, S. J. 2012. Temperature responses of leaf dark respiration of tropical canopy trees and lianas and its implication for modeling tropical forest responses to climate warming. Symposium presentation, Annual Meeting of the Association for Tropical Biology and Conservation, Bonito, Brazil, June 2012.
- Kitajima, K., Slot, M., Wright, S. J. 2011. Temperature responses of dark respiration as key functional traits for tropical tree carbon balance. Symposium presentation, Annual Meeting of the Association for Tropical Biology and Conservation, Arusha, Tanzania, June 2011.

Academic Meetings, Symposia, Workshops and Working Groups (2005-)

- Lead Organizer and Moderator, International Public Symposium “Networking for a sustainable future of the tropics” at the 25th Anniversary Meeting of the Japanese Society for Tropical Ecology, June 2015, Kyoto, Japan.
- Symposium Session: “*Trait-based trade-offs in the tropics*”, during the Annual Meeting of the Association of Tropical Biology and Conservation, Cairns, Australia, July 2014. (co-organized with Sabrina Russo.
- Program Chair, ATBC-OTS2013: the Joint 50th Anniversary Meeting of the Association for Tropical Biology and Conservation and the Organization for Tropical Studies, San José, Costa Rica, June 23-27, 2013
- Symposium Session: “*Functional traits and tropical forest response to climate change*”, during the Annual Meeting of the Association of Tropical Biology and Conservation, Arusha, Tanzania, June 2011. (30 % responsible, co-organized with Chris Baraloto and Lourens Poorter.
- Mini symposium, “*Functional traits and the ecological performance of tropical trees*”, Wageningen University, Netherlands, July 2008. (30% responsible, co-organized with Lourens Poorter)
- Symposium Session: *Functional Ecology of Tropical Trees*, during the Annual Meeting of the Association of Tropical Biology and Conservation, Morelia, Mexico, July 2007 (60% responsible, co-organized with Lourens Poorter, Louis Santiago, Horasio Paz)
- Japan-US special symposium, *Phenotypic plasticity in relation to environmental changes: scaling from molecular to ecosystem levels*, Nikko, Japan, October 2007 (co-organizer responsible for selecting and communication with speakers from the US with US-NSF support to lead PI, Robert Pearcy, University of California–Davis)
- Symposium Session: *Biological Invasion in the Tropics*, during the Annual Meeting of the Association of Tropical Biology and Conservation, Yunnan, China, July 2006 (60% responsible, co-organized with Dr. Carol Horvitz)
- Organizational Committee, National Academy of Science, 18th Frontier of Science, October 27-29, 2005, general planning and selecting and coordinating three speakers, “*Addiction: proximate and ultimate mechanisms*”.

