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Board of Directors Member
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Research interests:

Horticulture, tree physiology, environmental stresses on plants, plant nutrition, urban forestry, nursery and greenhouse crops, plant-beneficial microbes interaction, turfgrass management, environmental horticulture, climate change and trees decline

Introduction

Dr. Ali Nikbakht is an associate professor at the Department of Horticulture at the Isfahan University of Technology, Iran. He teaches courses relevant to horticulture, tree physiology, urban landscape design, and management, and protected and greenhouse production. Considering the vast consequences of climate change on urban greeneries including trees and turfgrasses and imposing environmental stresses on agricultural plants he has devoted his effort to managing and providing novel solutions for preserving the trees in such conditions. He also has been intensively involved in providing novel methods in environmentally sound strategies for greenhouse crop production. He received his doctorate in 2008 from the prestigious University of Tehran in Horticultural Science visiting China and Spain as a visiting scholar during his Ph.D. program. He received 2 merit scholarships one nationwide from the Ministry of Science and Research and a globally-operated merit co-sponsored scholarship from UNESCO and China (Great Wall program). He also participated in a particular workshop on Japan's 2002 World Cup football pitches following his efforts in restoring Azadi Grand Football Stadium reconstruction sponsored by the Japanese and Iranian National Olympic committees. He has participated in and presided over several national and international meetings, seminars, and academic conferences so far and also participated in several provincial and international level scientific research projects and cooperation. He has visited China, Spain, Japan, the USA, Canada, and New Zealand engaging himself in different academic, research, and cooperative exchange programs. He has published more than 95 scientific papers so far in leading peer-reviewed journals. He also wrote 3 books, translated 2 book from English to Persian, and 3 book chapters published by CRC Press and was the lead manager in compiling standards on the management of plant cultivation and preservation in the Isfahan urban landscape. He has been the conveyor of several national conferences and workshops. He also has been involved in extension programs to the surrounding municipalities and institutes including Tehran, Isfahan, Khomeini-Shahr (Iran), Fredericton (NB, Canada), and the University of British Columbia (BC, Canada). He is elected as one of the top nationwide professors in extension and joint works with the society and industry in 2022.

Education

Degrees:

2003-2008..... University of Tehran, Iran. **Doctorate in Horticulture (Ph.D.)**
2001-2003..... University of Tehran, Iran. **Master of Science in Horticulture (M.Sc.)**
1997-2001..... Isfahan University of Technology, Iran. **Bachelor of Science in Horticulture (B.Sc.)**

Diplomas:

2010-2011..... Isfahan House of Industry and Mine, Iran. **Advanced diploma in Landscape Design**
2005-2006..... Zhejiang University, China. **Advanced diploma in Plant Nutrition**

Academic Employment

- Sep. 2023- Present..... **Vice President of Research**, College of Agriculture, Isfahan University of Technology, Isfahan, Iran
- Feb. 2016 - Jun. 2018..... **Chair of Department of Horticulture**, Isfahan University of Technology, Isfahan, Iran
- Feb. 2017 - Present..... **Associate Professor**, Dept. of Horticulture, Isfahan University of Technology, Isfahan, Iran
- Dec. 2012- Present **Founder and manager of Urban Landscape Research Group**, Isfahan University of Technology, Isfahan, Iran
- Jan. 2008 - Feb. 2017..... **Assistant Professor**, Dept. of Horticulture, Isfahan University of Technology, Isfahan, Iran

International Research Collaborations and Sabbaticals

- Jun. 2018 - Mar. 2019..... Visiting Scientist at **Canadian Forest Service**, Natural Resources Canada, Fredericton, NB, Canada (Nursery plants)
- Sep. 2017..... Visiting Scholar at **Department of Agronomy**, University of Cordoba, Spain (Tree Physiology and Climate Change)
- Aug. 2013 – Sep. 2013.... Visiting Scholar at **Karsten Turfgrass Research Facility, School of Plant Sciences**, The University of Arizona, USA (Physiology of Stress on Turfgrasses)
- Apr. 2008 – Aug. 2008... Visiting Scholar at **Department of Natural Resources**, Massey University, New Zealand (Greenhouse Crops)
- May 2007- Nov. 2007..... Visiting Scholar at **Department of Agronomy**, University of Cordoba, Spain (Tree Physiology and Urban Forestry). **Fellowship awarded by Iranian Ministry of Science, Research and Technology**
- Sep. 2005- Aug. 2006..... Researcher at **Department of Plant Nutrition**, Zhejiang University, Hangzhou, China (Plant Nutrition). **Fellowship awarded by UNESCO- China Great Wall program**

Publications list

Peer-Reviewed International Journals

1. Aghamohammadi, N., **A. Nikbakht**, H. Aalipour, Gh. Akhbarfar and R. Fernández-Escobar. 2024. An integrated approach employing endotherapy accompanied with fertilization and soil mulching recovered plane trees from early leaf chlorosis in urban landscape. *Journal of Soil Science and Plant Nutrition* (under review).
2. Rezaei, S., M.R. Sabzalian, **A. Nikbakht**, H. Zarei, S. Baroodkoo and F. Beshkar. 2024. Optimization of rose growth performance in response to nano-nutrients of Fe, Ca and Zn under LED supplemental lighting. *BMC Plant Biology* (under review).
3. Sourani, M. **A. Nikbakht**, N. Etemadi and P. Aghdak. 2024. Growth, postharvest life, photosynthesis and qualitative characteristics of cut roses can be regulated by the different training strategies and canopy management. *Scientia Horticulturae* (under review).

