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Education:

- Ph.D., Plant Breeding, Cornell University (minor: Plant Molecular Biology and Plant Pathology), Ithaca, NY
- B.S., Plant Breeding, Faculty of Agriculture, Gadjah Mada University, Indonesia

Professional Preparation and Appointment:

- Associate Professor, Dept. of Soil and Crop Sciences, Texas A&M University, 2018-present
- Assistant Professor, Dept. of Soil and Crop Sciences, Texas A&M University, 2015-2018
- Adjunct Associate Professor/ Adjunct Professor, University of the Philippines Los Baños, 2009-2020
- Scientist/Senior Scientist, International Rice Research Institute (IRRI), Philippines, 2009-2015
- Post-doctoral Research Fellow, IRRI, Philippines, 2005-2008
- Scientist, Indonesian Center for Agricultural Biotechnology and Genetic Resources (ICABIOGRAD), 2003-2005
- Post-doctoral Research Fellow, Cornell University, Ithaca, New York, 2002-2003

Courses Taught:

- Crop Stress Management (SCSC 402), Biotechnology for Crop Improvement (SCSC/MEPS/GENE/ 411), and Analysis of Complex Genomes (SCSC 654 700—distance section)

Synergistic Activities/Professional Service:

- Associate Editor: International Journal of Molecular Science (2021-present), The Crop Journal (2020-present), and Crop Science Journal (2017-present)
- Grant review panel (USDA-NIFA, AFRI Foundational)
- Member: Crop Science Society of America (CSSA), American Society of Plant Biologist (ASPB), National Association of Plant Breeders (NAPB), International Society of Plant Anaerobiosis (ISPA), and Society for the Advancement of Breeding Research in Asia and Oceania (SABRAO, Life Member)

Research supervision:

- PhD: Advisor (9→ 6 graduated, 3 ongoing); Committee member (8→ 5 graduated; 3 ongoing)
- MS: Advisor (10→ 7 graduated, 3 ongoing); Committee member (8 → 7 graduated, 1 ongoing)
- 4 Post-doctoral Research Fellows (3 supervised)

Honor/Awards:

- Crop Science Outstanding Associate Editor (**2020**).
- Plaque of recognition from IRRI for an outstanding contribution to the development of flood tolerance research in rice through the work on genetics and breeding (**2015**).
- Plaque of appreciation from IRRI STRASA project for invaluable contribution to rice research and development of flood-prone areas of South Asia and Africa (**2015**)
- The Rockefeller Foundation PhD scholarship

Selected publications (total of 67 peer-reviewed journal articles, 5 book chapters, 165 published abstracts):

1. Biswas, S., M., O. Ibarra, M. Shaphek, M. Molina-Risco, M. Faion-Molina, M.J. Thomson, **E.M. Septiningsih**. 2022. Increasing the level of resistant starch in the rice cultivar Presidio through multiplex CRISPR-Cas9 gene editing of starch branching enzyme genes. *The Plant Genome*. DOI: 10.1002/tpg2.20225 (*in press*)
2. S. Higgins, S. Biswas, N.K. Goff, **E.M. Septiningsih**, Kurouski, D. 2022. Raman spectroscopy enables non-invasive and confirmatory diagnostics of aluminum and iron toxicities in rice. *Frontiers in Plant Science*. <https://doi.org/10.3389/fpls.2022.754735>
3. Dunbar, T., N. Tsakirpaloglou, **E.M. Septiningsih**, M.J. Thomson. 2022. Carbon nanotube-mediated plasmid DNA delivery in rice leaves and seeds. *International Journal of Molecular Sciences*. 2022, 23(8), 4081; <https://doi.org/10.3390/ijms23084081>
4. Biswas, S., N. Wahls, M.J. Thomson, J.M. Cason, B.F. McCutchen, **E.M. Septiningsih**. 2022. Optimization of protoplast isolation and transformation for a pilot study of genome editing system in peanut by targeting the allergen gene Ara h 2. *International Journal for Molecular Sciences*. 2022, 23(2), 837; <https://doi.org/10.3390/ijms23020837>