Publications

Peer-reviewed journal articles

- Fahey, C., Winter, K., Slot, M. and **Kitajima, K.** 2016. Influence of arbuscular mycorrhizal colonization on whole-plant respiration and thermal acclimation of tropical tree seedlings. *Ecology and Evolution*
- Kitajima, K.**, Wright, S. J. and Westbrook, J. W., 2016. Leaf cellulose density as the key determinant of inter- and intra-specific variation in leaf fracture toughness in a species-rich tropical forest. *Interface Focus* 6(3):
- Vanderwel, M. C., Slot, M., Lichstein, J. W. , Reich, P. B., Kattge, J., Atkin, O. K., Bloomfield, K., Tjoelker, M., and **Kitajima, K.** 2015. Global convergence in projected leaf respiration from estimates of thermal acclimation across time and space. *New Phytologist* 207(4):1026-37 (doi: 10.1111/nph.13417)
- Paine, T. and 35 coauthors listed alphabetical order. 2015. Globally, functional traits are weak predictors of juvenile tree growth, and we do not know why. *Journal of Ecology* 103(4): 978-989. (DOI: 10.1111/1365-2745.12401)
- Osada, N. , Oikawa, S., and **Kitajima K.** 2015. Implication of lifespan variation within a leaf cohort for evaluation of the optimal timing of leaf shedding. *Functional Ecology* 29: 308-314 (DOI: 10.1111/1365-2435.12326)
- Slot, M. and **Kitajima, K.** 2015. General patterns of acclimation of leaf respiration to elevated temperature across biomes and plant types. *Oecologia* 177: 885-900
- Slot, M. and **Kitajima, K.** 2015. Whole plant respiration and its temperature sensitivity during progressive carbon starvation. *Functional Plant Biology* 42: 579-588. (Doi: 10.1071/FP14329)
- Zhang, J., Zhang, S., Zhang, Y., and **Kitajima, K.** 2015. Effects of phylogeny and climate on seed oil fatty acid composition across 747 plant species in China. *Industrial Crops and Products* 63: 1-8. (doi:10.1016/j.indcrop.2014.10.045)
- Baber, O., Celis, G. and **Kitajima K.** 2014. Diel patterns of leaf carbohydrate concentrations between seedlings and mature trees of two sympatric oak species. *Botany* 92: 535-540. (doi: 10.1139/cjb-2014-0032)
- Slot, M., Rey-Sánchez, C., Gerber, S. Winter, K., Lichstein, J. W. and **Kitajima, K.** 2014. Thermal acclimation of leaf respiration of tropical trees and lianas: response to experimental canopy warming, and consequences for tropical forest carbon balance. *Global Change Biology* 9: 2915-2926. (doi: 10.1111/gcb.12563)
- Slot, M., Rey-Sánchez, C., Winter, K. and **Kitajima, K.** 2014. Trait-based scaling of temperature-dependent foliar respiration in a species-rich tropical forest canopy. *Functional Ecology* 27: 1074-1086 (doi: 10.1111/1365-2435.12263)
- Pizano, C., Mangan S. A., Graham J. H. and **Kitajima, K.** 2014. Habitat-specific positive and negative effects of soil biota on seedling growth in a fragmented tropical montane landscape. *Oikos* **123**: 846-856. (doi: 10.1111/oik.01032)

