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EDUCATION & AWARDS

International Society of Arboriculture President's Award (2019)
International Society of Arboriculture Alex L. Shigo Award (2014)
International Society of Arboriculture Early Career Scientist Award (2011)
Tree Care Industry Association Safety Award (2009)
Ph.D. Forestry (2002) University of Massachusetts – Amherst
Member Xi Sigma Pi National Honor Society
Donald L. Mader Scholarship for outstanding academic achievement
Malcom B. McKenzie Award for service and academic achievement
State Farm Companies Foundation Doctoral Dissertation Award
Dean's List 1999–2002
M.S. Forestry (1997) University of Massachusetts – Amherst
Donald L. Mader Scholarship for outstanding academic achievement
Member Xi Sigma Pi National Honor Society
Dean's List 1994–1997
A.B. Political Science (1992) The College of the Holy Cross, Worcester, MA
Dean's List Fall 1991, Spring 1992

PROFESSIONAL EMPLOYMENT

2016–Present: Massachusetts Arborists Association Professor of Commercial Arboriculture,
Department of Environmental Conservation, University of Massachusetts – Amherst
2010–2016: Massachusetts Arborists Association Associate Professor of Commercial Arboriculture,
Department of Environmental Conservation, University of Massachusetts – Amherst
2004–2010: Massachusetts Arborists Association Assistant Professor of Commercial Arboriculture,
Department of Natural Resources Conservation, University of Massachusetts – Amherst
2002–2004: Assistant Professor, Urban Forestry, Virginia Tech University, Blacksburg, VA

CERTIFICATIONS & MEMBERSHIPS

International Society of Arboriculture Certified Arborist #NY0448A
Member, International Society of Arboriculture (1994–Present)

PROFESSIONAL FOCUS

Arboricultural Biomechanics
Quantifying the effect of arboricultural practices on the likelihood of tree failure
Developing mechanistic models to predict tree failure
Tree Worker Safety
Evaluation of tree climbing gear and techniques
Assessing arboricultural safety standards

RESEARCH & SCHOLARLY ACHIEVEMENTS (names of graduate and undergraduate students are underlined and double underlined, respectively)

Refereed Journal Articles:

1. Kane, B., E. Brigham, and S.R. Arwade. 2020. The effects of ascent technique and the presence of leaves on loading of a tie-in point during climber ascents. *Urban Forestry & Urban Greening*. <https://doi.org/10.1016/j.ufug.2020.126762>
2. Lim, J., B. Kane, and D.V. Bloniarz. 2020. Arboriculture safety standards: Consistent trends. Accepted in: *Urban Forestry & Urban Greening*. <https://doi.org/10.1016/j.ufug.2020.126736>
3. Koeser, A.K., E.T. Smiley, R.J. Hauer, B. Kane, R.W., Klein, S.M. Landry, and M. Sherwood. 2020. Can Professionals Gauge Likelihood of Failure? - Insights from Tropical Storm Matthew. *Urban Forestry & Urban Greening*. <https://doi.org/10.1016/j.ufug.2020.126701>
4. Kane, B. 2020. Loads borne by a tie-in point during ascents and descents on a basal-anchored stationary rope system. *Urban Forestry & Urban Greening*. <https://doi.org/10.1016/j.ufug.2020.126687>
5. Klein, R.W. A.K. Koeser, B. Kane, S. Landry, H. Shields, S. Lloyd, and G. Hansen. 2020. Evaluating the Likelihood of Tree Failure in Naples, Florida Following Hurricane Irma. *Forests* 11: 485; <https://doi:10.3390/f11050485>.
6. Kane, B. 2020. Loads borne by a tie-in point (TIP) during arboricultural climbing. *Urban Forestry & Urban Greening*. <https://doi.org/10.1016/j.ufug.2020.126625>.
7. Kane, B. and S.R. Arwade. 2020. Quantifying tension and deflection in pre-tensioned speedlines carrying a load. *Urban Forestry & Urban Greening*. <https://doi.org/10.1016/j.ufug.2019.126514>.
8. Burcham, D., W.R. Autio, K. James, Y. Modarres-Sadeghi, and B. Kane. 2020. Effect of pruning type and severity on mass and vibration properties of Senegal mahogany (*Khaya senegalensis*) and rain tree (*Samanea saman*). *Trees – Structure & Function* 34:213–228 .
9. Kane, B. 2019. Frictional properties of arborist rigging blocks. *Urban Forestry & Urban Greening* 42:31–38.
10. Jackson, T., A. Shenkin, J. Moore, A. Bunce, T. van Emmerik, B. Kane, D. Burcham, K. James, J. Selker, K. Calders, N. Origo, M. Disney, A. Burt, P. Wilkes, P. Raunonen, J. Gonzalez de Tanago Menaca, A. Lau, M. Herold, R. C. Goodman, T. Fourcaud, Y. Malhi. 2019. An architectural understanding of natural sway frequencies in trees. *J. R. Soc. Interface*. 16(155).
11. Burcham, D., N. Brazee, R. Marra, and B. Kane. 2019. Can sonic tomography predict loss in load-bearing capacity for trees with internal defects? A comparison of sonic tomograms with destructive measurements. *Trees – Structure & Function* 33:681–695.
12. Kane, B. 2018. Loading experienced by a tie-in point during ascents. *Urban Forestry & Urban Greening* 34:78–84.
13. Kabir, E., S. Guikema, B. Kane. 2018. Statistical modeling of tree failures during storms. *Reliability Engineering and System Safety* 177:68–79.
14. Kane, B. 2018. The effect of simulated trunk splits, pruning, and cabling on sways of *Quercus rubra* L. *Trees – Structure & Function* 32:985–1000.
15. Cetrangolo, I., S.R. Arwade, and B. Kane. 2018. An investigation of branch stresses induced by arboricultural operations. *Urban Forestry & Urban Greening* 30:124–131.
16. Kane, B. 2017. Can pruning reduce the likelihood of tree failure? *Italus Hortus* 24:23–31.
17. Kane, B. 2017. Forces generated in rigging trees with single and co-dominant stems. *Urban Forestry & Urban Greening* 24:14–18.
18. MacFarlane, D.W. and B. Kane. 2017. Neighbor effects on tree architecture: functional trade-offs balancing crown competitiveness with wind resistance. *Functional Ecology* 31:1624–1636.

19. Dahle, G.A., K.R. James, B. Kane, J. Grabosky, and A. Detter. 2017. A review of factors that affect the static load-bearing capacity of urban trees. *Arboriculture & Urban Forestry* 43:89–106.
20. Sherman, A.R., B. Kane, J.R. Harris, W.A. Autio, and H.D.P. Ryan. 2016. Establishment period of three species planted in Boston, MA. *Urban Forestry & Urban Greening* 19:95–102.
21. Harris, J.R., S.D. Day, and B. Kane. 2016. Growth and stability of deep planted red maple and northern red oak trees and the efficacy of root collar excavations. *Urban Forestry & Urban Greening* 18:19–24.
22. Kane, B., P.S. Warren, and S.B. Lerman. 2015. Tree risk assessment and the occurrence of cavity-nesting birds in residential landscapes. *Urban Forestry & Urban Greening* 14:1137–1146.
23. Reiland, M., B. Kane, Y. Modarres-Sadeghi, and H.D.P. Ryan. 2015. The effect of cabling and leaves on sway characteristics of northern red oak. *Urban Forestry & Urban Greening* 14:844–850.
24. Kane, B. and J.T. Finn. 2014. Factors affecting branch failures in open-grown trees during a snowstorm in Massachusetts, USA. *SpringerPlus* 3:720.
25. Kane, B. 2014. Determining parameters related to the likelihood of failure of red oak (*Quercus rubra* L.) from winching tests. *Trees – Structure & Function* 28:1667–1677.
26. Julius, A., B. Kane, M. Bulzacchelli, and H.D.P. Ryan. 2014. Compliance with the Z.133 Safety Standard among arborists in New England. *Journal of Safety Research* 51:65–72.
27. Dahle, G., J. Grabosky, B. Kane, J. Miesbauer, W. Peterson, F.W. Telewski, A. Koeser, and G. Watson. 2014. Tree Biomechanics: A white paper from the 2010 international meeting and research summit at the Morton Arboretum (Lisle, IL, US). *Arboriculture & Urban Forestry* 40:309–318.
28. Kane, B. and W. Autio. 2014. Effect of cable systems on diameter growth of red oaks with co-dominant stems. *Urban Forestry & Urban Greening* 13:443–449.
29. Ciftci, C., S.R. Arwade, B. Kane, and S. Brena. 2014. Analysis of the probability of failure for open-grown trees during wind storms. *Probabilistic Engineering Mechanics* 37:41–50.
30. Ciftci, C., B. Kane, S. Brena, and S.R. Arwade. 2014. Moment capacity loss due to decay in tree stems. *Trees – Structure & Function* 28:517–529.
31. Kane, B. Y. Modarres-Sadeghi, K.R. James, and M. Reiland. 2014. Sway characteristics of large, decurrent trees affected by branches. *Trees – Structure & Function* 28:151–159.
32. James, K.R., G.A. Dahle, J. Grabosky, B. Kane, and A. Detter. 2014. Tree biomechanics literature review: Dynamics. *Arboriculture & Urban Forestry* 40:1–15.
33. Ciftci, C., S. Brena, B. Kane, and S.R. Arwade. 2013. The effect of crown architecture on dynamic amplification factor of an open-grown sugar maple (*Acer saccharum* L.). *Trees – Structure & Function* 27:1175–1189.
34. Smiley, E.T., B. Kane, W. Autio, and L. Holmes. 2012. Sapwood cuts and their impact on tree stability. *Arboriculture & Urban Forestry* 38:287–292.
35. Kane, B. 2012. Breaking load of hitches and ropes used in rigging. *Arboriculture & Urban Forestry* 38:1–5.
36. Kane, B. 2011. Compatibility of toothed ascenders with arborist climbing ropes. *Arboriculture & Urban Forestry* 37:180–185.
37. Kane, B. 2011. Withdrawal resistance of J-lags in three hardwood species. *Arboriculture & Urban Forestry* 37:139–145.
38. Rines, D., B. Kane, D. B. Kittredge, H.D.P. Ryan, and B. Butler. 2011. Measuring urban forestry performance and demographic associations in Massachusetts, U.S.A. *Urban Forestry & Urban Greening* 10:113–118.
39. Kane, B. and K. R. James. 2011. Dynamic properties of open-grown deciduous trees. *Canadian Journal of Forest Research* 41:321–330.

