

Yujin Park

6073 S. Backus Mall, Room 340D, Mesa, AZ 85212 • 517-899-3541 • yujin.park.2@asu.edu

EDUCATION

- Ph.D., Horticulture** *May 2018*
Michigan State University, USA
Dissertation: Controlling the radiation spectrum of sole-source lighting to elicit desirable photomorphogenic traits and regulate flowering of floriculture seedlings
Major Professor: Dr. Erik S. Runkle
- M.S., Horticultural Science** *Feb. 2013*
Seoul National University, Korea
Thesis: Vegetative growth and flowering of *Dianthus*, *Zinnia*, and *Pelargonium* as affected by night interruption at different timings
Major Professor: Dr. Kisun Kim
- B.S., Architectural Engineering**, Yonsei University, Korea *Feb. 2011*
Thesis: Constructing a vertical farm which can grow coffee trees
- Education Abroad Program, Horticulture**, Chiba University, Japan *Nov. 2011*
Education Abroad Program, Civil Engineering University of California, Davis, USA *Jan. 2010*

PROFESSIONAL EXPERIENCE

- Assistant Professor** *Aug 2019–present*
College of Integrative Sciences and Arts, Arizona State University
- Publish peer-reviewed articles
 - Build strong horticulture research programs
 - Obtain external research funding
- Post-doctoral Research Associate** *May 2018–July 2019*
Department of Horticulture, Michigan State University
- Lead two research projects on light quality with hydroponically grown vegetables as well as ornamental crops
 - Mentor and train one undergraduate student on experimental procedures, lighting control protocols, and scientific writing
- Ph.D. Graduate Research Assistant** *June 2014–May 2018*
Department of Horticulture, Michigan State University
- Evaluated the spectral effects of narrowband and broad-spectrum LEDs on photosynthetic and photomorphogenic traits and flowering responses on a range of floriculture crops in highly controlled environments
 - Managed environmental sensor networks daily to ensure proper system operation and precise environmental control
 - Tested the efficacy of ribose as a growth retardant in vegetable transplants and *Phalaenopsis* orchids
 - Co-wrote three grant proposals and obtained \$42,125 from the American Floral Endowment, the Western Michigan Greenhouse Association, and the Metro Detroit Flower Growers Association
 - Mentored and trained one master's student on experimental procedures, lighting control protocols, and scientific writing
 - Earned a certificate of LI-COR Photosynthesis Training

Research Associate*Feb. 2013–May 2014*

Research Institute for Agriculture & Life Sciences, Seoul National University, Korea

- Coordinated commercial greenhouse grower trials that validated the utility of night interruption lighting on promoting the growth and flowering of *Phalaenopsis* and *Cymbidium* orchids, and several foliage plants.
- Mentored and trained one master's student on experimental procedures and scientific writing
- Collaborated with other researchers to investigate photosynthetic and growth characteristics of two *Phalaenopsis* cultivars newly bred in South Korea

English Translator*Feb. 2013–May 2014*

- Worked with Berger, the largest Canadian peat moss company, to provide accurate translations from English to Korean for their highly technical documents, including brochures and other materials containing horticultural terminology

M.S. Graduate Research Assistant*Mar. 2011–Feb. 2013*

Department of Horticultural Science, Seoul National University, Korea

- Designed and conducted a growth chamber and a greenhouse experiment to evaluate the impacts of different timings of night interruption lighting on photosynthesis and vegetative growth in herbaceous bedding plants
- Collaborated with other researchers to assess the efficacy of night interruption lighting in vegetative growth and flowering control in *Cymbidium* and *Phalaenopsis* orchids

Intern*Apr. 2010–June 2010*

University Greenhouse, Yonsei University, Korea

- Assisted in all aspects of plant care for production greenhouses and outdoor nursery, including planting, watering, pruning, deadheading, mowing, edging, weeding, and mulching

Intern*June 2009–Dec. 2009*

Ecological Garden, UC Davis Agricultural Sustainability Institute, USA

- Created a garden map using AutoCAD
- Performed general maintenance for the integrity of established garden collections and ecological planting through watering, planting, weeding, irrigation, and pruning.