- Kai Z, Woan TS, Jie L, Goodale E, **Kitajima K**, Bagchi R, Harrison RD. 2014. Shifting Baselines on a Tropical Forest Frontier: Extirpations Drive Declines in Local Ecological Knowledge. *Plos One* **9**: e92931
- Kitajima, K.**, Cordero, R. A., Wright, S. J. 2013. Leaf lifespan spectrum of tropical woody seedlings: effects of light and ontogeny and consequences for survival. *Annals of Botany* **112**: 685-699 (doi:10.1093/aob/mct036)
- Slot, M., Wright, S. J., **Kitajima, K.** 2013. Foliar respiration and its temperature sensitivity of trees and lianas: *in situ* measurements in the upper canopy of a tropical forest. *Tree Physiology* **33**: 505-515 (doi:10.1093/treephys/tpt026)
- Slot, M., Palow, D. T., **Kitajima, K.** 2012. Seed reserve dependency of early seedling growth for nitrogen and phosphorus. *Functional Plant Biology* **40**: 244-250. (doi:10.1071/FP12255)
- Faisal, S., Callis, K., Slot, M., **Kitajima, K.** 2012. Transpiration-dependent passive silica accumulation in cucumber (*Cucumis sativus*) under varying soil silicon availability. *Botany* **90**: 1058-1064 (doi: 10.1139/b2012-072)
- Palow, D. T., Nolting, K., **Kitajima, K.** 2012. Functional traits and soil-fertility preference of *Inga* species in a wet tropical forest. *Functional Ecology* **26**: 1144-1152 (doi: 10.1111/j.1365-2435.2012.02019.x)
- Kitajima, K.**, Llorens, A.-M., Stefanescu, C.*, Timchenko, M. V., Lucas, P., Wright, S. J. 2012. Carbon-based leaf defense, leaf lifespan, and survival of juvenile tropical trees in gaps and understory. *New Phytologist* **195**: 640-652 (DOI: 10.1111/j.1469-8137.2012.04203.x)
- Bray, S. R., **Kitajima, K.**, Mack, M. C. 2012. Temporal dynamics of microbial communities on decomposing leaf litter of 10 plant species in relation to decomposition rate *Soil Biology and Biochemistry* **49**: 30-37 (doi: 10.1016/j.soilbio.2012.02.009)
- Westbrook, J. W., **Kitajima, K.**, Burleigh, J. G., Kress, J. W., Erickson, D., Wright, S. J. 2011. What makes a leaf tough? Patterns of correlated evolution between leaf toughness and demographic rates among 197 shade-tolerant woody species in a Neotropical forest. *American Naturalist* **177**: 800-811
- Kattge, J., Diaz, S., Lavorel, S., Prentice I. C. and 126 other coauthors. 2011. TRY – a global database for plant traits. *Global Change Biology* **17**: 2905-2935
- Soriano, D., Orozco-Segovia, A., Marquez-Guzman, J., **Kitajima, K.**, Huante, P. 2011. Seed reserve composition in nineteen tree species of a tropical deciduous forest in Mexico and its relationship to seed germination and seedling growth. *Annals of Botany* **107**: 939-951.
- Onoda, Y, Westoby, M, and 26 coauthors. 2011. Global patterns of leaf mechanical properties. *Ecology Letters* **14**: 301-312.
- Wright, S. J., **Kitajima, K.** and 15 other coauthors. 2010. Functional traits and growth-mortality trade-offs in a tropical forest. *Ecology* **210**: 3664-3674.
- Kitajima, K** and Poorer, L. 2010. Tissue-level leaf toughness, but not lamina thickness, predicts sapling leaf lifespan and shade tolerance of tropical tree species. *New Phytologist* **168**: 708-721 – reviewed in *Faculty 1000*
- Poorter, L., **Kitajima, K.**, Mercado, P., Chubiña, J., Melgar, I., and Prins, H. 2010. Resprouting as a persistent strategy in dry and moist tropical forest trees: its relation with carbohydrate storage and shade tolerance. *Ecology* **91**: 2613-2627.
- Volin, J. C., Kruger, E. L, Volin, V. C., Tobin, M. F., and **Kitajima, K.** 2009. Does release