4. Hossein-Hashemi, R., **A. Nikbakht** and H. Aalipour. 2024. Synergistic effects of oxygen nanobubble, nano-silicon and seaweed extract on promoting quality and postharvest performance of two cut rose flowers. *Scientia Horticulturae* (Accepted).
5. **Nikbakht, A.**, S. Tofighi, H. Aalipour, Gh. Akhbarfar, R. Fernandez-Escobar and M. Pessarakli. 2024. Silicon and seaweed extract injected into olive tree trunks (*Olea europaea* L.) as a means of generating drought stress resistance. *Communications in Soil Science and Plant Analysis*. 55 (15): 2339–2353
6. Rezaei, S., H. Zarei, **A. Nikbakht** and M.R. Sabzalian. 2024. Supplementary top LED lighting improved the postharvest life of cut rose flowers through modifications in physiological parameters. *Journal of Plant Growth Regulation*. 43 (1), 122-134
7. Rezaei, S., M.R. Sabzalian, **A. Nikbakht** and H. Zarei. 2024. Red LED light improved postharvest vase life of rose cut flowers during cold storage. *Postharvest Biology and Technology*. 210, 112752
8. Behnamnia, S., M. Rahimmalek, M. Haghighi, **A. Nikbakht**, Sh. Gharibi, N. Pachura, A. Szumny and J. Łyczko. 2024. Variation in flavonoid compounds, volatiles and yield related traits in different Iranian *Rosa damascena* Mill. cultivars based on SPME Arrow, LC-MS/MS and multivariate analyses. *Foods* 13 (5), 668.
9. Noori, K., **A. Nikbakht**, M. Haghighi, N. Etemadi, M. Rahimmalek and A. Szumny. 2023. Screening some pine species from North America and dried zones of western Asia for drought stress tolerance in terms of nutrients status, biochemical and physiological characteristics. *Frontiers in Plant Science* 14, 1281688
10. Khorsandy, S., **A. Nikbakht** and M.R. Sabzalian. 2023. Identification and distribution of endophytic fungi associated with stem and bark of old and young plane trees (*Platanus orientalis* L.) in the urban landscape. *Journal of Flower and Ornamental Plants* 8 (1), 77-88.
11. Jafari, S., **A. Nikbakht**, M. Haghighi and S. Shahin Varnousfaderani. 2023. Optimizing of the quality of rose grown with varying ratios and periods of Red: Blue light-emitting diodes in commercial greenhouse. *Journal of Horticulture and Postharvest Research* 6 (4), 331-348.
12. Akhbarfar, Gh., **A. Nikbakht**, N. Etemadi and O. Gailing. 2023. Physiological and Biochemical Responses of Plantain Trees (*Platanus orientalis* L.) Derived from Different Ages to Drought Stress and Ascophyllum nodosum L. Extract. *Soil Science and Plant Nutrition*. <https://doi.org/10.1007/s42729-023-01452-8>
13. Aalipour, H., **A. Nikbakht**, J. Khajehali and M. Taghizadeh. 2023. The beneficial role of arbuscular mycorrhizal fungi on population rates of aboveground herbivory: *Zyginella pulchra* (Hemiptera, Cicadellidae) in plane trees. *Journal of Forest Science*. 69: 244-253.
14. Kazemiyan-Jahromi, A., A. Esehaghbeygi, S. M. Sajadi, A. Nikbakht, W. da Silva, B. Sharifnabi and D. Toghraie. 2023. An application of dielectric barrier discharge treatment to control gray mold growth on cut rose flowers. *Journal of Stored Products Research*. 104: 102170.
15. Aalipour, H., **A. Nikbakht** and M.R. Sabzalian. 2023. Essential oil composition and total phenolic content in *Cupressus arizonica* G. in response to microbial inoculation under water stress. *Scientific Reports* 13 (1): 1-11.
16. Rezaei, S., **A. Nikbakht**, H. Zarei and M.R. Sabzalian. 2023. Physiological, biochemical, and postharvest characteristics of two cut rose cultivars are regulated by various supplemental light sources. *Scientia Horticulturae* 313: 111934.
17. Abdal, M., N. Etemadi, **A. Nikbakht** and R. Amirikhah. 2022. The arbuscular mycorrhizal symbiosis alleviating long-term salt stress through the modulation of nutrient elements, osmolytes, and antioxidant capacity in rosemary. *Biologia* 78 (4): 993-1010.
18. Basiri, Y., N. Etemadi, M. Alizadeh, **A. Nikbakht**, and G. Saeidi. 2022. Vase life consequences of natural and chemical treatments in foxtail lily (*Eremurus spectabilis*), as a specialty cut flowers. *Ornamental Horticulture*, 28: 120-129.
19. Aalipour, H., **A. Nikbakht** and N. Etemadi. 2021. Physiological response of Arizona cypress to Cd-contaminated soil inoculated with arbuscular mycorrhizal fungi and plant growth promoting rhizobacteria. *Rhizosphere*. 18: 100354
20. Aalipour, H., **A. Nikbakht**, N. Etemadi and J.E. MacDonald. 2021. Co-inoculation of Arizona cypress with mycorrhizae and rhizobacteria affects biomass, nutrient status, water-use efficiency, and glomalin-related soil protein concentration. *Urban Forestry & Urban Greening*. 60: 127050
21. Amirikhah, R., N. Etemadi, M.R. Sabzalian, **A. Nikbakht** and A. Eskandari. 2021. Gamma radiation negatively impacted seed germination, seedling growth and antioxidant enzymes activities in tall fescue infected with *Epichloë* endophyte. *Ecotoxicology and Environmental Safety*. 216: 112169