40. Rines, D., B. Kane, H.D.P. Ryan, and D. B. Kittredge. 2010. Attitudes of tree wardens in Massachusetts. *Urban Forestry & Urban Greening* 9:295–301.
41. Kane, B., M. Freilicher, M. Cloyes, and H.D.P. Ryan. 2010. Impact force and rope tension affect likelihood of cutting one's rope with a handsaw. *Arboriculture & Urban Forestry* 36:128–131.
42. Kane, B., M. Cloyes, M. Freilicher, and H.D.P. Ryan. 2009. Damage Inflicted on Climbing Ropes by Handsaws. *Arboriculture & Urban Forestry* 35:305–310.
43. Arbogast, K. L., B.C.P. Kane, J. Kirwan, and B. Hertel. 2009. Vegetation and outdoor recess time at elementary schools: What are the connections? *Journal of Environmental Psychology*. 29:450–456.
44. Alvey, A. A., P. E. Wiseman, and B. Kane. 2009. Efficacy of conventional tree stabilization systems and their effect on short-term tree development. *Arboriculture & Urban Forestry* 35:157–164.
45. Kane, B. and H.D.P. Ryan. 2009. Breaking strength of carabiners used in tree climbing. *Arboriculture & Urban Forestry*. 35:75–79.
46. Kane, B., S. Brena, and W. Autio. 2009. Forces and stresses associated with tree rigging. *Arboriculture & Urban Forestry*. 35:68–74.
47. Kane, B., R.W. Farrell, S. M. Zedaker, J.R. Loferski, and D.W. Smith. 2008. Failure mode and prediction of the strength of branch attachments. *Arboriculture & Urban Forestry* 34:308–316.
48. Harris, J. R., S. D. Day, and B. Kane. 2008. Nitrogen fertilization during planting and establishment of the urban forest: a collection of five studies. *Urban Forestry & Urban Greening* 7:195–206.
49. Pavlis, M., B. Kane, J. R. Seiler, and J. R. Harris. 2008. The effect of pruning on drag and bending moment of shade trees. *Arboriculture & Urban Forestry* 34:207–215.
50. James, K. and B. Kane. 2008. Precision digital instruments to measure dynamic wind loads on trees during storms. *Agricultural and Forest Meteorology* 148:1055–1061.
51. Kane, B., M. Pavlis, J. R. Seiler, J. R. Harris. 2008. Trunk stress and branch reconfiguration of shade trees. *Canadian Journal of Forest Research* 38:1275–1289.
52. Kane, B. and P. Clouston. 2008. Tree pulling tests of large shade trees in the genus *Acer*. *Arboriculture & Urban Forestry* 34:101–109.
53. Kane, B. 2008. Tree failure following a windstorm in Brewster, Massachusetts, USA. *Urban Forestry & Urban Greening*. 7:15–23.
54. Kane, B. 2007. Branch strength of Bradford pear (*Pyrus calleryana* var. 'Bradford'). *Arboriculture & Urban Forestry* 33:283–291.
55. Kane, B. 2007. Friction coefficients for arborist ropes passing over cambium saver rings. *Arboriculture & Urban Forestry*. 33:31–42.
56. Kane, B. and E. T. Smiley. 2006. Drag coefficients and area estimation of red maples. *Canadian Journal of Forest Research*. 36:1951–1958.
57. Gul, A., A. Gezer, and B. Kane. 2006. Multi-criteria analysis for locating new urban forests: An example from Isparta, Turkey. *Urban Forestry & Urban Greening*. 5:57–71.
58. Smiley, E. T. and B. Kane. 2006. The effects of pruning type on wind loading of *Acer rubrum*. *Arboriculture & Urban Forestry*. 32:33–42.
59. Rooney, C.J., H.D.P. Ryan, D. V. Bloniarz, and B.C.P. Kane. 2005. The reliability of a windshield survey to locate hazards in roadside trees. *Journal of Arboriculture*. 31:88–93.
60. Kane, B.C.P. and H.D.P. Ryan. 2004. The accuracy of formulas used to assess strength loss due to decay in trees. *Journal of Arboriculture*. 30:347–356.
61. Mortimer, M. J. and B.C.P. Kane. 2004. Hazard tree law in the United States. *Urban Forestry and Urban Greening*. 2:159–165.

62. Kane, B.C.P. and H.D.P. Ryan. 2003. Comparing formulas that examine strength loss due to decay in trees: woundwood toughness improvement in red maple (*Acer rubrum*). *Journal of Arboriculture*. 29:208–215.
63. Kane, B.C.P. and H.D.P. Ryan. 2002. Discoloration and decay associated with hardware installation in trees. *Journal of Arboriculture*. 28:187–193.
64. Kane, B.C.P., H.D.P. Ryan, and D. V. Bloniarz. 2001. Comparing formulae for assessing strength loss due to decay in trees. *Journal of Arboriculture*. 27:78–87.
65. Kane, B.C.P. and H.D.P. Ryan. 1998. Locating Trees using a Geographic Information System (GIS) and the Global Positioning System (GPS). *Journal of Arboriculture*. 24:135–143.

Submitted:

1. Burcham, D., W.R. Autio, K. James, Y. Modarres-Sadeghi, and B. Kane. Effect of pruning type and severity on wind-induced tree sways. Submitted to: *Urban Forestry & Urban Greening*.
2. Landry, Koeser, Kane, et al. Irma and tree damage in 3 Florida cities. Submitted to: *Urban Forestry & Urban Greening*.

In preparation:

1. Kane, B., S.R. Arwade, and E. Brigham. The effect of rope type on the magnitude and frequency of loads experienced by a tie-in point. Intended outlet: *Urban Forestry & Urban Greening*.
2. Kane, B. and D.W. MacFarlane. Branch allometry of common street trees in the Northeastern United States. Intended outlet: *Urban Forestry & Urban Greening*.
3. Jackson et al. The characteristics of tree motion: a data synthesis. Intended Outlet
4. Kane, B., S.R. Arwade, and E. Brigham. Simulated displacement of TIPs during ascents. Intended outlet: *Urban Forestry & Urban Greening*.
5. Kane, B. Do TIP motion and loads vary with load type and tree mass? Intended outlet: *AJB* or *TSAF*.
6. Kane, B. TIP motion and loads during arboricultural climbing. Intended outlet: *Urban Forestry & Urban Greening*.

Refereed Book Chapters:

1. Kane, B. 2017. Pruning. Chapter 27 In: *Routledge Handbook of Urban Forestry*. Ferrini, F., C. Konijnendijk van den Bosch, and A. Fini (Eds.). Taylor & Francis, NY, NY.

Refereed Conference Proceedings:

1. Kane, B. 2017. Arboricultural Biomechanics: How Arboricultural Practice Affects the Likelihood of Tree Failure. In: *Urban Forest Sustainability*. Ning, Z.H., D.J. Nowak, and G.W. Watson (Eds.). International Society of Arboriculture, Champaign, IL, pp. 264 – 273.
2. Kane, B. 2017. Assessing the likelihood of tree failure due to decay. In: *Urban Forest Sustainability*. Ning, Z.H., D.J. Nowak, and G.W. Watson (Eds.). International Society of Arboriculture, Champaign, IL, pp. 274 – 280.
3. Warren, P., Strobach, M., Lerman, S.B., Danford, R.S., Ryan, R., and Kane, B. 2016. Abstract.
4. Boal, C., DeStefano, S., and Kane, B. 2017. Urban Raptors: Perspectives and Future Directions. Raptor Research Foundation Annual Conference, Ecology and Management of Birds of Prey in an Urbanizing World. Cape May, NJ.
5. Warren, P.S., B. Kane, and C. Nilon. 2009. The socio-ecology of dying trees: cavity nesting birds, hazard trees, and declining urban forest canopies. *Urban Wildlife Ecology & Management: An*

International Symposium on Urban Wildlife & the Environment. University of Massachusetts-Amherst, June 2009. Abstract.

6. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. International Society of Arboriculture, Champaign, IL.
7. Kane, B., M. Pavlis, J.R. Harris, and J. Seiler. 2007. Crown reconfiguration and stress in shade trees. Abstract in HortScience 42:978.
8. Kane, B.C.P. Comparing formulas that assess strength loss due to decay in trees. In: Tree Structure and Mechanics: How Trees Stand Up and Fall Down. Smiley, E.T. and K.D. Coder (Eds.). 2002, International Society of Arboriculture, Champaign, IL.

Articles in Peer-Reviewed Trade Journals:

1. Kane, B. 2019. Arboricultural biomechanics: How arboricultural practice affects the likelihood of tree failure. *Arborist News* 28(3):36–41.
2. Koeser, A., S. Guikema, B. Kane, and S. Landry. 2018. Preparing for the next storm: The natural disaster preparation and responses conference. *Arborist News* 27(3):28-30.
3. Kane, B. 2018. Understanding the likelihood of failure of an anchor point during an ascent: Part II. *Arborist News* 27(2):56–57.
4. Kane, B. 2018. Understanding the likelihood of failure of an anchor point during an ascent: Part I. *Arborist News* 27(1):58–60.
5. Kane, B. 2013. The science of safe tree climbing. *Arborist News* 22(5):52–53.
6. Kane, B. and H.D.P. Ryan. 2012. Rigging ropes and hitch strength. *TCI* 23(3):RS1–RS5.
7. Kane, B. 2011. How safe are those ascenders? *Arborist News* 20(6):20–21.
8. Kane, B. 2010. What research is important to you? *Arborist News* 19:49.
9. Kane, B. 2009. Your handsaw is a lethal weapon. *Arborist News* 18:46.
10. Luley, C. J. and B. Kane. 2009. Sap Rot: It Will Let You Down. *Arborist News* 18:22–27.
11. Kane, B. and S. D. Day. 2008. Funding research. *Arborist News* 17:52–53.
12. Kane, B and H.D.P. Ryan. 2008. How strong is that branch attachment? *Arborist News* 17:50–51.
13. Kane, B. 2008. Science and the A300 Standard. *Arborist News* 17:29.
14. Kane, B., and J. R. Harris. 2008. Does pruning reduce the risk of tree failure? *Arborist News* 17:46–48.
15. Kane, B. 2007. Introducing the International Tree Failure Database. *Arborist News* 16:45.
16. Ryan, H.D.P. and B. Kane. 2006. New 2006 Z-133: Climbing Safety. *Arborist News* 15:48–50.
17. Kane, B. 2006. Pre-climb tree hazard assessment. *Tree Care Industry* 18:24–28.
18. Kane, B. 2006. The importance of science in arboriculture. *Arborist News* 15:22–23.
19. Ryan, H.D.P., and B. Kane. 2006. Z.133 Safety Standard, 2006: Personal Protective Equipment and Electrical Safety. *Arborist News* 15:48–50.
20. Damery, D. T. and B.C.P. Kane. 2005. Urban Wood Waste: Maximizing Log Value for the Sawmill Market. *Arborist News* 14:44–46.
21. Kane, B.C.P. and J. P. Kirwan. 2005. Value, Benefits and Costs of Urban Trees. Virginia Cooperative Extension publication #420–181.
22. Kirwan, J. P. and B.C.P. Kane. 2005. Urban Forestry Issues. Virginia Cooperative Extension publication #420–180.
23. Kane, B.C.P. and H.D.P. Ryan. 2004. The accuracy of formulas used to assess strength loss due to decay in trees. *Arborist News* 13:55.
24. Kane, B.C.P. and H.D.P. Ryan. 2003. How well do we assess tree risk due to decay? *Arborist News* 12:49–52.
25. Kane, B.C.P. and H.D.P. Ryan. 2002. Tree roots and hazard tree evaluation. *Tree Care Industry* 13:41–43.

26. Kane, B.C.P., H.D.P. Ryan, and D. V. Bloniarz. 2002. Prioritizing Risk Trees in a Community. *Tree Care Industry* 12:45–50.
27. Ryan, H.D.P. and B.C.P. Kane. 2001. Z133.1 Safety Standards: Changes and the impact on the profession. *Arborist News* 10:9–14.
28. Ryan, H.D.P. and B.C.P. Kane. 2001. Z133.1 Safety Standards: Changes and the impact on the profession Part 2. *Arborist News* 10:9–14.