- from natural belowground enemies help explain the invasiveness of *Lygodium microphyllum*? A cross continental experimental comparison. *Plant Ecology* 208: 223-234.
- Posada, J. M., Lechowicz, M. J., **Kitajima, K.** 2009. Optimal photosynthetic use of light by tropical tree crowns achieved by adjustment of individual leaf angles and nitrogen content. *Annals of Botany* 103: 695-805.
- Gandiaga, S., Volin, J. D., Kruger, E. L., **Kitajima, K.** 2009. Effects of hydrology on the growth and hydrology of an invasive exotic, *Lygodium microphyllum* (Old World climbing fern). *Weed Research* 49: 283-290.
- Alvarez-Clare, S. and **Kitajima, K.** 2009. Susceptibility of tree seedlings to biotic and abiotic hazards in the understory of a moist tropical forest in Panama. *Biotropica* 41: 47-56.
- Chapman, C. A., **Kitajima, K.**, Zanne, A. E., Kaufman, L. S., Lawes, M. J. 2008. A 10-year evaluation of the functional basis for regeneration habitat preference of trees in an African evergreen forest. *Forest Ecology and Management* 255: 3790-3796
- Alvarez-Clare, S. and **Kitajima, K.** 2007. Physical defense traits enhance seedling survival of neotropical tree species. *Functional Ecology* 21: 1044-1054.
- Myers, J. A. and **Kitajima, K.** 2007. Carbohydrate storage enhances seedling shade and stress tolerance in a neotropical forest. *Journal of Ecology* 95: 383-395. – *Reviewed in Faculty 1000*
- Poorter, L. and **Kitajima, K.** 2007. Carbohydrate storage and light requirements of tropical moist and dry forest species. *Ecology* 88: 1000-1011
- Avalos, G., Mulkey, S., **Kitajima, K.** and Wright, S. J. 2007. Canopy colonization strategies of two liana species in a tropical dry forest. *Biotropica* 39: 393-399.
- Kitajima, K.**, Fox, A. M., Satoh, T. and Nagamatsu, D. 2006. Cultivar selection prior to introduction may increase invasiveness: evidence from *Ardisia crenata*. *Biological Invasions* 8:1471-1482.
- Gilbert, B., Wright, S.J., **Kitajima, K.**, Muller-Landau, H.C. 2006. Life-history trade-offs in tropical trees and lianas. *Ecology* 87:1281-1288
- Romero, C., Putz, F. E., and **Kitajima, K.** 2006. Light, mist and pendent epiphytes in a tropical montane oak forest. *Biotropica* 38: 35-41.
- Gamon J.A., **Kitajima K.**, Mulkey S. S., Serrano L., Wright S. J. 2005. Diverse canopy responses to irradiance in a neotropical forest during the dry season: implications for remote estimation of photosynthesis. *Biotropica* 37: 547-560.
- Zanne, A. E., Chapman, C. A. and **Kitajima, K.** 2005. Evolutionary and ecological correlates of early seedling morphology in East African trees and shrubs. *American Journal of Botany* 92: 972-978.
- Kitajima, K.**, Mulkey, S. S., Wright, S. J. 2005. Variation in crown light utilization characteristics among tropical canopy trees. *Annals of Botany* 95: 535-547.
- Cavender-Barres, J., **Kitajima, K.** and Bazzaz, F. A. 2004. Multiple trait association in relation to habitat differentiation among 17 oak species in North Central Florida. *Ecological Monographs* 74: 635-662. – *Reviewed in Faculty 1000*
- Santiago, L. S., **Kitajima, K.**, Wright, S. J., Mulkey, S. S. 2004. Leaf physiological and structural traits of canopy trees along a precipitation gradient in lowland tropical forest.

- Oecologia* 139: 495-502.
- Kitajima, K.** 2003. Impact of cotyledon and leaf removal on survival of young seedlings with contrasting cotyledon morphologies. *Biotropica* 35: 429-434.
- Osada, N., Takeda, H., **Kitajima, K.** and Pearcy, R. W. 2003. Functional correlates of leaf demographic response to gap release in saplings of a shade tolerant tree *Elaeagnus* *tapos*. *Oecologia* 137: 181-187.
- Kitajima, K.** and Hogan, K. P. 2003. Increases of chlorophyll a/b ratios during acclimation of tropical woody seedlings to nitrogen limitation and high light. *Plant Cell and Environment* 26: 857-865.
- Kitajima, K.** and Bolker, B. 2003. Testing performance rank-reversals among coexisting species: CPI analysis by Sack and Grubb (2001) and alternatives. *Functional Ecology* 17: 276-281.
- Bray, S. R., **Kitajima, K.** and Sylvia, D. M. 2003. Differential response of an exotic invasive shrub to mycorrhizal fungi: growth, physiology and competitive interaction. *Ecological Applications* 13: 565-574.
- Possley, J. E., **Kitajima, K.**, Stocker, R. K. 2003. Effect of season and shoot removal on root carbohydrate storage in subtropical invasive shrub, *Rhodomyrtus tomentosa*. *Florida Scientist* 66: 157-167.
- Graham, E. A., Mulkey, S. S., Wright, S. J., **Kitajima, K.** and Phillips, N. G. 2003. Cloud cover limits productivity in a tropical rain forest tree during La Nina. *Proceeding of the National Academy of Science* 100: 572-576.
- Kitajima, K.** 2002. Do shade-tolerant tropical tree seedlings depend longer on seed reserves? Functional growth analysis of three Bignoniaceae species. *Functional Ecology* 16: 433-444.
- Kitajima, K.**, Mulkey, S. S., Samaniego, M., & Wright, S. J. 2002. Decline of photosynthetic capacity with leaf age and position in two tropical pioneer tree species. *American Journal of Botany*, 89, 1925-1932.
- Terwilliger, V. J., **Kitajima, K.**, Le Roux-Swarthout, D. J., Mulkey, S. and Wright, S. J. 2001. Intrinsic water-use efficiency and heterotrophic investment in tropical leaf growth of two Neotropical pioneer tree species as estimated from $\delta^{13}\text{C}$ values. *New Phytologist* 152: 267-281.
- Terwilliger, V., **Kitajima, K.**, Le Roux-Swarthout, D. J., Mulkey, S. S. and Wright, S. J. 2001. Influences of heterotrophic and autotrophic resource use on carbon and hydrogen isotopic compositions of tropical tree leaves. *Isotopes in Environmental and Health Studies* 37: 133-160.
- Austin, D. A., **Kitajima, K.**, Yoneda, Y. and Qian, L. 2001. A putative American plant, *Ipomoea nil* (Convolvulaceae), in pre-Columbian Japanese arts. *Economic Botany* 55: 515-527.
- Valladares, F. E., Wright, S. J., Lasso, E., **Kitajima, K.** and Pearcy, R. W. 2000. Phenotypic plastic response to light of 16 *Psychotria* species differing in shade tolerance. *Ecology* 87: 1925-1936.
- Avalos, G., Mulkey, S. S. and **Kitajima, K.** 1999. Leaf optical properties of trees and lianas in the outer layer of a tropical dry forest. *Biotropica* 31: 517-520.
- Forget, P.-M. F., **Kitajima, K.** and Foster, R. B. 1999. Pre- and post-dispersal seed predation in a tropical tree, *Tachigalia versicolor* (Caesalpinaceae): effects of fruiting timing and among-tree variation. *Journal of Tropical Ecology* 15: 61-81.