22. Haghighi, M. and **A. Nikbakht**. 2021. Growth, physiological and metabolic responses of gerbera to various combinations of calcium and humic acid levels. *Journal of Agricultural Science and Technology*. 23 (5): 1008
23. Heidari, S., S.N. Mortazavi, S. Reezi and **A. Nikbakht**. 2021. Composted palm waste as an alternative of coco peat in growing media: effects on growth and nutritional status of Lily cut flower (*Lilium spp.*). *Journal of Horticulture and Postharvest Research*. 4: 49-66
24. Aalipour, H., **A. Nikbakht**, N. Etemadi, F. Rejali and M. Soleimani. 2020. Biochemical response and interactions between arbuscular mycorrhizal fungi and plant growth promoting rhizobacteria during establishment and stimulating growth of Arizona Cypress (*Cupressus arizonica* G.) under drought stress. *Scientia Horticulturae*. 261: 108923
25. Aalipour, H., **A. Nikbakht**, M. Ghasemi and R. Amiri. 2020. Morpho-physiological and biochemical responses of two turfgrass species to arbuscular mycorrhizal fungi and humic acid under water stress condition. *Journal of Soil Science and Plant Nutrition*. 20: 566-576
26. Amirikhah, R., N. Etemadi, M.R. Sabzalian, **A. Nikbakht** and A. Eskandari. 2019. Physiological consequences of gamma ray irradiation in tall fescue with elimination potential of *Epichloë* fungal endophyte. *Ecotoxicology and Environmental Safety*. 182: 109412
27. Aalipour, H., **A. Nikbakht** and N. Etemadi. 2019. Co-inoculation of Arizona cypress with arbuscular mycorrhiza fungi and *Pseudomonas fluorescens* under fuel pollution. *Mycorrhiza*. 29: 277-289
28. Aalipour, H., **A. Nikbakht**, N. Etemadi. 2019. Relationship between chlorosis, photosynthesis and the nutrient content of plane trees in the presence of chemical and organic fertilizers. *Advances in Horticultural Science*. 33 (2). 171-177
29. Sheikh-Mohammadi, M.H., N. Etemadi, **A. Nikbakht**, M. Arab, M. Farajpour and M.M. Majidi. 2018. Wheatgrass germination and seedling growth under osmotic stress. *Agronomy Journal*. 110: 572-585
30. Rezai, S., N. Etemadi, **A. Nikbakht**, M. Yousefi and M.M. Majidi. 2018. Effect of light intensity on leaf morphology, photosynthetic capacity, and chlorophyll content in sage (*Salvia officinalis* L.). *Horticultural Science and Technology*. 36: 46-57
31. Amiri, R., **A. Nikbakht** and N. Etemadi and M.R. Sabzalian. 2017. Nutritional status, essential oil changes and water-use efficiency of rose geranium in response to arbuscular mycorrhizal fungi and water deficiency stress. *Symbiosis*. 73: 15-25
32. Amiri, R., **A. Nikbakht**, M. RahimMalek and H. Hosseini. 2017. Variation in the essential oil composition, antioxidant capacity, and physiological characteristics of *Pelargonium graveolens* L. inoculated with two species of mycorrhizal fungi under water deficit conditions. 2017. *Journal of Plant Growth Regulation*. 36: 502-515
33. Sheikh Mohammadi, M.H., N. Etemadi and **A. Nikbakht** and M. Pessarakli. 2017. Physiological responses of two cool-season grass species to trinexapac-ethyl under traffic stress. *HortScience*. 52: 99-109
34. Sheikh-Mohammadi, M.H., N. Etemadi and **A. Nikbakht**, M. Arab, M.M. Majidi and M. Pessarakli. 2017. Antioxidant defense system and physiological responses of Iranian crested wheatgrass (*Agropyron cristatum* L.) to drought and salinity stress. *Acta Physiologiae Plantarum*. 39: 245
35. Sheikh-Mohammadi, M.H., N. Etemadi and **A. Nikbakht**, M. Farajpour, M. Arab and M.M. Majidi. 2017. Screening and selection of twenty Iranian wheatgrass genotypes for tolerance to salinity stress during seed germination and seedling growth stage. *HortScience*. 52: 1125-1134
36. Ashrafi, N., **A. Nikbakht** and M. Gheysari. 2017. Effect of recycled water applied by surface and subsurface irrigation on the growth, photosynthetic indices and nutrient content of young olive trees in central Iran. *Journal of Water Reuse and Desalination*. 7: 246-252
37. Khorsandy, S., **A. Nikbakht**, M.R. Sabzalian and M. Pessarakli. 2016. Fungal endophyte presence affects morphological characteristics, nutrients content and longevity of plane tress (*Platanus orientalis* L.). *Journal of Plant Nutrition*. 39: 1156-1166.
38. Haghighi, M., **A. Nikbakht** and M. Pessarakli. 2016. Effects of humic acid on remediation of the nutritional deficiency of gerbera in hydroponic culture. *Journal of Plant Nutrition*. 39: 702-713.
39. Amiri, A. **A. Nikbakht** and N. Etemadi. 2015. Alleviation of drought stress on rose geranium [*Pelargonium graveolens* (L.) Herit.] in terms of antioxidant activity and secondary metabolites by mycorrhizal inoculation. *Scientia Horticulturae*. 197: 373–380.