Peer-Reviewed Instructional Materials:

1. Kane, B.C.P., H.D.P. Ryan, and D. V. Bloniarz. Tree Risk Assessment. Chapter of Massachusetts Certified Arborist Exam Study Guide 2nd Ed. 2011.
2. Ryan, H.D.P. and B.C.P. Kane. Z–133 Safety Standard. Chapter of Massachusetts Certified Arborist Exam Study Guide 2nd Ed. 2011.
3. Kane, B.C.P., H.D.P. Ryan, and D. V. Bloniarz. Tree Risk Assessment. Chapter of Massachusetts Certified Arborist Exam Study Guide 2006.
4. Ryan, H.D.P. and B.C.P. Kane. Z–133 Safety Standard. Chapter of Massachusetts Certified Arborist Exam Study Guide 2006.

Other papers:

1. Kane, B. 2019. Rigging and the likelihood of failure, *TCI Magazine* 30(11):32-36.
2. Kane, B. 2018. Is that tie-in point safe? *TREE Fund Research Report* 1(2):3–6.
3. Kane, B. P. Warren, and S. Lerman. 2016. Risk trees and cavity–nesting birds. *Arborist News* 25(2):24–26.
4. Kane, B. 2016. Cabling affects trees. *TCI XXVII*(2):30–31.
5. Kane, B. 2015. Eureka! New England ISA Fall Newsletter 4.
6. Kane, B. 2013. Response to Letter re: “Pruning to reduce the risk of tree failure”. *TCI* 24(6):64.
7. Kane, B. 2013. Pruning to reduce the risk of tree failure. *TCI* 24(5):42–44.
8. Ryan, H.D.P. and B. Kane. 2012. Trees, storms, and utility systems. *TCI* 23(12):22–25.
9. Reiland, M. and B. Kane. 2011. Applied research for climbing and rigging: Single rope technique. *TCI XXII* 9:42–45.
10. Kane, B. 2010. How do you get into that tree? *HortNotes* 21:1–2.
11. Ryan, H.D.P. and B. Kane. 2010. After the storms. *HortNotes* 21:3.
12. Kane, B. 2010. How strong are those J–lags you’re using? *HortNotes* 21:1–2.
13. Luley, C.J. and B. Kane. 2010. Sap Rot: It Will Let You Down. *Michigan Arborist Assoc. newsletter*.
14. Kane, B. and H.D.P. Ryan. 2009. How big a piece can I take? *HortNotes* 20:1.
15. Kane, B. and H.D.P. Ryan. 2009. Your handsaw is a lethal weapon. *HortNotes* 20:1–3.
16. Ryan, H.D.P. and B. Kane. 2009. After the ice. *HortNotes* 20:1–2.
17. Luley, C.J. and B. Kane. 2009. Sap Rot: It Will Let You Down. *The Bark* 1:6–9.
18. Kane, B. and H.D.P. Ryan. 2008. How strong is that branch attachment? *HortNotes* 19:1–4.
19. Kane, B. 2008. Does pruning reduce the risk of tree failure? *Citizen Forester* 1:8.
20. Ryan, H.D.P., B. Kane, and D.V. Bloniarz. 2008. What is your tree worth? *HortNotes* 19:1–2.
21. Kane, B. 2008. Does pruning reduce the risk of tree failure? *HortNotes* 19:1–3.
22. Kane, B. 2007. Trees and Wind. *HortNotes* 18:3–4.
23. Ryan, H.D.P. and B. Kane. 2007. Struck–by tree care accidents. *HortNotes* 18:3–4.
24. Kane, B., H.D.P. Ryan, and R. Herfurth. 2007. Tree–Grip Dead–end Failures. *HortNotes* 18:1.
25. Ryan, H.D.P., B. Kane, and R. Herfurth. 2007. Cable Thimbles *NEC–ISA Quarterly*.
26. Ryan, H.D.P. and B. Kane. 2007. Climber’s Pre–climbing Inspection. *HortNotes* 18:1–2.

27. Ryan, H.D.P. and B. Kane. 2006. New 2006 Z-133: Electrical Safety. HortNotes 18:1.
28. Ryan, H.D.P. and B. Kane. 2006. Z-133 Safety Standard, 2006: Safety Standards for Chain Saw Use, Climbing, Pruning, Rigging, and Removal. HortNotes 17:1-3.
29. Kane, B. 2006. Who's Responsible Here? HortNotes 17:1.
30. Kane, B. and H.D.P. Ryan. 2006. How Pruning Affects Wind Loading of Shade Trees. HortNotes 17:1.
31. Ryan, H.D.P., B. Kane, and D.V. Bloniarz. 2006. DBH vs. Caliper?? NEC-ISA Quarterly 1:7-8.
32. Kane, B.C.P. and H.D.P. Ryan. 2005. How well do we assess tree risk due to decay? Part 2. HortNotes 16:1.
33. Kane, B.C.P. and H.D.P. Ryan. 2005. How well do we assess tree risk due to decay? NEC-ISA Quarterly 2:8.
34. Rooney, C.J., H.D.P. Ryan, D.V. Bloniarz, and B.C.P. Kane. 2005. The reliability of a windshield survey to locate hazards in roadside trees. Trees on Maine Street 8:1-4.
35. Ryan, H.D.P. and B. Kane. 2005. Time for Spring Tree Inspections. HortNotes 16:1.
36. H.D.P. Ryan, B. Kane, and D.V. Bloniarz. 2005. DBH vs. Caliper?? HortNotes 16:1.
37. Ryan, H.D.P. and B. Kane. 2004. The Reason for Proper Pruning Cuts. HortNotes 15:3-4.
38. Kane, B.C.P. and H.D.P. Ryan. 2004. How well do we assess tree risk due to decay? Part 1. HortNotes 15:1.
39. Kane, B.C.P. and H.D.P. Ryan. How well do we assess tree risk due to decay? WoodNotes Quarterly. <http://treelink.org/woodnotes/index.html>

Invited Presentations:

1. Forces at an Anchor During Climbing and Rigging. Connecticut Tree Protection Association webinar (Zoom). August 2020 [25 attendees].
2. Decay and the Likelihood of Tree Failure. Davey Tree Experts Technical Services meeting (Zoom). July 2020 [16 attendees].
3. Likelihood of Failure of an Anchor Point. Davey Tree Experts International Safety Trainers meeting (Zoom). May 2020 [12 attendees].
4. Safe rigging techniques. (4 hour workshop including field demonstration) Berkshire Botanical Garden's Arborist Day, Monterey, MA October 2019 [30 attendees]
5. Structural Defects and Likelihood of Tree Failure. Massachusetts Tree Wardens & Foresters Association Qualified Tree Warden training. Sturbridge, MA September 2019 [50 attendees].
6. Understanding Likelihood of Tree Failure. Massachusetts Tree Wardens & Foresters Association Qualified Tree Warden training. Sturbridge, MA September 2019 [50 attendees].
7. Arboricultural Safety (8 hour workshop in collaboration with North American Training Solutions). EverSource Energy. UMass/Eversource Utility Arboretum, Amherst, MA July 2019 [60 attendees].
8. Arboricultural Safety (8 hour workshop in collaboration with North American Training Solutions). EverSource Energy. UMass/Eversource Utility Arboretum, Amherst, MA August 2019 [50 attendees].
9. Why Do Trees Fail and What Can You Do About It? (1.5 hrs.) EverSource Energy. Berlin, CT June 2019 [60 attendees].
10. Rigging Workshop (4.5 hours). Lewis Tree & Shelter Tree. North Attleboro, MA May 2019 [40 attendees].
11. Why Trees Break in Wind. Florida ISA workshop: Trees & Storms—Lessons Learned, Tallahassee, FL May 2019 [80 attendees].
12. Reducing Future Damage—Pruning Mature Trees. Florida ISA workshop: Trees & Storms—Lessons Learned, Tallahassee, FL May 2019 [80 attendees].

13. To Remove or Restore—Dealing With Damaged Trees Following the Storm. Florida ISA workshop: Trees & Storms—Lessons Learned, Tallahassee, FL May 2019 [80 attendees].
14. Why Trees Break in Wind. Florida ISA workshop: Trees & Storms—Lessons Learned, Orlando, FL May 2019 [150 attendees].
15. Reducing Future Damage—Pruning Mature Trees. Florida ISA workshop: Trees & Storms—Lessons Learned, Orlando, FL May 2019 [150 attendees].
16. To Remove or Restore—Dealing With Damaged Trees Following the Storm. Florida ISA workshop: Trees & Storms—Lessons Learned, Orlando, FL May 2019 [150 attendees].
17. OK, It's Dead, Now What? Safe Removal of Dead Trees. CTPA Ash & Oak Workshop, Connecticut Ag Experiment Station, New Haven, CT March 2019 [150 attendees].
18. Managing Tree Risk and Wildlife Habitat. Minnesota Shade Tree Short Course, Minneapolis, MN March 2019 [1,300 attendees].
19. Cabling and Likelihood of Tree Failure. PennDel ISA Shade Tree Symposium, Lancaster, PA February 2019 [150 attendees].
20. Arboricultural Biomechanics. Keynote Address, PennDel ISA Shade Tree Symposium, Lancaster, PA February 2019 [400 attendees].
21. Tree Risk Management (3 hrs.). UMass Extension Green School. Milford, MA December 2018 [25 attendees].
22. Co-leader of Eversource/UMass Utility Arboretum tour (4 hrs.). Stockbridge School of Agriculture's Centennial. October 2018 [70 attendees].
23. Safe Rigging Techniques to Reduce the Likelihood of Failure (3 hour workshop). Czech Arborist Association Annual Meeting. Brno, Czech Republic September 2018 [limited to 30 attendees].
24. Does Pruning Affect Sway Frequency and Damping Ratio? Czech Arborist Association Annual Meeting. Brno, Czech Republic September 2018 [220 attendees].
25. Does Pruning Affect Drag and Bending Moment? Czech Arborist Association Annual Meeting. Brno, Czech Republic September 2018 [220 attendees].
26. Arboricultural Biomechanics. TREE Fund Noontime Webinar (1 hr. online, plus 3 hrs. writing responses to questions). August 2018 [356 attendees].
27. Workshop on Tree Worker Safety (6 hrs.). Bartlett Tree Expert Co. Amherst, MA August 2018 [25 attendees—New England Regional Safety Officers and Division VP].
28. Workshop on Tree Worker Safety and the Likelihood of Failure (6 hrs.). Bartlett Tree Expert Co. Charlotte, NC May 2018 [25 international attendees, including the VPs for Regulatory Compliance and Safety and Training].
29. Assessing Structural Defects in Trees (3 hrs.). Mass Qualified Tree Warden training. Sturbridge, MA April 2018 [50 attendees].
30. Choosing A Safe Tie-in Point (TIP). Mass. Arborists Association Safety Saves seminar (2 hrs.). Mass. Horticultural Society, Wellesley, MA, March 2018. [65 attendees]
31. Safe Pruning Practices to Reduce Risk and Enhance Wildlife – II. UMass Community Tree Conference. UMass – Amherst, March 2018. [P.S. Warren presenter]
32. Safe Pruning Practices to Reduce Risk and Enhance Wildlife – I. UMass Community Tree Conference. UMass – Amherst, March 2018. [R. Harper presenter]
33. Arboricultural Practice to Reduce the Likelihood of Tree Failure. Florida Urban Forestry Council—Urban Forestry Institute: Natural Disaster Preparation and Response Conference. University of Florida Gulf Coast Research & Education Center, Tampa, FL, February 2018 [100 attendees].
34. What Causes Tree Failure? Florida Urban Forestry Council—Urban Forestry Institute: Natural Disaster Preparation and Response Conference. University of Florida Gulf Coast Research & Education Center, Tampa, FL, February 2018 [100 attendees].