5. Liang, Y., S. Biswas, B. Kim, J. Bailey-Serres, **E.M. Septiningsih**. 2021. Improved transformation and regeneration of *indica* rice: disruption of *SUB1A* as a test case via CRISPR-Cas9. **International Journal of Molecular Sciences** 021, 22(13), 6989. <https://doi.org/10.3390/ijms22136989>
6. Liang, Y., R.E. Tabien, L. Tarpley, A.R. Mohammed, **E.M. Septiningsih**. 2021. Transcriptome profiling of two rice genotypes under mild field drought stress during grain-filling stage. **AoB Plants**, , 13(4), p.plab043. <https://doi.org/10.1093/aobpla/plab043>
7. Tnani, H., D Chebotarov, R. Thapa, J.C.I. Ignacio, W.K. Israel, S. Dixit, **E.M. Septiningsih**, T. Kretzschmar. 2021. Enriched-GWAS and transcriptome analysis to refine and characterize a major QTL for anaerobic germination tolerance in rice. **International Journal of Molecular Sciences**. 2021, 22, 4445. <https://doi.org/10.3390/ijms22094445>
8. Ignacio, J.C.I., M. Zaidem, C. Casal, S. Dixit, T. Kretzschmar, J.M. Samaniego, M.S. Mendiolo, D. Weigel, **E.M. Septiningsih**. 2021. Genetic mapping by sequencing more precisely detects loci responsible for anaerobic germination tolerance in Rice. **Plants**, 10(4), p.705. <https://doi.org/10.3390/plants10040705>
9. Kim, B., R. Piao, G. Lee, E. Koh, Y. Lee, S. Woo, W. Jiang, **E.M. Septiningsih**, M.J. Thomson, H.J. Koh. 2021. OsCOP1 regulates embryo development and flavonoid biosynthesis in rice (*Oryza sativa* L.). **Theoretical and Applied Genetics**, pp.1-15. <https://doi.org/10.1007/s00122-021-03844-9>
10. Liang, Y., S. Wang, C.L. Harper, N.K. Subramanian, R.E. Tabien, C.D. Johnson, J. Bailey-Serres, **E.M. Septiningsih**. 2021. Reference-guided de novo genome assembly to dissect a QTL region for submergence tolerance derived from Ciherang-Sub1. **Plants**. 2021, 10(12), p.2740. <https://doi.org/10.3390/plants10122740>
11. Thapa, R., R.E. Tabien, M.J. Thomson, **E.M. Septiningsih**. 2020. Genome-wide association mapping to identify genetic loci for cold tolerance and cold recovery during germination in rice. **Frontiers in Genetics**. 11:22. <https://doi.org/10.3389/fgene.2020.00022>
12. Sanchez, L. A. Ermolenkov, S. Biswas, **E.M. Septiningsih**, D. Kourouski. 2020. Raman spectroscopy enables non-invasive and confirmatory diagnostics of salinity stresses, nitrogen, phosphorus, and potassium deficiencies in rice. **Frontier in Plant Science**. <https://doi.org/10.3389/fpls.2020.573321>
13. Schaarschmidt, S., A. Fischer, L.M. F. Lawas, R. Alam, **E. M. Septiningsih**, J.Bailey-Serres, S.V.K. Jagadish, B. Huettel, D.K. Hinch, E. Zuther. 2020. Utilizing PacBio Iso-Seq for novel transcript and gene discovery of abiotic stress responses in *Oryza sativa*. **International Journal of Molecular Sciences**. 2020, 21, 8148. <https://doi.org/10.3390/ijms21218148>
14. Mondal, S., F. Entila, M.I.R. Khan, M. G. Miah, S. Dixit, P.C.S. Cruz, M.P. Ali, B. Pittendrigh, **E.M. Septiningsih**, A.I. Ismail. 2020. Responses of AG1, AG2 QTLs and seed-pretreatment on growth and physiological process during anaerobic germination of rice under flooding. **Scientific Reports**. 10:10214. <https://doi.org/10.1038/s41598-020-67240-x>
15. Alam, R., M. Hummel, E. Young, A. Locke, Z. Jia, J.C.I. Ignacio, M.D. Baltazar, A. Ismail, **E.M. Septiningsih**, J. Bailey-Serres. 2020. The flooding resilience loci SUBMERGENCE1 and ANAROBIC GERMINATION1 interact in rice seedlings established underwater. **Plant Direct**. <https://doi.org/10.1002/pld3.240>
16. Singh, A., Y. Singh, A.K. Mahto, M. Negi, R. Singh, N. Yadav, A.K. Singh, P.K. Singh, R. Singh, **E.M. Septiningsih**, H.S. Balyan, N.K. Singh and V. Ray. 2020. Allelic sequence variation in the Sub1A, Sub1B and Sub1C genes among diverse rice cultivars and its association with submergence tolerance. **Scientific Reports**. 10: 8621. <https://doi.org/10.1038/s41598-020-65588-8>
17. Ghosal, S., F.A. Quilloy, C. Casal, **E.M. Septiningsih**, M.S. Mendiolo, S. Dixit. 2020. Trait based mapping to identify genetic factors underlying anaerobic germination of rice: Phenotyping, GXE and QTL mapping. **BMC Genetics**. <https://doi.org/10.1186/s12863-020-0808-y>.
18. **Septiningsih, E.M.**, D.J. Mackill. 2018. Genetics and breeding of flooding tolerance in rice. In: Sasaki, T., Ashikari, M. (eds.). **New Waves in Rice Genomics, Genetics, and Breeding**. Springer, Singapore, pp. 275-295. https://doi.org/10.1007/978-981-10-7461-5_15
19. Wilkins, O., S. Hafemeister, A. Plessis, M-M. Holloway-Philips, G. Pham, A. Nicotra, G. Gregorio, S.V. K. Jagadish, **E.M. Septiningsih**, R. Bonneau, M. Purugganan. 2016. EGRINs (Environmental gene regulatory influence networks) in rice that function in the response to water deficit, high temperature and agricultural environments. **Plant Cell** 28: 2365–2384. <https://doi.org/10.1105/tpc.16.00158>
20. Kretzschmar, T., M.A.F. Pelayo, K.R. Trijatmiko, L.F.M. Gabunada, R. Alam, R. Jimenez, M.S. Mendiolo, I.H. Slamet-Loedin, N. Sreenivasulu, J. Bailey-Serres, A.M. Ismail, D.J. Mackill, and **E.M. Septiningsih**. 2015. A trehalose-6-phosphate phosphatase enhances anaerobic germination tolerance in rice. **Nature Plants** 1(9). <https://doi.org/10.1038/nplants.2015.124>