Intern*Apr. 2009–Dec. 2009*

UC Davis Arboretum and Public Garden, USA

- Maintained herbaceous and woody plants in several sections of the gardens, labelled plants, and kept records for plant evaluation
- Sorted the pictures of oak trees for a new illustrated plant book
- Sorted the specimen of oak trees

TEACHING EXPERIENCE

Instructor*Fall 2019, Spring 2020*

ABS314 Applied Plant Physiology, College of Integrative Sciences and Arts, Arizona State University

- Develop and revise curriculum and instructional materials
- Design assessments and rubrics aligned with learning outcomes
- Provide students constructive feedback on their assignments and presentations

Co-instructor*Fall 2018*

PLB 203 Biology of Plants, Department of Plant Biology, Michigan State University

- Collaborate with teaching faculty in a team-teaching format
- Develop and revise curriculum and instructional materials
- Design assessments and rubrics aligned with learning outcomes
- Provide students constructive feedback on their assignments and presentations

Reviewer for FIRST IV Faculty Videos*May 2017–Aug. 2018*

Yujin Park – CV, page 2

Department of Plant Biology, Michigan State University

- Participate on a review team for a longitudinal NSF-funded study about early career biology faculty teaching

Guest Lecturer

Department of Horticulture, Michigan State University

- HRT 401 Physiology and Management of Herbaceous Plants *Jan. 2018*
 - Title: Effects of light quality on plant growth and development
- HRT 221 Greenhouse Structure and Management *Sept., Nov. 2018*
 - Title: Greenhouse benches
 - Title: Light management
- HRT 204 Plant Propagation *Mar. 2016, 2017, 2018*
 - Title: Growing seedlings indoors under light-emitting diode lighting

Department of Plant Biology, Michigan State University

- PLB 203 Biology of Plants *Nov. 2015, 2016*
 - Title: Plant circadian clock

Teaching Assistant

Department of Horticulture, Michigan State University

- HRT 221 Greenhouse Structure and Management *Fall 2017*
- HRT 204 Plant Propagation *Spring 2016*

Department of Horticultural Science, Seoul National University

- Home Horticulture *Spring, Fall 2011*

Teaching Fellowship

Sept. 2016–May 2017

Future Academic Scholars in Teaching Fellowship, Michigan State University

- Attended weekly meeting with fellowship recipients to discuss teaching and learning
- Conducted teaching research on active learning activities

Attendee

PLB802 Scientific Teaching Seminar

Fall 2015

- Discussed and developed instructional materials for introductory biology courses

PUBLICATIONS

Refereed Journal Publications and Conference Proceedings

- Zhang, M., **Y. Park**, and E.S. Runkle. (submitted). Regulation of extension growth and flowering of seedlings by blue radiation and the red to far-red ratio of sole-source lighting. *Sci. Hort.*
- Runkle, E.S., **Y. Park**, and Q. Meng. (submitted). High photosynthetic photon flux density can attenuate effects of light quality. *Acta Hort.*
- **Park, Y.** and E.S. Runkle. (accepted). Use of far-red radiation in sole-source lighting for floriculture crops. *Acta. Hort.*
- Runkle, E.S., Q. Meng, and **Y. Park**. 2019. LED applications in greenhouse and indoor production of horticultural crops. *Acta Hort.* 1263:17-30.
- **Park, Y.** and E.S. Runkle. 2019. Blue radiation attenuates the effects of the red to far-red ratio on extension growth but not on flowering. *Environ. Exp. Bot.* 103871.
- **Park, Y.** and E.S. Runkle. 2018. Spectral effects of light-emitting diodes on plant growth, visual color quality, and photosynthetic photon efficacy: White versus blue plus red radiation. *PLOS ONE* 13(8): e0202386.
- **Park, Y.** and E.S. Runkle. 2018. Far-red radiation and photosynthetic photon flux density independently regulate seedling growth but interactively regulate flowering. *Environ. Exp. Bot.* 155:206-216.