35. How Does Arboricultural Practice Affect the Likelihood of Tree Failure? Mass. Tree Wardens and Foresters Assoc. Annual Conference, Sturbridge, MA, January 2018 [350 attendees].
36. Arboricultural Biomechanics—How Does Arboricultural Practice Affect the Likelihood of Tree Failure (Part I: Biomechanics) (1.5 hrs.). International Arboriculture Summit, IASHK, Hong Kong November 2017 [200 attendees].
37. Arboricultural Biomechanics—How Does Arboricultural Practice Affect the Likelihood of Tree Failure (Part II: Cabling). International Arboriculture Summit, IASHK, Hong Kong November 2017 [200 attendees].
38. Arboricultural Biomechanics—How Does Arboricultural Practice Affect the Likelihood of Tree Failure (Part III: Pruning). International Arboriculture Summit, IASHK, Hong Kong November 2017 [200 attendees].
39. Tree Value, Tree Risk. Springfield Technical Community College workshop (4 hrs.), July 2017 [7 attendees].
40. Forces and Stresses Generated During Rigging. Advanced Biomechanics Workshop, Italian Horticulture Society, Pistoia, Italy June 2017 [70 attendees].
41. The Effect of Cabling on Growth and Sways of Trees. Advanced Biomechanics Workshop, Italian Horticulture Society, Pistoia, Italy June 2017 [70 attendees].
42. Defects and Likelihood of Tree Failure. Advanced Biomechanics Workshop, Italian Horticulture Society, Pistoia, Italy June 2017 [70 attendees].
43. Pruning Trees with Wildlife in Mind. Western Mass. Tree Wardens Meeting, Northampton, MA March 2017 [25 attendees].
44. Arboricultural Biomechanics (1.5 hrs.). CTPA Annual Meeting. Plantville, CT January 2017 [500 attendees].
45. Tree Risk Management (3 hrs.). UMass Extension Green School. Milford, MA December 2016 [40 attendees].
46. What Does Pulling Apart Red Oaks Tell Us About Tree Failure? American Society of Consulting Arborists Annual Meeting. Boston, MA December 2016 [250 attendees].
47. Assessing Structural Defects in Trees (3 hrs.). MTWFA training. Acton, MA November 2016 [40 attendees].
48. Arboricultural Biomechanics (7 hr. workshop). Spokane Conservation District Tree School. Spokane, WA June 2016 [40 attendees].
49. Arboricultural Biomechanics. Plenary session at the International Symposium on Urban Forestry & Sustainability. Chinese Academy of Sciences, Shenyang, China May 2016 [75 attendees].
50. Arboricultural Biomechanics (1.5 hrs.). KPB Dutch Chapter ISA Theme Day. Arnhem, Netherlands April 2016 [100 attendees].
51. Arboricultural Biomechanics (3 hr. workshop). Wisconsin Arborists Association Annual Meeting. Green Bay, WI February 2016 [220 attendees].
52. Arboricultural Biomechanics. ProGreen Expo. Denver, CO February 2016 [300 attendees].
53. Arboricultural Biomechanics: Tree Risk Assessment. ProGreen Expo. Denver, CO February 2016 [300 attendees].
54. Arboricultural Biomechanics. California Tree Failure Report Meeting. Woodside, CA January 2016 [200 attendees].
55. Arboricultural Biomechanics: Tree Risk Assessment. California Tree Failure Report Meeting. Woodside, CA January 2016 [200 attendees].
56. Arboricultural Biomechanics: Rigging. Kansas Arborists Association 61st Annual Conference. Topeka, KS January 2016 [250 attendees].
57. Arboricultural Biomechanics: Cabling. Kansas Arborists Association 61st Annual Conference. Topeka, KS January 2016 [250 attendees].

58. Arboricultural Biomechanics: Pruning. Kansas Arborists Association 61st Annual Conference. Topeka, KS January 2016 [200 attendees].
59. Arboricultural Biomechanics: Tree Risk Assessment. Kansas Arborists Association 61st Annual Conference. Topeka, KS January 2016 [200 attendees].
60. Trees and Wind. 7th Annual International Arboriculture Summit. Hong Kong, November 2014 [100 attendees].
61. Trees and Wind. PNW-ISA Annual Training Conference. Vancouver, WA, October 2014 [200 attendees].
62. Safe Climbing Practice. PNW-ISA Annual Training Conference. Vancouver, WA, October 2014 [100 attendees].
63. Tree Biomechanics. International Society of Arboriculture Annual Conference. Milwaukee, WI, August 2014 [100 attendees].
64. Trees and Wind. Keynote Presentation at the inaugural OK Arborists conference. Stillwater, OK, June 2014 [15 attendees].
65. Safe Rigging Practice. OK Arborists conference. Stillwater, OK, June 2014 [15 attendees].
66. Breaking Large, Open-grown Trees. UConn graduate seminar, Storrs, CT, March 2014 [20 attendees].
67. Trees and Wind. Keynote Presentation, Minnesota Shade Tree Short Course, Minneapolis, MN, March 2014 [950 attendees].
68. Safe Rigging Practices (2 hrs.). Think Trees NM, Albuquerque, NM, January 2014 [325 attendees].
69. Safe Climbing Practices (3 hrs.). Think Trees NM, Albuquerque, NM, January 2014 [30 attendees].
70. The Biomechanics of Tree Risk Assessment (2 hrs.). Idaho Nursery and Landscape Association, Boise, ID, January 2014 [100 attendees].
71. Single Rope Technique Summit. TCI Expo, Charlotte, NC, November 2013 [50 attendees].
72. Safe Rigging Practices. New England ISA Annual Conference, Warwick, RI, November 2013 [100 attendees].
73. Tree Risk Assessment Best Management Practices (half day). Urban Forest Strike Team Training (USDA FS) Springfield, MA, September 2013 [30 attendees].
74. Julius, A., B. Kane, M. Bulzachelli, and H.D.P. Ryan. 2013. Promoting a positive safety culture. ISA Annual Conference, Toronto, ON August 2013 [100 attendees].
75. Tree Biomechanics Workshop (full day). Centre for Urban Greening and Ecology Special Seminar, Singapore, July 2013 [50 attendees].
76. Pruning and Tree Risk Assessment. UMass Community Tree Conference, Amherst, MA March 2013 [300 attendees].
77. Pruning and Tree Risk Assessment. Iowa Shade Tree Short Course, Ames, IA, February 2013 [500 attendees].
78. Pruning and Tree Risk Assessment. Rochester Arborist Workshop, Rochester, MN, February 2013 [300 attendees].
79. Understanding Forces and Stresses in Rigging. Rochester Arborist Workshop, Rochester, MN, February 2013 [300 attendees].
80. Tree Biomechanics. CIPA Annual Meeting, Plantsville, CT, January 2013 [850 attendees].
81. Pruning and Tree Risk Assessment. TCI Expo, Baltimore, MD November 2012 [200 attendees].
82. Tree Pruning. MA Tree Stewards Training, Petersham, MA, October 2012 [25 attendees].
83. Tree Biomechanics Workshop (full day). Centre for Urban Greening and Ecology Special Seminar, Singapore, March 2012 [80 attendees].
84. Tree Biomechanics Workshop (full day). Melbourne, Australia, March 2012 [75 attendees].
85. Tree Biomechanics. Centre for Urban Greening and Ecology 5th Annual Regional Arboriculture Seminar, Singapore, August 2011 [60 attendees].

86. Tree Risk Assessment. Keynote Address: Penn-Del ISA Annual Shade Tree Symposium, Lancaster, PA, January 2011 [700 attendees].
87. Current trends and the future of arboricultural research. Keynote Address: Indiana Arborists Association Annual Meeting, Indianapolis, IN, January 2011 [200 attendees].
88. Tree Biomechanics Workshop (full day). Hong Kong November 2010 [85 attendees].
89. Tree Pruning. MA Tree Stewards Training, Petersham, MA, November 2010 [45 attendees].
90. Pruning and Wind Load. MAA Safety Saves program, Wellesley, MA October 2010 [75 attendees].
91. Tree Biomechanics. Kent, OH August 2010 [25 attendees].
92. Tree Pruning. MNLA, Charlton, MA, July 2010 [30 attendees].
93. Rochester Arborist Workshop, Rochester, MN, July 2010 [125 attendees].
94. Tree Pruning. MA Tree Stewards Training, Petersham, MA, October 2009 [25 attendees].
95. Forces in Rigging. MAA Dinner Meeting, Framingham, MA, October 2009 [75 attendees].
96. Decay in Trees. Tour des Trees dinner presentation, Springfield, MA, July 2009 [65 attendees].
97. The Arborist's Role in Ecosystem Management. MAA Dinner Meeting, Framingham, MA, April 2009 [75 attendees].
98. The Arborist's Role in Ecosystem Management. Tower Hill Botanic Garden, West Boylston, MA, November 2008 [60 attendees].
99. Tree Pruning. MA Tree Stewards Training, Petersham, MA, October 2008 [20 attendees].
100. The International Tree Failure Database. New England ISA annual meeting, Portland, ME, October 2008 [150 attendees].
101. Urban Natural Resources Institute Webcast June 2007 [30 attendees].
102. International Tree Failure Database training. University of Massachusetts, December 2007 [25 attendees].
103. Tree Pruning. MA Tree Stewards Training, Petersham, MA, November 2007 [37 attendees].
104. Arboriculture and Urban Forestry at University of Massachusetts. Purdue University Department of Forestry and Natural Resources Undergraduate Seminar, September 2007 [30 attendees]
105. The International Tree Failure Database. Urban Natural Resources Institute Webcast June 2007 [30 attendees].
106. Dynamic Motion of Shade Trees. Western Hazard Tree Workshop, Midway, UT, June 2007 [40 attendees].
107. Tree Risk Assessment and the International Tree Failure Database. Connecticut Natural Resource Conference, Storrs, CT, March 2007 [270 attendees].
108. Tree Pruning. Ecological Landscaping Association, Springfield, MA, March 2007 [20 attendees].
109. Using the Resistograph to detect decay. Garden State Tree Conference, New Brunswick, NJ, March 2007 [50 attendees].
110. Tree Risk Assessment. UMass Community Tree Conference, Amherst, MA February 2007 [150 attendees].
111. Tree Pruning. Western MA Arborists Meeting, Stockbridge, MA November 2006 [30 attendees].
112. Tree Pruning. MA Tree Stewards Training, Petersham, MA, November 2006 [30 attendees].
113. Safe Tree Climbing Practices. MNLA Summer conference, Amherst, MA, July 2006 [50 attendees].
114. Tree Risk Assessment. CT Tree Protective Association workshop, April 2006 [125 attendees].
115. Static vs. Dynamic Cabling Systems. MAA dinner meeting, Framingham, MA April 2006 [70 attendees].