40. Ashrafi, A., **A. Nikbakht**, M. Gheysari, R. Fernandez-Escobar and M.H. Ehtemam. 2015. Effect of a new irrigation system using recycled water on stomatal behavior, photosynthesis and nutrient uptake in olive trees (*Olea europaea* L.). Journal of Horticultural Science and Biotechnology. 90: 401-406
41. Amiri-Khah, R., N. Etemadi, **A. Nikbakht** and M. Pessarakli. 2015. Influence of sequential trinexapac-ethyl applications and traffic on growth and chemical constituents of perennial ryegrass (*Lolium perenne* L.). Korean Journal of Horticultural Science and Technology. 33: 340-348
42. Etemadi, N. M.H. Sheikh Mohammadi, **A. Nikbakht**, M.R. Sabzalian and M. Pessarakli. 2015. Influence of trinexapac-ethyl in improving drought resistance of wheatgrass and tall fescue. Acta Physiologiae Plantarum. 37: 53-70.
43. Daneshvar, N., M. Kafi, **A. Nikbakht** and F. Rejali. 2015. Effect of foliar applications of humic acid on nutrient content, growth, root parameters and visual quality of perennial ryegrass (*Lolium perenne* L.). Journal of Plant Nutrition. 38:224–236.
44. Saeedi, R. N. Etemadi, **A. Nikbakht** and A.H. Khoshgoftarmanesh. 2015. Calcium Chelated with Amino Acids Improves Quality and Postharvest Life of Lisianthus (*Eustoma grandiflorum* cv. Cinderella Lime). HortScience 50(9):1394–1398.
45. Yazdani, B., **A. Nikbakht** and N. Etemadi. 2014. Physiological effects of different combinations of humic and fulvic acid on gerbera. Communications in Soil Science and Plant Analysis. 45:1357-1368.
46. Haghighi, M., **A. Nikbakht**, Y.P. Xia and M. Pessarakli. 2014. Influence of humic Acid in diluted nutrient solution on growth, Nutrient Efficiency, and Postharvest Attributes of Gerbera nutrient solution on growth, nutrient efficiency and postharvest attributes of gerbera. Communications in Soil Science and Plant Analysis. 45: 177-188.
47. **Nikbakht, A.**, M. Pessarakli, N. Daneshvar and M. Kafi. 2014. Mycorrhizal infection, nutrients uptake, and quality of ryegrass under humic acid treatments. Agronomy Journal. 106: 585-595.
48. Amani Beni, M., A. Hatamzadeh, **A. Nikbakht**, M. Ghasemnezhad, M. Zarchini. 2013. Improving Physiological Quality of Cut Tuberose (*Polianthes tuberosa* cv. Single) Flowers by Continues Treatment with Humic Acid and Nano-Silver Particles. Journal of Ornamental Plants (Journal of Ornamental and Horticultural Plants), 3 (3): 133-141.
49. **Nikbakht, A.**, N. Etemadi, B. Yazdani and M. Majidi. 2012. Application of humic and fulvic acids in nutrient solution affect postharvest characteristics of *Gerbera jamesonii* L. Acta Horticulturae. 934: 495-500
50. Chang, L., Y. Wu, W.W. Xu, **A. Nikbakht** and Y.P. Xia. 2012. Effects of calcium and humic acid treatment on the growth and nutrient uptake of Oriental lily. African Journal of Biotechnology. 11(9): 2218-2222.
51. **Nikbakht, A.**, S.A.H. Goli, M. Kargar and S. Ahmadzadeh. 2011. Effect of humic acids on yield and oil characteristics of *Silybum marianum* and *Cucurbita pepo* convar. pepo var. styriaca seeds. Herba Polonica. 57 (4): 25-32
52. Etemadi, N., M. Haghighi, **A. Nikbakht** and Z. Zamani. 2010. Methods to promote germination of *Kelussia odoratissima* Mozaff., an Iranian endemic medicinal plant. Herba Polonica. 56(2): 23-28
53. **Nikbakht, A.**, M. Kafi, M. Babalar and Y.P. Xia. 2008. Effect of humic acid on plant growth, nutrients uptake and postharvest life of gerbera. Journal of Plant Nutrition. 31: 2155–2167
54. **Nikbakht, A.**, M. Kafi and M. Haghighi. 2008. The abilities and potentials of medicinal plants production and herbal medicine in Iran. Acta Horticulturea. 790: 259-262
55. **Nikbakht, A.** and M. Kafi. 2008. A study on the relationship between Iranian people and Damask rose (*Rosa damascena* Mill.) and its therapeutic and healing properties. Acta Horticulturea. 790: 251-254
56. Haghighi, M., A. Tehranifar, **A. Nikbakht** and M. Kafi. 2008. Research and current profile of Iranian production of Damask rose (*Rosa damascena* Mill.). Acta Horticulturea. 769: 449-455
57. **Nikbakht, A.**, M. Kafi, M. Mirmasoumi and M. Babalar. 2005. Micropropagation of Damask rose cvs Ghamsar and Azaran. International Journal of Agriculture and Biology. 7 (4):535-538

Peer-Reviewed Persian Journals with English Abstract

1. Aghdak, P., R. Barzegar, **A. Nikbakht**, H. Shariatmadari, S. S. Mousavifard and A. Alipour. 2024. Efficiency of a closed hydroponic system and nano-silica treatment in resource-use, quality and production of samurai roses. Journal of Flower and Ornamental Plants (Accepted).