- **Park, Y.** and E.S. Runkle. 2017. Far-red radiation promotes growth of seedlings by increasing leaf expansion and whole-plant net assimilation. *Environ. Exp. Bot.* 136:41–49.
- **Park, Y.** and E.S. Runkle. 2016. Investigating the merit of including far-red radiation in the production of ornamental seedlings grown under sole-source lighting. *Acta Hort.* 1134:259–266.
- Kim, Y.J., **Y. Park**, and K.S. Kim. 2015. Night interruption promotes flowering and improves flower quality in *Doritaenopsis* Orchid. *Flower. Res. J.* 23:6–10.
- An, H.R, Kim, Y.J., **Y. Park**, and K.S. Kim. 2015. Night interruption promotes subsequent cut flower quality in *Cymbidium* ‘Red Fire’. *Hort. Environ. Biotechnol.* 56:455–461.
- Hong, Y.Y., **Y. Park**, Y.J. Kim, and K.S. Kim. 2014. Vegetative growth and flowering of *Salvia splendens* ‘Salsa’ in response to night interruption. *Kor. J. Hort. Sci. Technol.* 32:434–439.
- **Park, Y.**, Y.J. Kim, and K.S. Kim. 2013. Vegetative growth and flowering of *Dianthus*, *Zinnia*, and *Pelargonium* as affected by night interruption at different timings. *Hort. Environ. Biotechnol.* 54:236–242.

Research Abstracts

- **Park, Y.** and E.S. Runkle. 2019. Investigating the effects of duration and timing of far-red radiation treatments on seedling growth and subsequent flowering of floriculture transplants. *J. Amer. Soc. Hort. Sci.*
- **Park, Y.** and E.S. Runkle. 2019. Investigating the merit of including green and far-red radiation in plant growth of lettuce and tomato under sole-source lighting. *J. Amer. Soc. Hort. Sci.*
- **Park, Y.** and E.S. Runkle. 2018. Growth and subsequent flowering responses of annual bedding plants under sole-source lighting at least partly from white light-emitting diodes. *J. Amer. Soc. Hort. Sci.*
- **Park, Y.** and E.S. Runkle. 2018. Investigating the interactions between blue and far-red radiation in growth of ornamental seedlings under sole-source lighting. *J. Amer. Soc. Hort. Sci.*
- **Park, Y.** and D. Ebert-May. 2018. Effects of active learning activities on student engagement with science practices. *North American College Teachers Agr. J.* 62 (Suppl. I): 111
- **Park, Y.**, and E.S. Runkle. 2015. Quantifying growth responses of high-value ornamental seedlings to red to far-red light. *J. Amer. Soc. Hort. Sci.*
- **Park, Y.**, and E.S. Runkle. 2015. Growing high-value ornamental seedlings under white light-emitting diodes. *J. Amer. Soc. Hort. Sci.*
- Hong, Y.Y., **Y. Park**, H.B. Lee, and K.S. Kim. 2014. Photosynthesis and vegetative growth of *Phalaenopsis* ‘Hwasu 3551’ and ‘White-Red Lip’ in response to low temperature during nursery cultivation. *J. Amer. Soc. Hort. Sci.* 94.
- **Park, Y.**, Hong, Y.Y., and K.S. Kim. 2014. Influence of different light intensity of night interruption on vegetative growth in cordyline, epipremnum, and hoya. *Kor. J. Hort. Sci. Technol.* 32 (Suppl. I):169.
- Hong, Y.Y., **Y. Park**, H.B. Lee, and K.S. Kim. 2014. Long-term effects of low temperature on vegetative growth and photosynthesis of *Phalaenopsis* ‘Hwasu 3551’ and ‘White-red Lip’ during the nursery cultivation. *Kor. J. Hort. Sci. Technol.* 32 (Suppl. I):52.
- Hong, Y.Y., **Y. Park**, Y.J. Kim, and K.S. Kim. 2013. Photosynthetic characteristics of *Phalaenopsis* ‘Hwasu 3551’ and ‘White Red Lip’. *Kor. J. Hort. Sci. Technol.* 31 (Suppl. II):152.
- Hong, Y.Y., **Y. Park**, Y.J. Kim, and K.S. Kim. 2013. Vegetative growth and flowering of *Salvia splendens* ‘Salsa’ in response to different night interruption application timings. *Kor. J. Hort. Sci. Technol.* 31 (Suppl. I):148.
- **Park, Y.**, Y.J. Kim, and K.S. Kim. 2012. Vegetative growth and flowering of three herbaceous plants under different timing of night interruption. *Kor. J. Hort. Sci. Technol.* 30 (Suppl. II):44.
- Kim, Y.J., **Y. Park**, and K.S. Kim. 2012. Night interruption promotes flowering and improves flower quality in four *Doritaenopsis* orchid. *Kor. J. Hort. Sci. Technol.* 30 (Suppl. I):151.
- An, H. R., **Y. Park**, Y. J. Kim, and K.S. Kim. 2012. Flower quality and anthocyanin