116. Tree Physiology. MA Tree Stewards Training, Petersham, MA, November 2005 [30 attendees].
117. Tree Risk Assessment. MA Tree Stewards Training, Petersham, MA, November 2005 [30 attendees].
118. Pre-Climb Tree Risk Assessment. UMass Extension workshop, Amherst, MA, November 2005 [40 attendees].
119. Safe Tree Climbing Practices. MAA Safety Saves program, Wellesley, MA November 2005 [40 attendees].
120. Pre-Climb Tree Risk Assessment. TCI Expo, Columbus, OH November 2005 [500 attendees].
121. Tree Risk Assessment. UMass Physical Plant and Housing Supervisors training April 2005 [15 attendees].
122. Safe Tree Climbing Practices. New England Grows conference February 2005 [13,000 attendees over 3 days].
123. Safe Tree Climbing Practices. Connecting 4 Success conference (HS Vocational Teachers conference, Fitchburg, MA) June 2005 [20 attendees].
124. Tree Risk Assessment. MAA dinner meeting, Framingham, MA March 2005 [60 attendees].
125. Tree Risk Assessment. MATWFA annual meeting, Sturbridge, MA January 2005 [120 attendees].
126. Tree Risk Assessment. UMass Community Tree Conference, Amherst, MA March 2005 [120 attendees].
127. Assessing Tree Risk from the Climber's Perspective. New England Chapter ISA Annual Meeting, Manchester, NH October 2004 [150 attendees].
128. Managing Small Woodlots on the Urban Interface. Virginia Tech & VADOF. Critz, VA, July 2004 [55 attendees].
129. Assessing Tree Risk. Pennsylvania Community Forestry Conference. State College, PA, March 2003 [100 attendees].
130. Benefits and Values of Urban Trees. Trees & Trails Conference, Appalachian RC&D Council. Kingsport, TN March 2003 [40 attendees].
131. Tree Risk Assessment. Turf and Landscape Conference, Virginia Turfgrass Council. Richmond, VA January 2003 [10 attendees].
132. Tree Risk Assessment. Tree Care Symposium, Lewis-Ginter Botanical Garden. Richmond, VA, February 2003 [150 attendees].
133. Assessing Hazard Defects in Trees. Mid-Atlantic Chapter ISA Annual Meeting. Virginia Beach, VA, October 2002 [200 attendees].

Papers presented at professional meetings:

1. Kane, B. 2019. The effect of simulated trunk splits, pruning, and cabling on sways of *Quercus rubra* L. Open-grown and Urban Trees Conference. University of Freiburg, Germany.
2. MacFarlane, D.W. and B. Kane. 2017. Tree architecture and wind resistance: influence from neighboring trees, or lack thereof. 8th IUFRO International Conference on Wind and Trees. Boulder, CO July 2017.
3. MacFarlane, D.W. and B. Kane. 2016. Allometric scaling of urban- versus forest-grown trees: responses to shading and wind resistance. Northeastern Mensurationists Organization Meeting. Concord, MA November 2016.
4. Kane, B., P.S. Warren, and S.B. Lerman. 2015. Tree risk assessment and the occurrence of cavity-nesting birds in residential landscapes. Western MA Tree Wardens dinner meeting. Northampton, MA March 2017.

5. Determining parameters related to the likelihood of failure of red oak (*Quercus rubra* L.) from winching tests. International Symposium on Urban Forestry & Sustainability. Chinese Academy of Sciences, Shenyang, China May 2016 [75 attendees].
6. Kane, B. 2014. Determining parameters related to the likelihood of failure of red oak (*Quercus rubra* L.) from winching tests. International Symposium on Urban Forestry & Sustainability. Chinese Academy of Sciences, Shenyang, China May 2016 [75 attendees].
7. Kane, B. and W. Autio. 2014. Installing cables did not affect diameter growth of codominant stems in red oaks. 7th Annual International Arboriculture Summit. Hong Kong November 2014 [100 attendees].
8. Reiland, M., B. Kane, Y. Modarres-Sadeghi, and D. Ryan. 2014. Effect of leaves and static support cables on the dynamic properties of northern red oak with codominant trunks. 7th Annual International Arboriculture Summit. Hong Kong November 2014 [100 attendees].
9. Kane, B. 2014. Determining parameters related to the likelihood of failure of red oak (*Quercus rubra* L.) from winching tests. Arnold Arboretum Research Seminar, Roslindale, MA October 2014 [25 attendees].
10. Kane, B. and W. Autio. 2014. Installing cables did not affect diameter growth of codominant stems in red oaks. European Arboriculture Congress, Torino, Italy May 2014 [300 attendees].
11. Reiland, M., B. Kane, Y. Modarres-Sadeghi, and D. Ryan. 2014. Effect of leaves and static support cables on the dynamic properties of northern red oak with codominant trunks. European Arboriculture Congress, Torino, Italy May 2014 [300 attendees].
12. Kane B., B. Seyed-Aghazadeh, M. Reiland, and Y. Modarres-Sadeghi. Pruning did not affect sway response of large sugar maples. European Arboriculture Congress, Torino, Italy May 2014 [300 attendees].
13. Ciftci, C., S. Brena, B. Kane, and S.R. Arwade. 2014. A probabilistic approach to tree risk assessment. European Arboriculture Congress, Torino, Italy May 2014 [300 attendees].
14. Reiland, M., B. Kane, Y. Modarres-Sadeghi, and D. Ryan. 2013. Dynamics of red oaks with cables. Idaho Nursery Landscape Association, Boise, ID January 2014 [100 attendees].
15. Ciftci, C., S. Brena, B. Kane, and S.R. Arwade. 2013. The effect of crown architecture on dynamic amplification factor of an open-grown sugar maple (*Acer saccharum* L.). Annual Conference, Uncasville, CT December 2013 [310 attendees].
16. Ciftci, C., B. Kane, S. Brena, and S.R. Arwade. Moment capacity loss due to decay in tree stems. ASCA Annual Conference, Uncasville, CT December 2013 [310 attendees].
17. Reiland, M., B. Kane, Y. Modarres-Sadeghi, and D. Ryan. 2013. Dynamics of red oaks with cables. MAA Dinner Meeting, Framingham, MA October 2013 [160 attendees].
18. Reiland, M., B. Kane, Y. Modarres-Sadeghi, and D. Ryan. 2013. Dynamics of red oaks with cables. ISA Annual Conference, Toronto, ON August 2013 [500 attendees].
19. Sherman, A.R., B. Kane, W.A. Autio, and J.R. Harris. 2012. Newly planted street tree growth and establishment in the urban environment. ISA Annual Conference, Portland, OR August 2012 [200 attendees].
20. Julius, A., B. Kane, M. Bulzachelli, and H.D.P. Ryan. 2012. Risking Life and Limb. ISA Annual Conference, Portland, OR August 2012 [300 attendees].
21. Cifti, C., S. Brena, B. Kane, and S.R. Arwade. 2012. Effects of crown architecture on dynamic behavior of trees. ISA Annual Conference, Portland, OR August 2012 [150 attendees].
22. Kane, B. Effect of pruning on wind loading of shade trees. Centre for Urban Greening and Ecology 5th Annual Regional Arboriculture Seminar, Singapore, August 2011 [100 attendees].
23. Kane, B. Compatibility of toothed ascenders with arborist climbing ropes. Centre for Urban Greening and Ecology 5th Annual Regional Arboriculture Seminar, Singapore, August 2011 [100 attendees].

24. Kane, B. Breaking strength of knotted rigging ropes. Centre for Urban Greening and Ecology 5th Annual Regional Arboriculture Seminar, Singapore, August 2011 [100 attendees].
25. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. Centre for Urban Greening and Ecology 5th Annual Regional Arboriculture Seminar, Singapore, August 2011 [100 attendees].
26. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. ISA Annual Conference, Sydney, Australia, July 2011 [75 attendees].
27. Kane, B. Compatibility of toothed ascenders with arborist climbing ropes. ISA Annual Conference, Sydney, Australia, July 2011 [75 attendees].
28. Kane, B. Breaking strength of knotted rigging ropes. ISA Annual Conference, Sydney, Australia, July 2011 [75 attendees].
29. Kane, B. Compatibility of toothed ascenders with arborist climbing ropes. Penn-Del ISA Annual Shade Tree Symposium, Lancaster, PA, January 2011 [120 attendees].
30. Kane, B. Breaking strength of knotted rigging ropes. Penn-Del ISA Annual Shade Tree Symposium, Lancaster, PA, January 2011 [120 attendees].
31. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. Penn-Del ISA Annual Shade Tree Symposium, Lancaster, PA, January 2011 [120 attendees].
32. Kane, B. Compatibility of toothed ascenders with arborist climbing ropes. Indiana Arborists Association Annual Meeting, Indianapolis, IN, January 2011 [25 attendees].
33. Kane, B. Breaking strength of knotted rigging ropes. Indiana Arborists Association Annual Meeting, Indianapolis, IN, January 2011 [25 attendees].
34. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. Indiana Arborists Association Annual Meeting, Indianapolis, IN, January 2011 [25 attendees].
35. Kane, B. Effect of pruning on wind loading of shade trees. Indiana Arborists Association Annual Meeting, Indianapolis, IN, January 2011 [25 attendees].
36. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. TCI Expo, Pittsburg, PA, November 2010 [200 attendees].
37. Kane, B. Compatibility of toothed ascenders with arborist climbing ropes. TCI Expo, Pittsburg, PA, November 2010 [200 attendees].
38. Kane, B. Breaking strength of knotted rigging ropes. TCI Expo, Pittsburg, PA, November 2010 [200 attendees].
39. Cloyes, M. and B. Kane. 2010. Damage inflicted on climbing ropes by handsaws & Rigging Knots & Ascenders. NYSAA Workshop, Ithaca, NY, September 2010 [75 attendees].
40. Cloyes, M., B. Kane, and M. Freilicher. 2010. Damage inflicted on climbing ropes by handsaws. ISA Annual Conference, Chicago, IL, July 2010 [50 attendees].
41. Cloyes, M., B. Kane, and M. Freilicher. 2010. Damage inflicted on climbing ropes by handsaws. National Conference on Undergraduate Research, Univ. of Montana, Missoula, MA, April 2010 [50 attendees].
42. Kane, B., M. Pavlis, J. R. Harris, and J. Seiler. Crown reconfiguration and trunk stress in deciduous trees. Fluid-Structure Interactions Workshop, Dept. of Mechanical and Industrial Engineering, Amherst, MA, April 2010 [poster].
43. Cloyes, M., B. Kane, and M. Freilicher. 2010. Damage inflicted on climbing ropes by handsaws. 16th Annual Massachusetts Statewide Undergraduate Research Conference, Amherst, MA, April 2010 [10 attendees].