2. Mohammadi, A.R., M. Haghighi, **A. Nikbakht** and M. Mehnatkesh. 2023. The effect of seaweed extract and LED on the growth and flowering of two lisianthus cultivars. *Journal of Crop Production and Processing*. 12: 1-14
3. Amirikhah, R., N. Etemadi, M.R. Sabzalian and **A. Nikbakht**. 2023. Morpho-physiological effects of gamma radiation on Tall fescue (*Festuca arundinacea* Scrb.). *Journal of Plant Process and Function*. 11: 37-54
4. Rezaei, S., H. Zarei, **A. Nikbakht**, M.R. Sabzalian. 2022. Investigation of the effect of different light sources on some physiological and morphological characteristics of samurai rose. *Journal of Plant Production*. 29: 185-202
5. **Nikbakht, A.**, A. Sheykhani and Gh. Akhbarfar. 2022. Effect of sources of iron on recovering plane trees (*Platanus orientalis* L. from chlorosis by trunk injection. *Journal of Plant Process and Function*. 11: 213-230
6. Safari, A., S. Reezi, N. Etemadi, **A. Nikbakht**, A. Mohammadkhani and A. Badalzadeh. 2022. Effect of different levels of nitrogen and phosphorous on some physiological and morphological traits of golden rod (*Solidago canadensis* L.). *Iranian Journal of Horticultural Science*. 52: 951-963
7. Amirikhah, R., N. Etemadi, M.R. Sabzalian, **A. Nikbakht**. 2022. Morpho-physiological effects of gamma radiation on Tall fescue (*Festuca arundinacea* Scrb.). *Journal of Plant Process and Function*. 11: 37-53
8. Mohammadi, A.R., M. Haghighi and **A. Nikbakht**. 2021. Seed germination of lisianthus (*Eustoma grandiflorum*) treated with stratification and seaweed extract. *Journal of Flower and Ornamental Plants*. 5: 109-122
9. Heidari, S., S.N. Mortazavi, S. Reezi and **A. Nikbakht**. 2021. Study the effect of cultivar and disbudding on the bulb propagation of lily. *Journal of Horticultural Science*. 35 (2): 301-3011
10. Shahidani, F., M. Gheisari, **A. Nikbakht** and Z. Moshrefian. 2021. Effect of treflan injection on the decline of emitter clogging by roots of two grass species under subsurface drip irrigation. *Iranian Journal of Irrigation & Drainage*. 15 (3): 679-689
11. Heidari, S., S.N. Mortazavi, S. Reezi and **A. Nikbakht**. 2021. The effect of storage temperature and duration on the growth and bulb production of two lily cultivars. *Iranian Journal of Horticultural Science and Technology*. 22 (3): 289-300
12. Sourani, M. and **A. Nikbakht**. 2019. Effect of arching and traditional method of training on the yield and quality of cut-roses in soilless culture condition. *Iranian Journal of Horticultural Science and Technology* 20 (3): 359-368
13. Alipour, H., **A. Nikbakht**, F. Rejali and M. Soleimani. 2019. Application of *pseudomonas fluorescens* bacteria and two species of AM fungi on water deficit tolerance of Arizona cypress seedlings (*Cupressus arizonica* G.). *Journal of Plant Process and Function*. 8: 391-406.
14. Alipour, H., **A. Nikbakht**, N. Etemadi, F. Rejali and M. Soleimani. 2019. Evaluating the effect of cadmium on the decline of Arizona cypress seedlings and the enhancement role of mycorrhizal fungus and plant growth promoting rhizobacteria. *Journal of Water and Soil Science*. 23: 417-431.
15. Vafadar, Z., M. Rahimmalek, M.R. Sabzalian and **A. Nikbakht**. 2018. Effect of salt stress and harvesting time on morphological and physiological characteristics of myrtle (*Myrtus communis*). *Plant Physiology and Function*. 7: 35-47
16. Alipour, H. **A. Nikbakht**, N. Etemadi, F. Rejali and M.H. Ehtemam. 2016. Effects of mycorrhizal inoculation on health appearance, physiological characteristics and photosynthetic behavior of plane trees. *Iranian Journal of Horticultural Science and Technology*. 16: 463-472
17. Alipour Amraie, H., **A. Nikbakht**, N. Etemadi, F. Norbakhsh and F. Rejali. 2016. Beneficial effects of mycorrhizal fungi on growth characteristics and nutrients uptake by the plane tree (*Platanus orientalis* L). *JCPP* 21: 81-90
18. Gheisari, M., N. Ashrafi, A. Maleki and **A. Nikbakht**. 2015. Effect of Irrigation with reclaimed water on fruit characteristics and photosynthesis of olive trees under two irrigation systems. *Journal of Water and Soil*. 29: 569-577
19. Haghighi, M and **A. Nikbakht**. 2015. The concentration changes of divalent elements in roots, stems and leaves of gerbera affected different amounts of calcium and humic acid. *Journal of Soil Research (Soil and Water Sciences)*. 28(2): 387- 396
20. Rezaee, S., **A. Nikbakht**, N. Etemadi, M. Yusefi and M.M. Majedi. 2015. The effect of PE coating and shade on morphological and physiological characteristics of dwarf lisianthus (cv. Matador) flowers. *Journal of Science and Technology of Greenhouse Culture*. 22: 135-143

21. Amani Beni, M., A. Hatamzadeh, **A. Nikbakht**, M. Ghasemnezhad, M. Zarchini. 2014. Effect of humic acid and silver nanoparticles to increase the vase life of tuberose (*Polianthes tuberosa* cv. Single) Flowers. Iranian Journal of Horticultural Science. 28 (2):185-191
22. Amri-Khah, R. N. Etemadi, Frahmmand, Sh and **A. Nikbakht**. 2014. Effect of Trinexapac-Ethyl on quality and Physiological characteristics of Perennial Ryegrass (*Lolium perenne* L.) in Salinity conditions. Iranian Journal of Horticultural Science. 45:23-33
23. Kiani, E., N. Etemadi, **A. Nikbakht**, J. Razmjoo and R. Amiri Khah. 2014. Evaluation of salinity tolerance of Kentucky bluegrass cultivars used in landscape. Iranian Journal of Horticultural Science and Technology 15 (1): 119-130
24. Khorsandi, S., **A. Nikbakht**, M.R. Sabzalian and B. Sharifnabi. 2014. Effect of age and tree tissue on endophytic fungi presence, nutrient content and morphological characteristics of plane trees. Iranian Journal of Horticultural Science and Technology 15 (3): 317-330
25. Daneshvar, N., M. Kafi, **A. Nikbakht**, F. Rejali. 2013. Influence of humic acid and mycorrhiza fungi on some growth characters and nutrient uptake in "Speedygreen" perennial ryegrass (*Lolium perenne* L.) under controlled conditions. Journal of Horticultural Science and Technology. 14 (2): 195-210
26. Sheikh Mohammadi, M.H., N. Etemadi and **A. Nikbakht**. 2013. The effect of trinexapac-ethyl and traffic stress on physiological and morphological characteristics of *Agropyron desertorum*. Journal of Crop Production and Processing.
27. Sheikh Mohammadi, M.H., N. Etemadi and **A. Nikbakht**. 2013. The effect of trinexapac-ethyl on physiological and morphological characteristics of tall fescue "Rebel" under drought conditions. Journal of Crop Production and Processing.
28. **Nikbakht, A.**, M. Gheysari. N. Etemadi, N. Ashrafi and A. Maleki. 2013. Investigation the application of a modern irrigation system and wastewater on physiological characteristics of olive trees in the urban landscape (*Olea europaea* L. cv. Roghani). Journal of Horticultural Science and Technology. 13 (4): 459-468
29. Mirabbasi N., **A. Nikbakht** N. Etemadi and M. Sabzalian. 2013. The Effect of different concentrations of potassium silicate, nano-silicon and calcium chloride on the concentration of potassium, calcium and magnesium, chlorophyll content and number of florets of Asiatic lily Cv. 'Brunello'. Journal of Science and Technology of Greenhouse Culture. 4 (14):41-50
30. Mirabbasi N., **A. Nikbakht** N. Etemadi and M. Sabzalian. 2013. The Effect of Concentration, Type and Source of Silicon and Calcium Chloride on Characteristics and Postharvest Longevity in Asiatic Lily Cv. 'Brunello'. Iranian Journal of Horticultural Science and Technology 15 (2): 245-256
31. Barkatein, L., **A. Nikbakht** and N. Etemadi. 2013. Effect of source and method of silica application on some of the quantitative and physiological characteristics of *Gerbera jamesonii* L. Journal of Science and Technology of Greenhouse Culture. 13: 39-46.
32. Rahnamoonfar, M., N. Etemadi, **A. Nikbakht**, M. Gheysari and M. Sabzalian. 2013. The effect of shade, Organic materials and Planting time on morphological and physiological characteristics of Lisianthus flowers cv. 'Matador'. Journal Plant Production. 37(3):1-13.
33. Kafi, M. N. Daneshvar, **A. Nikbakht**, F. Rejali and M. Daneshkhah. 2013. Effect of humic acid and mycorrhiza fungi on some characteristics of Speedy green perennial ryegrass (*Lolium perenne* L.). Journal of Science and Technology of Greenhouse Culture. 13: 49- 58
34. Kafi, M., M. Babalar, **A. Nikbakht**, H. Ebrahim-Zadeh, N. Etemadi and S. Samavat. 2009. Effect of humic acid spray on nutrients uptake, protein content and postharvest life of *Gerbera jamesonii* cv. 'Malibu'. Iranian Journal of Horticultural Sciences. 40 (1): 69-75
35. Daneshvar, N., M. Kafi, **A. Nikbakht** and F. Rejali. 2012. Effect humic acid on some of the quantitative and qualitative characteristics Speedygreen grass. Iranian Journal of Horticultural Science. 42: 403-412
36. **Nikbakht, A.**, M. Kafi, M. Babalar, H., EbrahimZade, N. Etemadi and Y.P. Xia. 2008. Effect of humic acid on calcium absorbtion and postharvest physiological behavior of gerbera. Iranian Journal of Horticultural Science and Technology. 8 (4): 237-248
37. Daneshkhah, M. M. Kafi and **A. Nikbakht**. 2007. The effect of different levels of nitrogen and potassium on qualitative and quantitative characteristics of Damask rose (*Rosa damascena* Mill.). Iranian Journal of Horticultural Science and Technology. 8 (2): 83-90