concentration increased in *Cymbidium* under night interruption condition. Kor. J. Hort. Sci. Technol. 30 (Suppl. I):150.

- **Park, Y.**, Y.J. Kim, and K.S. Kim. 2012. Influence of different timing of night interruption on vegetative growth and flowering of three herbaceous plants. Kor. J. Hort. Sci. Technol. 30 (Suppl. I):148.

Extension Articles

- Zhang, M., **Y. Park**, and E.S. Runkle. 2019. A little far-red light goes a long way. *GrowerTalks* 82(13):58–61.
- **Park, Y.** and E.S. Runkle. 2019. LEDs: Blue & Far-red light. *GrowerTalks* 82(12):58–60.
- **Park, Y.** and E.S. Runkle. 2019. LEDs: Far red & light intensity interaction. *GrowerTalks* 82(11):54–57.
- Runkle, E.S., **Y. Park**, M. Zhang, and P. Fisher. 2019. Lighting young plants indoors. *GrowerTalks* 82(10):58-60.
- **Park, Y.** and E.S. Runkle. 2016. Red light spectrum. *GrowerTalks* 80:68–72.
- **Park, Y.** and E.S. Runkle. 2018. Growing ornamental seedlings under white LEDs. *Greenhouse Grower*

HONORS AND AWARDS

American Floral Endowment Travel Grant (\$100)	<i>Aug. 2018</i>
ASHS Controlled Environment Working Group Graduate Student Oral Competition, Third Place	<i>Aug. 2018</i>
MSU Graduate School Travel Funding (\$425)	<i>Mar. 2018</i>
NACTA-CHS Foundation Travel Grant (\$500)	<i>Mar. 2018</i>
Greenhouse Product News Magazine Top 40 Under 40	<i>Feb. 2018</i>
Horticultural Organization of Graduate Students Travel Grant (\$300)	<i>May 2017</i>
Future Academic Scholars in Teaching Fellowship (\$2,000)	<i>June 2016</i>
John L. Arend Excellence in Graduate Student Research Scholarship (\$1,200)	<i>May 2016</i>
ASHS Graduate Ph.D. Student Poster Competition Second Place (\$200)	<i>Aug. 2015</i>
ASHS Travel Grant (\$500)	<i>June 2015</i>
NCERA-101 Travel Grant (\$300)	<i>Mar. 2015</i>
MSU Graduate Office Fellowship in the Department of Horticulture (\$2,000)	<i>Feb. 2015</i>
John L. Arend Excellence in Graduate Student Research Scholarship (\$2,500)	<i>Jan. 2015</i>
Annual Conference of the Korean Society for Horticultural Science Outstanding Award of Oral Presentation	<i>Oct. 2012</i>
University Fellowship, Seoul National University	<i>2012</i>
Outstanding Award of Good Engineering Design, Yonsei University	<i>2010</i>
Highest Honors, Yonsei University	<i>2010</i>
High Honors, Yonsei University	<i>2007–2008</i>
University Fellowship, Yonsei University	<i>2006–2010</i>

PROFESSIONAL PRESENTATIONS

2020

USDA-ARS, US Arid-Land Agricultural Research Center Seminar, Maricopa, AZ

Oral presentation: Manipulating the radiation spectrum to improve horticultural crop quality in controlled environments