44. Cloyes, M., B. Kane, M. Freilicher, and D. Bloniarz. 2010. Damage inflicted on climbing ropes by handsaws. ISA UMass Undergraduate Life Sciences Research Symposium, Amherst, MA, March 2010 [poster].
45. Cloyes, M., B. Kane, M. Freilicher, and D. Bloniarz. 2009. Withdrawal resistance of lags installed in trees after 4 years. ISA Annual Conference, Providence, RI, July 2009 [poster].
46. Warren, P.S., B. Kane, and C. Nilon. 2009. The socio-ecology of dying trees: cavity nesting birds, hazard trees, and declining urban forest canopies. Urban Wildlife Ecology & Management: An International Symposium on Urban Wildlife & the Environment. University of Massachusetts-Amherst, June 2009.
47. Cloyes, M., B. Kane, M. Freilicher, and D. Bloniarz. 2009. Withdrawal resistance of lags installed in trees after 4 years. Massachusetts Statewide Undergraduate Research Conference, Amherst, MA, May 2009 [poster].
48. Kane, B., M. Pavlis, J. R. Harris, and J. Seiler. Crown reconfiguration and trunk stress in deciduous trees. Dept. of Natural Resources Conservation graduate seminar, Amherst, MA, April 2009 [20 attendees].
49. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. International Tree Risk Summit, Charlotte, NC, February 2009 [150 attendees].
50. Pavlis, M., B. Kane, J. R. Harris, and J. Seiler. The effect of pruning on drag-induced bending moment of shade trees. PNW-ISA annual meeting, Portland, OR, February 2009 [75 attendees].
51. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. PNW-ISA annual meeting, Portland, OR, February 2009 [75 attendees].
52. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. Mid-Atlantic Horticulture Short Course, Virginia Beach, VA, January 2009 [60 attendees].
53. Pavlis, M., B. Kane, J. R. Harris, and J. Seiler. The effect of pruning on drag-induced bending moment of shade trees. Mid-Atlantic Horticulture Short Course, Virginia Beach, VA, January 2009 [60 attendees].
54. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. Mid-Atlantic Horticulture Short Course, Virginia Beach, VA, January 2009 [60 attendees].
55. Kane, B. and H.D.P. Ryan. Assessing strength loss formulae. American Society of Consulting Arborists Annual Meeting, Tucson, AZ, December 2008 [400 attendees].
56. Kane, B., and H.D.P. Ryan. Strength Loss in Carabiners Used in Tree Climbing. ANSI Z.133 Safety Committee meeting Providence, RI, October 2008 [30 attendees].
57. Gladdys, M., B. Kane, D. V. Bloniarz, and H.D.P. Ryan. Breaking strength of used carabiners. ISA Annual Conference, St. Louis, MO, July 2008 [poster].
58. Kane, B. and H.D.P. Ryan. Assessing strength loss formulae. Texas ISA Conference College Station, TX, September 2008 [200 attendees].
59. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. Texas ISA Conference College Station, TX, September 2008 [70 attendees].
60. Pavlis, M., B. Kane, J. R. Harris, and J. Seiler. The effect of pruning on drag-induced bending moment of shade trees. Texas ISA Conference College Station, TX, September 2008 [70 attendees].
61. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. Texas ISA Conference College Station, TX, September 2008 [70 attendees].
62. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. European Arboricultural Congress Turin, Italy, June 2008 [200 attendees].
63. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. European Arboricultural Congress Turin, Italy, June 2008 [200 attendees].

64. Kane, B. and H.D.P. Ryan. Assessing strength loss formulae. ISA Asia-Pacific Conference Brisbane, Australia, May 2008 [250 attendees].
65. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. ISA Asia-Pacific Conference Brisbane, Australia, May 2008 [25 attendees].
66. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. ISA Asia-Pacific Conference in Brisbane, Australia, May 2008 [250 attendees].
67. Kane, B. and P. Clouston. Tree pulling of large shade trees in the genus *Acer*. Purdue University Department of Forestry and Natural Resources Graduate Seminar September 2007 [40 attendees].
68. Smiley, E. T. and B.C.P. Kane. Effects of pruning on wind resistance of shade trees. Indiana and Michigan County Extension Offices video conference, West Lafayette, IN, September 2007 [200 attendees].
69. Kane, B., S. Brena, and W. A. Autio. Predicting rigging forces and tree stresses during tree removal. TCI Expo Hartford, CT, November 2007 [600 attendees].
70. Pavlis, M., B. Kane, J. R. Harris, and J. Seiler. The effect of pruning on drag-induced bending moment of shade trees. NEC-ISA annual meeting North Conway, NH, October 2007 [200 attendees].
71. Pavlis, M., B. Kane, J.R. Harris, and J. Seiler. The effect of pruning on drag-induced bending moment of shade trees. Pro-Green Conference Denver, CO, January 2008 [300 attendees].
72. Kane, B. and H.D.P. Ryan. Assessing strength loss formulae. Garden State Tree Conference, Rutgers University, March 2008 [150 attendees].
73. Kane, B.C.P., M. Pavlis, J. Seiler, J. R. Harris. Trunk stress and crown reconfiguration of shade trees. American Society for Horticultural Science Annual Meeting, Phoenix, AZ, July 2007 [poster].
74. Harris, J. R., S. D. Day, and B.C.P. Kane. Fertilizing urban trees, a compendium of five studies. American Society for Horticultural Science Annual Meeting, Phoenix, AZ, July 2007 [poster].
75. Kane, B.C.P. Comparing formulas that examine strength loss due to decay in trees. Western Hazard Tree Workshop, Midway, UT, June 2007 [40 attendees].
76. Kane, B.C.P. Friction coefficients for arborist ropes passing over cambium saver rings. California Tree Failure Report Meeting, Half Moon Bay, CA, January 2007 [200 attendees].
77. Kane, B.C.P. Effects of pruning on wind resistance of shade trees. California Tree Failure Report Meeting, Half Moon Bay, CA, January 2007 [200 attendees].
78. Warren, P. S., B. Kane, and S. Lerman. Contribution of urban-suburban tree care practices to reduced habitat for cavity nesting birds. Ecological Society of America Conference, San Jose, CA, August 2007 [poster].
79. Pavlis, M., B. Kane, J.R. Seiler, and J.R. Harris. Pruning effects on wind loading of shade trees. ISA Annual Conference, Minneapolis, MN, August 2006 [poster].
80. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. Kentucky Arborist Association, Lexington, KY, February 2006 [200 attendees].
81. Kane, B.C.P. Effects of pruning on wind resistance of shade trees. Kentucky Arborist Association, Lexington, KY, February 2006 [200 attendees].
82. Pavlis, M., B. Kane, J.R. Seiler, and J.R. Harris. Effects of pruning on wind resistance of shade trees. ISA Annual Conference, Nashville, TN, August 2005 [poster].
83. Smiley, E.T. and B.C.P. Kane. Effects of pruning on wind resistance of shade trees. Connecticut Tree Protective Association annual meeting, July 2005 [300 attendees]
84. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. ISA Annual meeting Nashville, TN August 2005 [500 attendees].
85. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. PNW-ISA Annual Meeting Vancouver, BC, November 2004 [150 attendees].

86. Smiley, E. T. and B.C.P. Kane. Effects of pruning on wind resistance of shade trees. IL Arborist Association Annual Meeting, Chicago, IL, October 2004 [300 attendees].
87. Smiley, E. T. and B.C.P. Kane. Effects of pruning on wind resistance of shade trees. MAC-ISA Annual Meeting, Richmond, VA, September 2004 [200 attendees].
88. Smiley, E. T. and B.C.P. Kane. Effects of pruning on wind resistance of shade trees. ISA Annual Meeting, Pittsburg, PA, August 2004 [500 attendees].
89. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. Trees Florida, Key West, FL, June 2004 [300 attendees].
90. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. Ohio Tree Care Conference, Columbus, OH, February 2004 [200 attendees].
91. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. California Tree Failure Report Annual Meeting, Half Moon Bay, CA, January 2003 [200 attendees].
92. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. International Society of Arboriculture Annual Meeting, Seattle, WA, August 2002 [500 attendees].
93. Kane, B.C.P. and H.D.P. Ryan. Comparing formulas that examine strength loss due to decay in trees. Society of American Foresters Annual Meeting, Winston-Salem, NC, October 2002 [30 attendees].
94. Kane, B.C.P. and H.D.P. Ryan. Assessing strength loss formulas for hazard tree evaluation. International Tree Structure and Mechanics Conference, Savannah, GA, October 2001 [700 attendees].
95. Kane, B.C.P. and H.D.P. Ryan. Patterns of discoloration and decay associated with hardware installation in trees. International Society of Arboriculture Annual Meeting, Milwaukee, WI, August 2001.
96. Kane, B.C.P. and H.D.P. Ryan. Comparing Formulae for Assessing Strength Loss Due to Decay in Trees. International Society of Arboriculture Annual Meeting, Baltimore, MD, August 2000 [50 attendees].

Sponsored Research & Other Awards (amounts in *italics* indicate donations of materials)

Project Title	Dates	Participation ¹	Supporting Agency	Amount
Instruction	2020-2022	Kane	Barrett Tree Service	<i>\$300</i>
Instruction	2020-2022	Kane	Davey Tree Experts	<i>\$1,000</i>
Instruction	2020-2022	Kane	Bartlett Tree Experts	<i>\$1,000</i>
Training for UMass Landscape Management Personnel	2020-2021	Kane	MA DCR	\$11,214
Comparing the Efficacy of Pull Tests Versus Expert Opinion When Assessing Decay and Likelihood of Tree Failure	2020-2022	Kane	TREE Fund	\$25,000
Planting Trees on Campus	2020-2022	Kane	Sustainability Innovation & Engagement Fund	\$8,000
The State of the Utility Forest in Massachusetts	2019-2022	Kane	Eversource	\$177,000
Instruction	2019	Kane	N.A.T.S.	<i>\$1,000</i>
Instruction	2018	Kane	Bartlett Tree Experts	<i>\$1,800</i>

The Effects of Support Systems on Tree Growth, Sway Motion, and Load-bearing Capacity	2018-2021	Kane	Florida ISA	\$90,000
Urban Tree Growth	2018-2019	Kane	UMass-CNS	\$1,000
Instruction	2017	Kane	UMass-TEFD	\$500
Urban Tree Growth	2018-2019	Kane	MA DCR	\$9,974
Instruction	2017	Kane	UMass-TEFD	\$500
Loading of a tie-in point during ascents	2017	Kane	International Society of Arboriculture	\$1,000
Review of Arboricultural Safety Standards Worldwide	2017-2020	Kane	TREE Fund	\$15,000
Installing a campus tree nursery	2017-2018	Kane	UMass-TEFD	\$3,000
Instruction	2016	Kane	UMass-TEFD	\$500
Impacts of Root Removal on Tree Stability – Full Scale Meets Model Scale	2017-2020	Kane, Modarres-Sadeghi, Koeser (U.FL), Miesbauer (Morton Arboretum)	Florida ISA	\$90,000
Measuring forces at multiple locations in rigging systems	2017-2019	Kane	N.A.T.S.	\$2,000
Measuring forces at multiple locations in rigging systems	2017-2019	Kane, Reiland	TREE Fund	\$25,000
Growth of campus trees	2016-2017	Kane	UMass-CAFE	\$5,000
Instruction	2016	Kane	grdntuul.com	\$384
Sway Motion of Cabled Trees	2015-2016	Kane	UMass-CNS	\$1,000
Sway Motion of Cabled Trees	2015	Kane	Endz.Biz	\$410
Crown Architecture of Open-Grown Trees	2015	Kane	Dept. of Env. Cons.	\$3,000
Instruction	2015	Kane	NEC-ISA	\$200
Instruction	2015	Kane	MAA	\$350
Instruction	2015	Kane	ArborMaster	\$1,000
Instruction	2015	Kane	Center for Teaching	\$500
Instruction	2015	Kane	Hartney-Greymont	\$1,000
Mobile Tree Failure Prediction for Storm Preparation and Response	2014-2017	Koeser, Kane, Guikema, Landry	NUCFAC	\$281,900
Instruction	2014	Kane	Center for Teaching	\$500
Instruction	2013	Kane	Center for Teaching	\$500
Urban Forest Monitoring	2013-2015	Harper, Kane	Center for Agriculture	\$82,050
Pruning Tropical Trees	2013-2014	Burcham, Kane	NParks Singapore	\$262,500
Instruction	2013-2014	Kane	Sterling Rope	\$1,000
Planning	2013	Rudnicki, Kane, Dahle, Grabosky	NERA	\$6,000
Urban Forest Monitoring	2012-present	Kane	MA Dept. Cons. Rec.	\$132,000
Monitoring Utility ROW	2012	Kane	UMass Physical Plant	\$4,200