38. **Nikbakht, A.** 2005. Medicine in landscape architecture: healing gardens. Bagh-i-Nazar. The professional scientific journal of Nazar institute: The Art, Architecture & Urbanism Research Center. 1(2): 79-82
39. Kafi, M., **A. Nikbakht**, M. Babalar and M. Mirmasoumi. 2005. The effect of plant growth regulators on growth characteristics of damask rose in vitro. Iranian Journal of Horticultural Sciences and Technology. 5 (3): 166-157

Selected Offered Peer Review Service

1. **International Journals:** *Journal of Arid Environments* (Ref: JAE19-665), *Journal of Biocatalyst and Agricultural Biotechnology* (Ref: BAB_2020_323), *Journal of Plant Growth Regulation* (Ref: JPGR-D-21-00179, JPGR-D-17-00223, JPGR-D-19-00413, Ref: JPGR-D-18-00157), *Journal of Plant Nutrition* (ID: LPLA-2018-0466, LPLA-2019-0769, LPLA-2019-0774, LPLA-2022-0592), *Scientia Horticulturae* (Ref: HORTI29669), *International Journal of Horticultural Science and Technology* (ID: IJHST-201606-137), *Urban Forestry & Urban Greening* (Ref: UFUG_2016_139), *The Brazilian Archives of Biology and Technology* (Ref: BAPT-2021-0270), *Environmental Pollution* (ENVPOL-D-22-06137).
2. **Domestic Journals:** More than 120 articles in journals and conferences: *Iranian Journal of Plant Physiology*, *Plant production*, *Iranian Journal for Horticulture Science and Technology*, *Journal of Science and Technology of Greenhouse Culture*, *Journal of Water and Soil*, *Plant Physiology and Function*, *Journal of Horticultural Science*, 6,7,8 and 9th Iranian Congress on Horticulture, 1 and 2nd Hydroponics and Greenhouse Culture Congress, 5th National and International Congress of Flowers and Ornamental Plants
3. **Books:** *Urban Horticulture* (University of Tehran Press. Ref: UTP: 2011-1907), *Cut flowers* (University of Zanjan Press)
4. **Ph.D. Dissertations:** **F. Fakhrzad**, University of Shiraz, Fars, Iran (Sept. 2022), **A. Vatankhah**, Shahrekord University, Chaharmahal Bakhtiyari, Iran (Sept. 2022)
5. **Academic Promotion:** **Dr. M. Karimi**, Univeristy of Mazandaran, Mazandaran, Iran (May, 2021), **Dr. M. Alaei**, University of Zanjan, Zanjan, Iran (Feb. 2020)

Books and Book Chapter

1. **Nikbakht, A.**, and N. Etemadi. 2024. *Urban Landscape Management, Principles and Practices*. Isfahan Municipality Pub., Isfahan, Iran. 520 p. (in Persian).
2. Aalipour, A. and **A. Nikbakht**. 2021. *Trees' Physiological and Environmental Stresses, Challenges, and Solutions* (Chapter 36). in M. Pessarakli (ed.). *Handbook of Plant and Crop Physiology* (Books in Soils, Plants, and the Environment) 4th ed. CRC Press. <https://doi.org/10.1201/9781003093640>
3. **Nikbakht, A.**, N. Daneshvar and M. Pessarakli. 2021. *Using Humic Substances and Mycorrhizal Inoculation as New Approaches for Improving Turfgrass Nutrition* (Chapter 50). in M. Pessarakli (ed.). *Handbook of Plant and Crop Physiology* (Books in Soils, Plants, and the Environment) 4th ed. CRC Press. <https://doi.org/10.1201/9781003093640>
4. **Nikbakht, A.** and N. Ashrafi. 2021. *Cut Flowers: Practical and Scientific Growing*. Isfahan University of Technology Pub. Isfahan. Iran. 2nd Ed. 460 p. (In Persian).
5. **Nikbakht, A.** and N. Ashrafi. 2019. *Cut Flowers: Practical and Scientific Growing*. Isfahan University of Technology Pub. Isfahan. Iran. 440 p. (In Persian).
6. **Nikbakht, A.** and M. Pessarakli. 2014. *New Approaches to Turfgrass Nutrition: Humic Substances and Mycorrhizal Inoculation*. in M. Pessarakli (ed.). *Handbook of Plant and Crop Physiology* (Books in Soils, Plants, and the Environment) 3rd ed. CRC Press.
7. **Nikbakht, A.**, E. Kiani and N. Etemadi. 2012. *Fundamentals of Turfgrass Management* (N. Christians). Translated into Persian from English. Isfahan University of Technology Pub. Isfahan. Iran. 434 p.