2019

Identifying Emerging Opportunities for Arizona Agriculture Workshop, Mesa, AZ

Oral presentation: Controlling the light spectrum to improve quality of crops and production efficiency in controlled environments

American Society for Horticultural Science Annual Conference, Las Vegas, NV

Oral presentation: Investigating the effects of duration and timing of far-red radiation treatments

on seedling growth and subsequent flowering of floriculture transplants

Oral presentation: Investigating the merit of including green and far-red radiation in plant growth of lettuce and tomato under sole-source lighting

2018

Floriculture Research Alliance Annual Meeting, Minneapolis, MN

Poster presentation: Green radiation has little effect on stem elongation and flowering in floriculture seedlings

American Society for Horticultural Science Annual Conference, Washington DC

Oral presentation: Growth and subsequent flowering responses of annual bedding plants under sole-source lighting at least partly from white light-emitting diodes

Oral presentation: Investigating the interactions between blue and far-red radiation in growth of ornamental seedlings under sole-source lighting

North American Colleges and Teachers of Agricultural Annual Conference, Ames, IA

Poster presentation: Effects of active learning activities on student engagement with science practices

Michiana Vegetable, Fruit & Flower Growers Meeting, Goshen, IN

Oral presentation: Growing floriculture seedlings indoors under LED lighting

Michigan State University Plant Science Recruitment Week, East Lansing, MI

Poster presentation: Blue radiation attenuates the effects of far-red radiation on extension growth but has little effect on flowering

2017

Great Lakes Fruit, Vegetable and Farm Market and Michigan Greenhouse Growers Expo, Grand Rapids, MI

Oral presentation: Benefits of including far-red light in the production of floriculture plugs

Floriculture Research Alliance Annual Meeting, Portsmouth, NH

Poster presentation: Blue radiation attenuates the effects of far-red radiation on extension growth but has little effect on flowering

Greensys 2017, Beijing, China

Oral presentation: Investigating the interaction between photosynthetic photon flux density and far-red radiation in petunia seedlings under sole-source lighting

Future Academic Scholars in Teaching Symposium, East Lansing, MI

Oral presentation: Effects of active learning activities on student engagement with science practices

All-Network Teaching-As-Research Event, Center for the Integration of Research, Teaching, & Learning, East Lansing, MI

Oral presentation: Effects of active learning activities on student engagement with science practices

Teaching Fellows Networking Event, East Lansing, MI

Poster presentation: Effects of active learning activities on student engagement with science practices

Committee on Controlled Environment Technology & Use (NCERA-101) regional working group annual meeting, Monterey, CA

Oral presentation: Blue radiation reduces the effects of far-red radiation on extension growth but not on flowering promotion

15th Annual Michigan State University Plant Science Graduate Student Research Symposium, East Lansing, MI

Poster presentation: Blue radiation attenuates the effects of far-red radiation on extension growth but has little effect on flowering

9th Annual Michigan State University Graduate Academic Conference, East Lansing, MI

Poster presentation: Growing specialty crops indoors under light-emitting diode

Michigan State University lighting workshop, East Lansing, MI

Oral presentation: Sole-source lighting

Poster presentation: Growing high-value ornamental seedlings under light-emitting diodes

Southeast Greenhouse Growers Day, East Earl, PA

Oral presentation: LED lighting systems

Oral presentation: Light and temperature monitoring in controlled environment system

2016

8th International Symposium on Light in Horticulture, East Lansing, MI

Oral presentation: Investigating the merit of including far-red radiation in the production of ornamental seedlings grown under sole-source lighting

14th Annual Michigan State University Plant Science Graduate Student Research Symposium East Lansing, MI

Oral presentation: Quantifying the merit of using far-red radiation in ornamental seedling production with sole-source lighting from light-emitting diodes

2015

Great Lakes Fruit, Vegetable and Farm Market and Michigan Greenhouse Growers Expo, Grand Rapids, MI

Oral presentation: The effectiveness of white light-emitting diodes (LEDs) for indoor production of bedding plant plugs

American Society for Horticultural Science annual conference, New Orleans, LA

Poster presentation: Quantifying growth responses of high-value ornamental seedlings to red to far-red light