Instruction	2012	Kane	Center for Teaching	\$500
Instruction	2012	Kane	Buckingham Mfg.	\$400
Instruction	2012	Kane	SavATree	\$300
Growth and Dynamic Motion of Cabled Trees with Co-dominant Trunks	2010-2012	Kane	TREE Fund	\$25,000
Biomechanics Literature Review	2010-2011	Dahle, Kane, James, Grabosky, Detter	International Society of Arboriculture	\$25,000
Rigging Stresses During Speedlining	2010-2012	Kane, Scharf	TREE Fund	\$10,000
Dynamics of Shade Trees	2010	Kane	MA Dept. Cons. Rec.	\$5,000
Student Tree Climbing Competition	Annually	Kane	Shelter Tree et al.	\$500
Boston Metropolitan Area ULTRA	2009-2012	Warren, Nicolson, Ryan, Kane	NSF & USDA FS	\$299,471
Assessing the Effect of Decay on Tree Stability	2009-2012	Kane, Breña	TREE Fund	\$100,000
Worcester ALB Reforestation	2009-2011	Kane, Ryan	MA Dept. Cons. Rec.	\$70,000
MOE of Shade Trees	2009	Kane	Dept. Nat. Res. Cons.	\$3,000
Campus Shade Tree Nursery	2008-2010	Kane	UMass Faculty Research Grant	\$30,000
Campus Shade Tree Nursery	2008-2010	Kane	Hartney-Greymont Co.	\$5,000
Dynamic Motion of Shade Trees	2008-2010	Kane	McIntyre-Stennis	\$29,570
Handsaw Safety	2009	Kane	Bartlett Tree Experts	\$10,000
Dynamic Motion of Shade Trees	2008-2010	Kane, Ryan	MA Dept. Cons. Rec.	\$15,000
Forces and Stresses in Rigging	2009-2011	Kane, Ryan	TREE Fund ³	\$25,000
Use of Ascenders in Tree Climbing	2009-2011	Ryan, Kane	TREE Fund	\$25,000
Measuring Dynamic Wind Loads	2008-2010	James, Kane	TREE Fund	\$25,000
Determining Strength of Knotted Rigging Slings	2009	Kane	Yale Cordage	\$2,000
Urban Forest Management in Massachusetts	2007-2009	Kane, Ryan	MA Dept. Cons. Rec.	\$35,000
Instruction	2007	Kane	New England Chapter ISA	\$350
Cabling and Tree Growth	2007	Kane	Sherrill Tree	\$2,000
Safe Tree Climbing	2006	Kane	New England Grows	\$5,000
Instruction	2006	Kane	Tree Specialists	\$325
Instruction	2007	Kane	Cedar Lawn & Tree	\$250
Effect of Tree Care Practices on Cavity Nesting Birds	2005-2007	Warren, Kane	FRG & McIntyre-Stennis	\$66,215

Carabineer Use in the Tree Care Industry	2005-2007	Kane, Ryan	TREE Fund	\$25,000
Urban Forest Management in Massachusetts	2005-2007	Kane, Ryan	MA DCR	\$27,000
Instruction	2005	Kane	New England Chapter ISA	\$750
Instruction	2005	Kane	Husqvarna	\$800
Pruning Effects on Wind Loading of Trees	2004-2007	Kane, Harris	NUCFAC	\$109,100
Friction Coefficients of Climbing Ropes	2004-2006	Kane	TREE Fund	7,500
Friction Coefficients of Climbing Ropes	2004-2006	Kane	New England Ropes	\$300
Friction Coefficients of Climbing Ropes	2004-2006	Kane	Samson American Group	\$500
Measuring Bark Friction for Rigging Operations	2004-2006	Kane	Yale Cordage	\$400
Instruction (FOREST 102, 210)	2004-2008	Kane, Ryan	The Care of Trees	\$7,500
Measuring Dynamic Wind Forces on Shade Trees	2003-2005	James, Kane	TREE Fund	\$25,000
Street Tree Inventory Update for the City of Roanoke	2003-2004	Kane	VA Forestry Dept.	\$3,350
Testing Shade Trees for Failure Stresses and Patterns	2003-2004	Kane	VA Forestry Dept.	\$16,650
Testing Shade Trees for Failure Stresses and Patterns	2003-2004	Kane	TREE Fund	\$7,000
Testing Shade Trees for Failure Stresses and Patterns	2003-2004	Kane, Harris	Mid-Atlantic Chapter ISA	\$5,000
Lab Equipment for Virginia Tech University Urban Forestry Program	2003	Kane	VA Forestry Dept., Davey Tree Co., Wood Acres Tree Specialists	\$7,600

¹PI is listed first

TEACHING EXPERIENCE

Revised and taught the following courses at The University of Massachusetts – Amherst:

NRC 102 Arboriculture Field Techniques I (2 cr.) ≈20 students/year 2004 – 2015

NRC 191 Seminar in Arboriculture (2 cr.) ≈20 students/year 2004 – 2010

NRC 210 Arboriculture Field Techniques II (2 cr.) ≈20 students/year 2004 – 2014

NRC 305 Commercial Arboriculture (3 cr.) ≈20 students/year 2004 – present

ECO 605 Urban Forestry (3 cr.) ≈12 students 2008, 2012 – present (co-taught)

Developed the following courses at The University of Massachusetts – Amherst:

NRC 290C Trees & Sustainability (3 cr.) ≈30 students/year 2016 – present

NRC 213 Arboriculture Field Techniques III (2 cr.) ≈10 students/year 2013 – present

NRC 590A Advanced Arboriculture (3 cr.) ≈5 students/year 2013, 2015

SC 197 Urban Forestry (1 or 2 cr.) ≈5 students/year 2014 – 2017

HNRS 391 Trees & Sustainability (1 cr.) ≈15 students/semester 2014 – 2017

FFYS 197 Trees & Sustainability (1 cr.) ≈15 students/semester 2014 – 2016

Developed and taught the following courses at Virginia Tech University:

FOR 3354 Urban Forestry & Arboriculture (3 cr.) ≈30 students/year 2002 – 2004

FOR 4454 Urban Forest Management & Policy (3 cr.) ≈10 students/year 2002 – 2004

Visiting Scholar, Purdue University, September 2007

Presented 4 seminars (11 hours total)

Undergraduate arboriculture class

Undergraduate arboriculture club

Indiana Cooperative Extension video conference broadcast across the state

Graduate student seminar

Teaching Evaluations

Academic Year (Total Credits)	Course No.	Course Name	Credits	No. Students	SRTI ¹	Annual Mean ²
2020 – 2021 (7)	ECO 605	Urban Forestry ³	3		n/a ³	
	NRC 102	Arboriculture Field Techniques I	2		n/a ⁸	
	NRC 210	Arboriculture Field Techniques II	2			
	NRC 290C	Trees & Sustainability	3		n/a ⁸	
2019 – 2020 (7)	ECO 605	Urban Forestry ³	3	18	n/a ^{3,8}	4.5
	NRC 102	Arboriculture Field Techniques I	2	19	4.6	
	NRC 210	Arboriculture Field Techniques II	2	13	n/a ⁸	
	NRC 290C	Trees & Sustainability	3	50	4.4	
2018 – 2019 (7)	ECO 605	Urban Forestry ³	3	7	n/a ³	4.5
	NRC 102	Arboriculture Field Techniques I	2	15	4.5	
	NRC 210	Arboriculture Field Techniques II	2	12	4.7	
	NRC 290C	Trees & Sustainability	3	49	4.3	
2017 – 2018 (6)	NRC 290C	Trees & Sustainability	3	35	4.5	4.4
	NRC 305	Commercial Arboriculture	3	17	4.3	
2016 – 2017 (10)	ECO 605	Urban Forestry ³	3		n/a ³	4.5
	HNRS 391	Trees & Sustainability	1	15	4.2	
	NRC 290C	Trees & Sustainability	3	7	4.7	
	NRC 213	Arboriculture Field Techniques III	2	7	4.2	
	NRC 305	Commercial Arboriculture	3	14	4.7	
	SC 197	Urban Forestry ⁶	1	6	n/a ⁶	
2015 – 2016 (10)	ECO 697U	Urban Forestry ³	3	10	n/a ³	4.8
	FFYS 197	Trees & Sustainability	1	15	n/a ⁴	
	HNRS 391	Trees & Sustainability	1	16	4.3	
	NRC 102	Arboriculture Field Techniques I	2	13	4.6	
	NRC 213	Arboriculture Field Techniques III	2	8	5.0	
	NRC 305	Commercial Arboriculture	3	9	4.9	
	SC 197	Urban Forestry ⁶	1	4	n/a ⁶	
2014 – 2015 (19)	ECO 697U	Urban Forestry ³	3	8	n/a ³	4.6
	FFYS 197	Trees & Sustainability	1	7	n/a ⁴	
	FFYS 197	Trees & Sustainability	1	17	n/a ⁴	
	HNRS 391	Trees & Sustainability	1	10	4.2	
	HNRS 391	Trees & Sustainability	1	12	4.7	
	NRC 102	Arboriculture Field Techniques I	2	13	4.4	

	NRC 102	Arboriculture Field Techniques I ⁵	2	6	4.7	
	NRC 210	Arboriculture Field Techniques II	2	14	4.7	
	NRC 213	Arboriculture Field Techniques III	2	10	4.8	
	NRC 305	Commercial Arboriculture	3	12	4.7	
	NRC 590A	Advanced Arboriculture	3	4	4.3	
	SC 197	Urban Forestry ⁶	1	4	n/a ⁶	
2013 – 2014 (13)	ECO 697U	Urban Forestry ³	3	6	n/a ³	4.5
	NRC 102	Arboriculture Field Techniques I	2	19	4.7	
	NRC 102	Arboriculture Field Techniques I ⁵	2	19	4.5	
	NRC 210	Arboriculture Field Techniques II	2	16	4.3	
	NRC 213	Arboriculture Field Techniques III	2	6	4.7	
	NRC 305	Commercial Arboriculture	3	12	4.4	
	SC 197	Urban Forestry ⁶	2	3	n/a ⁶	
2012 – 2013 (12)	ECO 697U	Urban Forestry ³	3	8	n/a ³	4.5
	NRC 102	Arboriculture Field Techniques I	2	19	4.6	
	NRC 210	Arboriculture Field Techniques II	2	12	4.1	
	NRC 213	Arboriculture Field Techniques III	2	10	4.8	
	NRC 305	Commercial Arboriculture	3	12	4.6	
	NRC 590A	Advanced Arboriculture	3	9	4.3	
2011 – 2012 (7)	ECO 697U	Urban Forestry ²	3	9	n/a ³	4.6
	NRC 102	Arboriculture Field Techniques I	2	19	4.8	
	NRC 210	Arboriculture Field Techniques II	2	16	4.6	
	NRC 305	Commercial Arboriculture	3	14	4.5	
2010 – 2011 (5)	NRC 102	Arboriculture Field Techniques I	2	13	4.6	4.4
	NRC 305	Commercial Arboriculture	3	20	4.3	
2009 – 2010 (10)	ECO 691B	Land Conservation in MA ⁷	1	3	n/a ⁷	4.3
	NRC 102	Arboriculture Field Techniques I	2	24	4.7	
	NRC 191	Seminar in Arboriculture	2	21	4.7	
	NRC 210	Arboriculture Field Techniques II	2	31	4.2	
	NRC 305	Commercial Arboriculture	3	17	3.9	
2008 – 2009 (9)	NRC 102	Arboriculture Field Techniques I	2	27	4.6	4.4
	NRC 191	Seminar in Arboriculture	2	17	4.5	
	NRC 210	Arboriculture Field Techniques II	2	16	4.8	
	NRC 305	Commercial Arboriculture	3	12	3.9	
2007 – 2008 (9)	ECO 697U	Urban Forestry ³	3	10	n/a ³	4.2
	NRC 102	Arboriculture Field Techniques I	2	15	4.1	
	NRC 191	Seminar in Arboriculture	2	14	4.5	
	NRC 210	Arboriculture Field Techniques II	2	18	3.8	
	NRC 305	Commercial Arboriculture	3	19	4.3	
2006 – 2007 (9)	NRC 102	Arboriculture Field Techniques I	2	22	4.6	4.3
	NRC 191	Seminar in Arboriculture	2	18	4.0	
	NRC 210	Arboriculture Field Techniques II	2	15	4.3	
	NRC 305	Commercial Arboriculture	3	25	4.3	
2005 – 2006 (9)	NRC 102	Arboriculture Field Techniques I	2	30	4.5	4.0
	NRC 191	Seminar in Arboriculture	2	18	4.2	