- Kitajima, K.**, Mulkey, S. S., Wright, S. J. 1997. Decline of photosynthetic capacity with leaf age in relation to leaf longevities for five tropical canopy tree species. *American Journal of Botany* 84: 702-708.
- Kitajima, K.**, Mulkey, S. S. and Wright, S. J. 1997. Seasonal leaf phenotypes in the canopy of a tropical dry forest: photosynthetic characteristics and associated traits. *Oecologia* 109: 490-498.
- Kitajima, K.** and Tilman, D. 1996. Seed banks and seedling establishment in an experimental nitrogen gradient. *Oikos* 76: 381-391.
- Mulkey, S., **Kitajima, K.** and Wright, S. J. 1996. Plant physiological ecology of tropical forest canopies. *Trends in Ecology and Evolution* 11: 408-412.
- Mulkey, S., **Kitajima, K.**, and Wright, S. J. 1995. Photosynthetic capacity and leaf longevity in the canopy of a dry tropical forest. *Selbyana* 16: 169-173.
- Kitajima, K.** 1994. Relative importance of photosynthetic and allocation traits as correlates of seedling shade tolerance of 15 tropical tree species. *Oecologia* 98: 419-428.
- Kitajima, K.** 1992. Relationship between photosynthesis and thickness of cotyledons for tropical tree species. *Functional Ecology* 6: 582-589.
- Kitajima, K.** 1992. The importance of cotyledon functional morphology and patterns of seed reserve utilization for the ecology of neotropical tree seedlings. Ph. D. Thesis, University of Illinois.
- Augspurger, C. K. and **Kitajima, K.** 1992. Experimental studies of seedling recruitment from contrasting seed distributions. *Ecology* 73: 1270-1287.
- Kitajima, K.** 1988. Forest decline in Central Europe: current status and its research. *Japanese Journal of Ecology* 38: 269-277.
- Kitajima, K. and Augspurger, C. K. 1989. Seed and seedling ecology of a monocarpic tropical tree, *Tachigalia versicolor*. *Ecology* 70: 1102-1114.
- Hirose, T. and **Kitajima, K.** 1986. Nitrogen uptake and plant growth. I. Effect of nitrogen removal on growth of *Polygonum cuspidatum*. *Annals of Botany* 58: 479-486.