Poster presentation: Growing high-value ornamental seedlings under white light-emitting diodes

Committee on Controlled Environment Technology & Use (NCERA-101) regional working group annual meeting, Columbus, OH

Poster presentation: Quantifying growth responses of high-value ornamental seedlings to red to far-red light

2014

American Society for Horticultural Science annual conference, Orland, FL

Poster presentation: Photosynthesis and vegetative growth of *Phalaenopsis* ‘Hwasu 3551’ and ‘White-Red Lip’ in response to low temperature during nursery cultivation

SCIENCE OUTREACH

Native American High School Student Events, Michigan State University *June 2018*

- Gave a mini-lecture about horticulture and the careers in horticulture
- Engaged students in hands-on activities to observe a variety of horticultural crops

Fascination of Plants Day, Michigan State University *May 2017, 2018*

- Engaged students and general public in hands-on activities to identify floricultural crops and to quantify the color of flowers and leaves

Middle School Girls Math and Science Day, Michigan State University *Mar. 2015, 2017, 2018*

- Gave a mini-lecture on horticultural crops and plant pigments
- Engaged middle school students in hands-on activities to quantify the color of plants

MSU NSF STEM-FEE Academy, Everett High School, Lansing, MI *Apr. 2018*

- Gave a mini-lecture on popular bedding plants, flower color, and anthocyanin
- Engaged high school students in hands-on activities to quantify the color of flowers

Middle School Science Fairs, East Lansing & Lansing, MI *Apr., May 2015*
(Laingsburg Middle School, MacDonald Middle School, Lansing Charter Academy)

- Engaged students in hands-on activities to quantify the color of flowers and leaves

MSU Science Festival, Michigan State University *Apr. 2018*

- Gave a mini-lecture about vertical farming

MSU Alumni Association Grandparents University, Michigan State University *June 2017*

- Taught kids ages 8 to 12 and their grandparents about DNA in hands-on activities

SERVICE ACTIVITIES

Reviewer

May 2018–present

- Horticulture, Environment, and Biotechnology (10)
- Environmental and Experimental Botany (1)
- Agronomy (2)
- Journal of the American Society for Horticultural Science (1)

Leader

Dec. 2016–present

The HortReport (a monthly newsletter for the Department of Horticulture), Michigan State University

- Organize monthly meetings
- Plan and write articles in the newsletter

Professional Development Chair

Sept. 2017–May 2018

Horticultural Organization of Graduate Students, Michigan State University

- Hosted a department seminar entitled “Hops in Florida? An Unexpected Journey into a New Academic Program” and a career development workshop with invited speaker Dr. Brian J. Pearson of the University of Florida

Co-chair

Sept. 2016–May 2017

Horticultural Organization of Graduate Students, Michigan State University

- Held a monthly meeting and hosted the 15th Annual Michigan State University Plant Science Graduate Student Research Symposium with committees

Social Chair

Sept. 2014–May 2016

Horticultural Organization of Graduate Students, Michigan State University

- Organized monthly social events for graduate students and managed Facebook webpage

Social Event Committee

Sept. 2015 –Sept. 2017

Department of Horticulture, Michigan State University

- Organized social activities for departmental staff, faculty, and students

Judge

Apr. 2015, 2016, 2017

University Undergraduate Research and Arts Forum, Michigan State University

- Judged undergraduate poster presentation in the plant science field

VOLUNTEERING

MSU Horticulture Student Plant Sale

Apr. 2014–2017

- Sold plants to fundraise for the student organization

Lansing Home and Garden Show

Mar. 2014–2017

- Promoted the spring plant sale event

8th International Symposium on Light in Horticulture

May 2016

- Organized registration and AV, and moderated scientific sessions and tours

MSU Global Day of Service

Apr. 2016

- Worked as a team to clean up the North School Garden, a community garden associated with the Greater Lansing Food Bank that gives people a place to grow their own food

MSU Science Festival

Apr. 2015

- Served as a school guide volunteer to help incoming school groups find the location of their presentations, places to eat lunch, and provide a warm welcome to the MSU campus