천범석 (Beomseok Chun)
1997-06-30
Ph.D. student

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Ph. D. (Pursuing)
Biological and Agricultural Engineering

M. S. Agricultural Civil Engineering
Kyungpook National University, South Korea
(2022)

B. S. Agricultural Civil Engineering
Kyungpook National University, South Korea
(2020)

Research interests
- Soil health, Vadose zone hydrology, Soil carbon flux, Agricultural practices, Soil biogeochemistry, Remote sensing, Field monitoring

Award, scholarships & fellowships
- 2023 BAEN GSA Travel Awards
- 2021 The prize for Excellent Paper Presentation in 2021 Conference of the Korea Water Resources Association

Modeling Tools and Skills:
- Modeling Packages: DayCent, SWAT, SWAP, Noah-LSM, SEBAL, S-SEBI, CLUE, SWMM
- Modeling Skills : Genetic Algorithm, Data Assimilation, Deep Neural Network(DNN), Recurrent Neural Network(RNN), Long-Short Term Memory(LSTM)

Field Monitoring Tools and Skills:
- Measuring root zone soil moisture: Time Domain Reflectometry(TDR)
- Measuring root zone soil matric potential: MPS-6
- Soil surface carbon measurement: Soil CO_2 Flux Sensor, eosFD
- Ecosystem gas and energy flux measurement: Eddy-Covariance System

List of select publication
1. **Chun, B.**, T. Lee, K. Jeong, and Y. Shin (2022), Estimation and Spatial Distribution of Monthly FDSI Using AMSR2 Satellite Image-based Soil Moisture in South Korea, *Journal of the Korean Society of Agricultural Engineers,* 64(4), 31-43. doi:10.5389/KSAE.2022.64.4.031
2. **Chun, B.**, T. Lee, S. Kim, K. J. Lim, Y. Jung, J. W. Do, and Y. Shin (2021), Estimation of Optimal Training Period for the Deep-Learning LSTM Model to Forecast CMIP5-based

Streamflow, *Journal of the Korean Society of Agricultural Engineers,* 64(1), 39-50. doi:10.5389/KSAE.2022.64.1.039

3. Kim, S., T. Lee, **B. Chun**, Y. Jung, W. Jang, C. Sur, and Y. Shin (2020), Estimation of High-Resolution Soil Moisture Using Sentinel-1A/B SAR and Soil Moisture Data Assimilation Scheme, *Journal of the Korean Society of Agricultural Engineers,* 62(6), 11-20. doi:10.5389/KSAE.2020.62.6.011

4. **Chun, B.**, T. Lee, S. Kim, J. Kim, K. Jang, J. Chun, W. Jang, and Y. Shin (2020), Estimation of DNN-based Soil Moisture at Mountainous Regions, *Journal of the Korean Society of Agricultural Engineers,* 62(5), 93-103. doi:10.5389/KSAE.2020.62.5.093

5. Taehwa Lee, Won-seok Jang, **Beomseok Chun**, Mirza Junaid Ahmad, Younghun Jung, Jonggun Kim, and Yongchul Shin (2022), Development of Irrigation Schedule and Management Model for Sustaining Optimal Crop Production under Agricultural Drought, *Paddy and Water Environment,* 21(1), 31-45. doi:10.1007/s10333-022-00911-9