



Dr. Rafael Magallanes Quintanar



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Professional profile

I have directed and collaborated on projects on complex systems, climate change and plant nutrition. I have published several scientific articles indexed in the Journal Citation Reports (JCR) and participated in national and international conferences.

I have directed thesis of Bachelor's, Master's and Doctorate at the Universidad Autónoma de Zacatecas and other Institutions.

Education

- Ph.D. degree in Livestock Sciences from the Universidad Autónoma de Zacatecas (2000-2004).
- M.Sc. degree in irrigation and drainage from the Universidad Autónoma Agraria Antonio Narro (UAAAAN), Saltillo, Coahuila. (1989-1991).
- B.Sc. degree in Agriculture engineering from the Universidad Autónoma de Zacatecas (1981-1986)

Teaching

B. Sc. : Titular professor at computer engineering and software and engineering. Unidad Académica de Ingeniería Eléctrica.

- Numerical Methods
- Probability and Statistics



Achievements

- PRODEP Profile (SEP)
- National Researcher level I (CONACYT)

Research areas

- Climate change
- Complex systems
- Climatological time series

Research Projects

- Fractal analysis of climatological time series.
- Analysis of extreme temperatures in the state of Zacatecas.
- Climate change and standardized precipitation index for the state of Zacatecas.
- Application of artificial intelligence models for the prediction of the SPI standardized precipitation index for the state of Zacatecas.

Recent published papers

Cattle Grazing Exclusion Increases Basal, Crown and Mulch Cover in the Sierra de los Órganos National Park, Sombrerete, Zacatecas, Mexico. Valdez-Cepeda, R. D., Blanco-Macías, F., Ruiz-Garduño, R. R., & Magallanes-Quintanar, R. (2021). *Agroproductividad*, 14(1).

Automatic Evaluation of Heart Condition According to the Sounds Emitted and Implementing Six Classification Methods. Soto-Murillo, M. A., Galván-Tejada, J. I., Galván-Tejada, C. E., Celaya-Padilla, J. M., Luna-García, H., Magallanes-Quintanar, R., & Gamboa-Rosales, H. (2021, March). In *Healthcare* (Vol. 9, No. 3, p. 317). Multidisciplinary Digital Publishing Institute.

Rendimiento y calidad de ácido carmínico de dactylopius coccus costa en diferentes alturas de la nopaloteca. Alvarado, J. R. Z., Robles, C. L. T., Gallegos, S. D. J. M., Quintanar, R. M., & Pérez, G. A. (2020). *Agrociencia*, 54(5), 705-716.

Relationship between precipitation anomalies and multivariate ENSO index through wavelet coherence analysis. Valdez-Cepeda, R. D., Galván-Tejada, C. E., Galván-Tejada, J. I., Medina-García, G., Blanco-Macías, F., Méndez-Gallegos, S. D. J., & Magallanes-Quintanar, R. (2020). *Atmosfera*, 33(3), 285-299.