8. **Nikbakht, A.** and M. Kafi. 2011. The *Rosa damascena* of Iran. 2010. Isfahan University of Technology Pub. Isfahan. Iran. 161p. (In Persian).

Patent

1. Gheysari, M. and **A. Nikbakht**. 2010. Subsurface-leakage irrigation system for the urban landscape. Patent#: 66979 at the Iranian office for companies and industrial registration.

Selected International Presentations

1. **Nikbakht, A.**, N. Daneshvar-Hakimi-Maibodi, M. Kafi and M. Pessarakli*. 2013. Physiological responses and visual quality of perennial ryegrass (*Lolium perenne* L.) influenced by mycorrhizal infection and humic acid. ASA-CSSA-SSSA International Annual Meetings, Nov. 3-6, 2013, Tampa, Florida-Oral Presentation
2. **Nikbakht, A.**, N. Etemadi*, B. Yazdani and M.M. Majidi. 2013. Application of Humic and Fulvic Acids in Nutrient Solution Affect Postharvest Characteristics of *Gerbera jamesonii* L. 28th International Horticultural Congress (IHC). 22-27 August. Lisbon, Portugal
3. Kafi*, M., D. Naderi and **A. Nikbakht**. 2007. Study on two levels of Trinexapac-ethyl effects on qualitative traits of sod after storekeeping. 2nd International ISHS Conference on Turfgrass Science and Management for Sports Fields. 24-29 June. Beijing. China.
4. Haghighi, M., M. Kafi, A. Tehranifar* and **A. Nikbakht**. 2006. Effects of decay level of SMC (Spent Mushroom Compost), media diameter and compound on turf culture in hydromulching method. 27th International Horticultural Congress (IHC). 13-19 August. Seoul, South Korea.
5. Haghighi*, M., M. Kafi, A. Tehranifar and **A. Nikbakht**. 2005. The effect of best mulching media and cultivation time on the qualitative and quantitative characteristics of turfgrass in hydromulching system. International Symposium on Growing Media. 4-10 September. Angers, France.
6. Haghighi*, M., M. Kafi, A. Tehranifar and **A. Nikbakht**. 2005. A study on replacing municipal solid waste (MSW) with spent mushroom compost (SMC) in Iran. International Symposium on Growing Media. 4-10 September. Angers, France
7. **Nikbakht*, A.**, M. Kafi and M. Haghighi. 2004. The abilities and potentials of medicinal plants production and herbal medicine in Iran. Proceeding of the 8th international plant-people symposium (IPPS), 4-6 June, Hyogo, Japan-Oral Presentation

Invited Speaker

1. **Approaches to protect trees in the urban landscape.** A keynote and workshop presented at the 13th Iranian Horticulture Congress (IRHC). Gorgan University of Agriculture and Natural Resources. Gorgan, Iran. Sept. 2022
2. **New concepts in nutrition and rehabilitation of trees in the urban landscape.** A workshop presented for Isfahan province municipalities. Isfahan, Iran. Sept. 2022.
3. Trees decline in urban green spaces, causes, and solutions: A review of the experiences of the last two decades. **5th International Congress on Flowers and Ornamental Plants.** Shiraz University. Fars, Iran. Sept. 2022
4. Natural turfgrass management. The workshop was offered to the managers of sports facilities in teacher universities. **Ministry of Education.** 26 October 2021
5. Sport turfgrass management. The workshop was offered to the managers of sports facilities in Iran universities. **Ministry of Science and Technology.** 1 September 2021
6. How to efficiently educate and give consultation to the greenhouse crops producers. **Isfahan Chamber of Commerce, Industry, Mining, and Agriculture.** 4 January 2021.
7. Climate change and trees decline management in the urban landscape. **3rd International Congress on Flowers and Ornamental Plants.** Shahid Chamran University. Ahvaz, Iran. 21 January 2021

8. Stress physiology. Atlantic Forestry Center, **Canadian Forest Service**. Fredericton, NB, Canada. 29 November 2018
9. Concepts in the growth and development of woody plants. Atlantic Forestry Center, **Canadian Forest Service**. Fredericton, NB, Canada. 26 October 2018
10. Environmental conditions in greenhouses. Atlantic Forestry Center, **Canadian Forest Service**. Fredericton, NB, Canada. 28 September 2018
11. Turfgrasses management for arid areas. **National conference of Xeriscaping**. Kashan University. Kashan, Iran. 6 May 2015

Offered Degree Courses

- **BSc:**
 1. Turfgrass and Cover Plants. Isfahan University of Technology. 7 semesters by 2021
 2. Garden and Park Design. Isfahan University of Technology. 6 semesters by 2021
 3. Field Training in Horticulture. Isfahan University of Technology. 3 semesters by 2021
- **MSc:**
 1. Management of Urban Landscape. Isfahan University of Technology. 7 semesters by 2021
 2. Physiology of Ornamental Plants. Isfahan University of Technology. 7 semesters by 2021
 3. Advanced Postharvest Physiology. Isfahan University of Technology. 3 semesters by 2021
 4. Production of Cut Flowers. Isfahan University of Technology. 3 semesters by 2021
- **PhD:**
 1. Physiology of Flowering. Isfahan University of Technology. 1 semester by 2021
 2. New Topic in Horticulture. Isfahan University of Technology. 3 semesters by 2021