Peer-reviewed book chapters

- Russo, S. E. and **Kitajima, K.** (2016) The ecophysiology of leaf lifespan in tropical forests: adaptive and plastic response to environmental heterogeneity. In: Santiago, L. and Goldstein, G. (eds.) *Tropical Tree Physiology: Adaptations and Responses in a Changing Environment*, Springer. Pp. 357-383.
- Kitajima, K.** and Poorter, L. 2008. Functional basis for resource niche partitioning by tropical trees. In: Schnitzer, S. A. and Carson, W. P. (eds.) *Tropical Forest Community Ecology*, Blackwell Science, Pp. 160-181.
- Kitajima, K.** and Myers, J. A. 2008. Seedling ecophysiology: strategies towards achievement of positive carbon balance. In: M. A. Leck, V. T. Parker, and R. L. Simpson. *Seedling Ecology and Evolution*. Cambridge University Press. Pp. 172-188.
- Kitajima, K.** 2007. Seed and seedling ecology. In: F. Pugnaire and F. Valladares (eds.) *Handbook of Functional Plant Ecology*, 2nd Ed. Marcel Dekker, NY. pp. 549-579.
- Kitajima, K.** and Fenner, M. 2000. Seedling regeneration ecology. In: Fenner, M. (ed.) *Seeds: Ecology of Regeneration in Plant Communities*, 2nd ed, pp. 331-360. CAB International, Wallingford.
- Fenner, M. and **Kitajima, K.** 1999. Seed and seedling ecology. In: F. Pugnaire and F. Valladares (eds.) *Handbook of Functional Plant Ecology*, Pp. 589-622. Marcel Dekker, NY.

- Kitajima, K.** 1996. Ecophysiology of tropical tree seedlings. In: S. Mulkey, R. Chazdon, and A. Smith (eds.) *Tropical Forest Plant Ecophysiology*. Pp. 559-596. Chapman and Hall, NY.
- Kitajima, K.** 1996. Cotyledon functional morphology, patterns of seed reserve utilization and regeneration niches of tropical tree seedlings. In: M. D. Swaine (ed.) *The Ecology of Tropical Forest Tree Seedlings*. Pp. 193-210, UNESCO, Paris.

Non-peer reviewed publications

- Kitajima, K.** 2003. Shade tolerance. In: Iwasa, Y., Matsumoto, T, and Kikuzawa, K. (eds.) Japanese Encyclopedia of Ecology, pp. 372-373. Kyoritsu, Tokyo. [in Japanese]
- Basset, Y., **Kitajima, K.**, and Wright, S. J. 2003. The international canopy crane network: key findings in canopy science. In: Basset, Y., Horlyck, V. & Wright, S. J. (eds) *Studying Forest Canopies From Above: The International Canopy Crane Network*, pp. 159-172. Smithsonian Tropical Research Institute..

Note: underlined are names of coauthors who were students at the time of publication.

Teaching and Advising

Courses taught (since 2006)

- Tropical Forest Environments (at Kyoto University, Fall 2013)
 Integrative Principles of Biology II (BSC 2011, Fall 2008, Fall 2009)
 Introductory Botany (BOT 2010, Fall 2007, Fall 2010)
 Plant Ecology (PCB3601, Spring 2007, Spring 2009, Spring 2011)
 Tropical Ecology (PCB 5365, Fall 2006, Spring 2008, Spring 2010, Fall 2011)
 Integrative Principles (ZOO 6005; Module “*Integration of Plant Functional Traits*”, Fall 2010)
 Special Topics in Seed and Seedling Regeneration Ecology (PCB 6935, Spring 2007, 2009)
 Special Topics in Tropical Forest Community Ecology (PCB 6935, Spring 2009)

Student Supervisory Committees (1997-2012)

- 35 Ph. D. committees (including **six** as the main advisor)
 26 Master’s degree committees (including **seven** as the main advisor)