	NRC 210	Arboriculture Field Techniques II	2	18	4.3	
	NRC 305	Commercial Arboriculture	3	19	3.2	
2004 – 2005 (9)	NRC 102	Arboriculture Field Techniques I	2	18	4.4	4.0
	NRC 191	Seminar in Arboriculture	2	15	4.0	
	NRC 210	Arboriculture Field Techniques II	2	17	3.9	
	NRC 305	Commercial Arboriculture	3	17	3.9	

¹Student Response To Instruction is the mean of the global questions (10, 11, 12); on a scale of 1-5

²Weighted by credits

³Aside from giving an occasional lecture (not each year), I am only responsible for administrative aspects of this course

⁴SRTI for FFYS is not comparable to other classes; in Fall 2014, for the question, “What is your overall rating of this instructor’s teaching?” the overall mean was 4.5 (n=37); my score was 4.8. For the same question, in Spring 2015, the overall mean was 4.6 (n=19); my score was 4.9.

⁵In response to student demand, I taught a second section for non-majors

⁶I was responsible for 75% of this summer course for high school students; no formal course evaluations were given, but informal feedback was very positive

⁷I co-taught this seminar with two colleagues; formal SRTI evaluations were not given

⁸COVID-19 no SRTIs administered

Supervision of Graduate Students

Role	Degree	Option	Student	Department	Graduation
Chair	M.S.	Thesis	Amanda Halperin	ECO	Exp. 9/22
Chair	M.S.	Thesis	Ryan Suttle	ECO	Exp. 5/22
Chair	Ph.D.	Dissertation	Clarisse Hart	ECO	Exp. 2/23
Chair	M.S.	Thesis	Jacyln Lim	ECO	Exp. 2/21
Chair	M.S.	Thesis	Ryan Fawcett	ECO	Exp. 2/21
Chair	Ph.D.	Dissertation	Dan Burcham	ECO	2/20
Chair	M.S.	Thesis	Jamie Lim	ECO	9/19
Member	M.S.	Thesis	Ignacio Centrangolo	CEE	12/16
Chair	M.S.	Thesis	Mark Reiland	ECO	8/13
Co-chair	Ph.D.	Dissertation	Cihan Ciftci	CEE	8/12
Member	M.S.	Thesis	Lakshmi Narayanan	MIE	8/12
Chair	M.S.	Thesis	Alex Sherman	NRC	5/13
Chair	M.S.	Thesis	Alex Julius	NRC	5/12
Chair	M.S.	Thesis	Mollie Frelicher	NRC	8/10
Chair	M.S.	Thesis	David Rines	NRC	8/07
Member	M.S.	Thesis	Payman Karvanirabori	CEE	8/09
Chair	M.S.	Thesis	Mike Pavlis	NRC	8/07
Chair	M.S.	Thesis	Kelley Arbogast	NRC	12/05

Supervision of Undergraduate Students (*italicized* names indicate contribution to a scholarly publication)

Academic Year	Course No.	Student	Credits	Project
2019-2020	NRC 396	Harmon	1	TA NRC 102
	NRC 396	Wilson	1	TA NRC 102
	NRC 396	Medeiros	1	TA NRC 102
2017-2018	Honor’s Thesis	Esiason	6	Branch Allometry

	CAFE Summer Scholar	Esiason	n/a	Branch Allometry
2016-2017	CAFE Summer Scholar	Esiason	n/a	Growth of Campus Trees
	CAFE Summer Scholar	Zolondick	n/a	Growth of Campus Trees
	CAFE Summer Scholar	<i>Aronson</i>	n/a	Dynamics of Cabled Trees
	NRC 396	<i>Sidman</i>	1	Dynamics of Cabled Trees
	NRC 396	Iacomini	1	Urban Tree Growth
	NRC 396	<i>Palaschak</i>	1	Dynamics of Cabled Trees
	2014-2015	CNS-190	Wojciak	1
CNS-190		Susai	1	FYRE Tree growth
2013-2014	NRC 396	Longstreeth	2	TA NRC 102
	NRC 396	D'Angelo	1	TA NRC 102
	NRC 396	Chretien	1	TA NRC 102
	NRC 396	Koerth	1	Tree growth
	CNS-190	Choudhary	1	FYRE Tree growth
2012-2013	NRC 396	Stankewicz	1	Crown architecture
	NRC 396	<i>Westlake</i>	1	Branch allometry
2011-2012	NRC 396	<i>Wood</i>	2	Dynamics & cabling
2010-2011	NRC 396	<i>McCabe</i>	3	TA NRC 102 & Cabling
	NRC 396	<i>Roy</i>	2	Cabling & Rigging
2009-2010	NRC 396	<i>McCabe</i>	3	TA NRC 102 & Ascenders
	NRC 396	Beals	1	TA NRC 102
	NRC 396	Golon	1	TA NRC 102
2008-2009	NRC 396	Beals	2	TA NRC 102
	NRC 396	Roberts	2	TA NRC 102
	NRC 396	<i>Cloyes</i>	3	Withdrawal Resistance of Lags
	NRC 396	<i>Gladdys</i>	3	Breaking Strength of Carabiners
2007-2008	NRC 396	Cohen	2	TA NRC 102
	NRC 396	Ford-Diamond	2	TA NRC 102
	NRC 396	Seaboyer	2	TA NRC 102
	NRC 396	Bailey	2	TA NRC 102
2006-2007	NRC 396	Pineau	1	TA NRC 102
	NRC 396	Santoro	1	TA NRC 102
	NRC 396	Putnam	2	TA NRC 210
2005-2006	NRC 396	Cohen	1	TA NRC 102

	NRC 396	O'Brien	3	NRC 305
2004-2005	NRC 396	Carpenter	1	TA NRC 102
	NRC 396	Dale	3	NRC 305

UNIVERSITY SERVICE

1. Departmental Personnel Committee: Chair (2012-2014, 2020-2021), Secretary (2007-2010), member (2011-2012, 2016-2017, 2019-2020)
2. Faculty Senate Health Council (2016-2019)
3. Chair Search Committee: Technical Supervisor I (2016)
4. Co-Chair Search Committee: Lecturer in Arboriculture & Urban Forestry (2015)
5. Departmental committee on graduate teaching assistants, fellowships, and diversity (2015)
6. Agricultural Learning Center Steering Committee (2015-present)
7. University Sexual Harassment Board (2014-present)
8. Vice-Chair Arboretum Committee (2012-2016); member (2016-present)
9. Chair of Tree Preservation sub-committee of Arboretum Committee (2013-present)
10. Departmental Graduate Program Director (2012)
11. Chair Search Committee: Urban & Community Forestry Extension Assistant Professor (2011)
12. Faculty Senate Campus Physical Planning Council (2011-2014)
13. Graduate Concentration Coordinator (Forest Resources & Arboriculture) (2011-2013)
14. Graduate Program Director (Forest Conservation) (2010)
15. Dean's Committee on Agriculture at the University of Massachusetts (2010)
16. Young Guns and Warren Commission departmental committees (2008)
17. Stockbridge School of Agriculture Arboriculture & Community Forestry Program Coordinator (2007-Present)
18. Faculty advisor for annual student tree climbing competition (2007-Present)
19. Director of Stockbridge School of Agriculture search committee member (2007)
20. University Forests Committee (2006-2007)
21. College Open House tree climbing demonstration (2006-2010)
22. Departmental AQAD Extension sub-committee member (2006)
23. Stockbridge graduation diploma presentation (2005, 2006, 2007, 2009, 2010)
24. Departmental banquet awards presentation (2006)
25. College Curriculum Committee member (2005-2007)
26. College Appreciation Day—tree climbing demonstration (2004-2008)
27. Stockbridge Field Day—tree climbing demonstration (2004-2007)
28. Campus beautification—student tree pruning on campus (2004-Present)
29. Stockbridge School's Commencement (read names of graduates) (2004-present)
30. Consultant for Grounds Department—diagnosing tree health issues (2004-Present)
31. Various service for student recruiting and hosting visiting faculty (2004-present)
32. Chair, Campus Arboretum Committee (Virginia Tech) (2004)
33. Member, Campus Arboretum Committee (Virginia Tech) (2002-2003)
34. Secretary, College of Natural Resources Faculty Association (Virginia Tech) (2003-2004)

PROFESSIONAL SERVICE

1. ISA Nominating & Elections Committee (Chair, 2017-2020)
2. Session moderator for Open-grown and Urban Trees Workshop at University of Freiburg, Germany April 2019 (IUFRO Working Party 8.03.06 Impact of Wind on Forests)
3. ISA Certified Arborist Exam Proctor (2016-present)
4. Reviewer for ISA Tree Climber's Guide (4th Ed.) (2020)

5. Reviewer for proposed ISA Pruning qualification (2019)
6. Reviewer for 2 chapters in the ISA Board Certified Master Arborist Study Guide (2019)
7. Reviewer of promotion case at University of Florida (2018)
8. Reviewer of promotion case at Michigan State University (2018)
9. External review of Arboriculture curriculum for Hong Kong Baptist University (2016-2020)
10. ISA Board of Directors (2013-2016)
11. Program Committee European Arboricultural Congress (2014)
12. Facilitated SRT Summit at TCI Expo Charlotte, NC (2013)
13. ISA Hong Kong Advisory Board (2013-Present)
14. Reviewer of promotion & tenure case at Virginia Tech (2013)
15. ISA Science & Research Committee: Chair (2011-2013), Vice-Chair (2006-2011)
16. Ad hoc reviewer: *Acta Oecologica, Landscape and Urban Planning, Canadian Journal of Forest Research, Forest Science, Forestry, Urban Forestry & Urban Greening, Trees: Structure & Function, International Journal of Solids, Journal of Fluids and Structures, Journal of Tropical Forest Science, Plant Methods, Risk Analysis, Virginia Journal of Science, Arborist News*, ISA publications
17. External reviewer for M.Phil. Thesis University of Hong Kong (2015)
18. Associate Editor *Arboriculture & Urban Forestry* (2008-2011)
19. Regional Director, International Tree Failure Database (2005-2015)
20. Editorial Board *Arboriculture & Urban Forestry* (2004-2008)
21. Steering Committee, International Tree Failure Database (2004-2010)
22. Co-Chair, UMass Community Tree Conference (2004-2013, 2019-present)
23. Board of Directors, MA Representative, New England Chapter ISA (2004-2009)
24. Member, Bartlett Tree Foundation (2004-Present)
25. Advisory Board, TreeLink.org (2004-2009)
26. Member, ISA Educational Goods and Services Group (2003-2013)
27. Board of Directors, Tree Dynamics and Arborist Techniques Fund (2002-2009)
28. Board of Directors, TreesVA (2002-2004)