Memberships

1. International Society for Horticultural Science (ISHS)
2. Nominated and elected member of the chair at Iranian Society for Horticultural Science

Projects

1. **Nikbakht, A.** and A.M. Bahari. Comparing nano-fertilizers vs common fertilizers in growing rose cut-flower in greenhouses. 2020-2021
2. **Nikbakht, A.**, R. Sabzalian, H. Zareie and S. Rezaei. The effect of different regimes of supplementary light and Nano-micro minerals on physiological and morphological characteristics of two cut rose varieties. 2019-2020
3. **Nikbakht, A.**, R. Sabzalian and S. Jafari. Response of two cut rose cultivars to improved LED light in a commercial greenhouse. 2017-2018
4. **Nikbakht, A.** and J. MacDonald. Improving the survival of urban landscape trees using a novel endotherapy tool in Fredericton urban landscape. 2018-2019
5. MacDonald, J. and **A. Nikbakht**. Improving root system development and other seedling quality attributes in choke and pine cherries. Canadian Forest Service. 2018-2019
6. MacDonald, J. and **A. Nikbakht**. Root growth potential assessment of jack pines receiving biostimulants. 2018-2019
7. MacDonald, J. and **A. Nikbakht**. Study the growth and drought tolerance of 3 populations of jack pines treated by biostimulants.
8. MacDonald, J. and **A. Nikbakht**. The response of pine cherries to arbuscular mycorrhizal fungi and biostimulants. 2018-2019
9. **Nikbakht, A.** Designing the urban landscape of Khomeini-Shahr town. Khomeini-Shahr Municipality, Iran. 2016 to

present.

10. **Nikbakht, A.** Compilation standards and executive direction on the management of plant cultivation and preservation in Isfahan urban landscape parks and pathways. Isfahan Municipality, Isfahan, Iran. 2012-2016.
11. **Nikbakht, A.** Effect of mycorrhizal fungi on growth characteristics and essential oil changes of rose-scented geranium (*Pelargonium graveolens*) in complete and deficit irrigation conditions. Barij Essence Co. Kashan, Iran. 2013-2015.
12. **Nikbakht, A.** Isfahan University of Technology landscape designing, and construction supervising according to water-wise landscaping principles (1st phase: 6 blocks). Isfahan, Iran. 2011-2013.
13. **Nikbakht, A.** Investigation the effect of irrigation system and water quality on growth indices of olive trees in the landscape. (co-I with M. Gheysari, and R. Fernandez-Escobar (University of Cordoba, Spain). Isfahan, Iran. 2010-2012.
14. **Nikbakht, A.** Study the possibility of *Aeolesthes sarta* control on elm trees via direct trunk injection system in Isfahan urban landscape. Isfahan Municipality, Isfahan, Iran. 2009-2011.
15. **Nikbakht, A.** Controlling lime witches broom through direct trunk injection. Hormozgan, Iran. 2007-2008.

Academic Activities

1. **Chair of Urban Landscape Research Group.** Isfahan University of Technology. 2012-present.
2. **Board of Directors Member.** Iranian Society for Horticultural Science. 2023-current
3. **Journal Editor** of Journal of Horticultural Science and Technology
4. **Journal Editor** of Journal of Science and Technology of Greenhouse Culture

Meetings Organized

1. Conveyer, organizer, and interpreter of the **International Workshop on Sport turfs**. June 2022. Isfahan University of Technology and Sepahan F.C.
2. Organizing and hosting more than 10 live Instagrams on urban landscape current issues with the specialist on [urban.landscape page](#)
3. Conveyer of the national congress. **Greenhouse risk-assessment in Iran, first meeting: greenhouse structures and equipment**. March 2016. Isfahan University of Technology
4. Workshop organizer and manager. **New approaches in turfgrass stress management**. By Professor M. Pessarakli (University of Arizona). 2013. Isfahan University of Technology
5. Workshop organizer and manager. **Methods in successful international scientific article preparation and submission**. By Professor M. Pessarakli (University of Arizona). 2013. Isfahan University of Technology
6. Session organizer and co-executive director of **7th Iranian Congress for Horticultural Sciences**. 2011. Isfahan University of Technology

Other Work Experiences

1. Naghsh-e Jahan Stadium **turfgrass supreme supervisor**, Isfahan, Iran. 2023-Present
2. **Manager of Sport and Physical Education Center of the Isfahan University of Technology**. 2020- 2021
3. **Scientific consultant** of the Department of Parks and Recreation of Khomeini-Shahr Municipality. 2015- Present.
4. **Scientific consultant** of the Department of Parks and Recreation of Isfahan Municipality. 2008- Present.
5. **Scientific consultant** and co-manager of Isfahan University of Technology green area and landscape. (400 ha). 2010-2014.
6. Naghsh-e Jahan Stadium **turfgrass manager**, Isfahan, Iran. 2005
7. Turfgrass **nursery manager**, Tehran, Iran. 2004-2005
8. Azadi Grand Stadium **turfgrass manager**, Tehran, Iran. 2004-2005

Honors

1. Top nationwide professors in extension and joint works with the society and industry. 2022
2. Top Teacher at College of Agriculture based on students' assessments (out of 80 teachers). 2019
3. Top Teacher at College of Agriculture based on students' assessments (out of 80 teachers). 2020
4. Rank 4 at the nationwide University Entrance exam in Iran (MSc).
5. Rank 3 at the nationwide University Entrance exam in Iran (PhD).

Graduate Students Supervision

1. Supervisor: PhD students (6 students), MSc students (30 students), BSc students (35 students). Isfahan University of Technology, Iran. 2009-2021
2. Member of supervisory committee: MSc students (32 students) at the Isfahan University of Technology, University of Tehran (1 student), Guilan University (1 student). 2009-2021

Languages

1. Persian (Native)
2. English (Complete Work Proficiency, IELTS 7.0)
3. Spanish (Basic)

Interests

Philosophy, Judo, Driving, Camping, Charity activities