Graduate students advised

- Sarah Bray (PhD 2005)
 Camila Pizano (PhD. December 2011)
 Danielle Palow (PhD, May 2012)
 Gerardo Celis (PhD, December 2012)
 Martijn Slot (PhD, August 2013)
 Cathy Fahey (PhD expected May 2017)
 Vincent Medjbe (2008-2009 co-advising with Jack Putz, PhD expected May 2012)
 Kirs Callis (2008-2010, August 2013)
 Jonathan Myers (MS 2004), PhD Louisiana State University, 2010, currently a postdoc at Washington University, St. Louis.
 Silvia Alvares-Clare (MS 2005), PhD University of Florida, 2010.
 Carla Stafanescu (MS 2006), currently in MD Program, Alabama State University.
 Erica Van Etten (MS 2007)
 Jared Westbrook (MS 2010)
 Miriam Mathula (MST 2001)
 Cathy Fahey (MS 2014)

Undergraduate students advised for independent studies

Chad Reddick (B.S. 1999)
Melony Dooley (B.S. 2000)
Elise Owen (B.S. 2003)
Bernice Lo (B.S. 2003)
Jeffrey Hubbard (B.S. 2004)
Lisa Cowart (B.S. 2004)
Sergio Suriel (B.S. 2005)
Sarah Tarrant (B.S. 2005)
Alexander Boulos (B.S. 2009)
Ori Baber (B.S. 2010)
Amanda Pendleton (B.S. 2010)
Shaji Faisal (B.S. 2010)

High school students hosted in the lab for the University of Florida Student Science Training Program (UF-SSTP)
Don Lee (2000)

Professional Service and Membership

Executive Board – Association for Tropical Biology and Conservation, President 2016;
Treasurer, 2009-2014, Councilor 2006-2008.
Councilor – Japan Society for Tropical Ecology, 2014-current.
Editorial Board – Associate Editor, *Functional Ecology*, 2009-2015
Editorial Board – Associate Editor, *Frontier in Functional Plant Ecology*, 2011-current
Peer review for academic journals (excluding those handled as an associate editor): 48
manuscripts reviewed since 2006-2010 for 18 journals (*Aquatic Botany, American Journal of Botany, Annals of Botany, Canadian Journal of Forest Research, Ecology, Ecology Letter, Forest Ecology and Management, Functional Ecology, International Journal of Ecology, International Journal of Plant Science, Journal of Ecology, Journal of Tropical Ecology, New Phytologist, Oecologia, Planta, Plant Ecology, PlosOne Biology, Restoration Ecology and Management*)
Grant Panels and Reviews - National Science Foundation (October 2003, January 2011),
World Wildlife Fund Tropical Botany Award Fellowship Committee (February 2010, 2011)
Organizing international symposia, meetings and workshops
2014 – Symposium Session, *Trait-based Trade-offs in Tropical Forests*, Association for Tropical Biology and Conservation Annual Meeting, Cairns, Australia.
2013 – Program Chair for the Joint 50th Anniversary Meeting of the Association for Tropical Biology and Conservation and the Organization for Tropical Studies, San José, Costa Rica.
2011 – Symposium Session, *Functional Traits and Tropical Forest Response to Climate Change*, Association for Tropical Biology and Conservation Annual Meeting, Arusha, Tanzania.
2008 – Mini Symposium *Functional traits and the ecological performance of tropical trees* (co-organizer, Lourens Poorter). Wageningen University, Netherlands.
2007 - Japan-US special symposium, *Phenotypic plasticity in relation to environmental changes: scaling from molecular to ecosystem levels*, Nikko, Japan.
2006 – Symposium Session, *Biological Invasion in the Tropics*, Association for Tropical Biology and Conservation Annual Meeting, Beijing, China.
External referee for tenure and promotion at other institutions (Michigan State University, 2008; University of Minnesota, 2010)

Service as an external examiner of PhD committees (University of Alberta, 2010; University of Montreal, 2011-)

Members – American Society of Botany, Ecological Society of America, British Ecological Society, Association for Tropical Biology and Conservation, American Association for Advancement of Science, Sigma-Xi, Japanese Society of Tropical Ecology, American Society of Naturalist, American Geographical Union.