



## Scott Ganson

CCM

### Meteorologist

#### Department

Engineering Services

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#### Locations

Kansas City, MO

## Biography

Scott Ganson has 17 years of experience writing and developing radar meteorology algorithms. He specializes in polarimetric weather radar and hail detection using various weather radar systems, including mobile, airborne, and surface-based radars. With a fundamental background in meteorology and specifically storm-scale microphysics, Scott has been able to combine years of software engineering experience with his passion for meteorology. During this time, he has authored, co-authored, and presented this work at numerous scientific conferences both domestically and internationally. Now, bringing this core expertise to work alongside engineers & consultants at YAES, Scott can bring an interdisciplinary perspective to forensic meteorology and engineering.

## Credentials

- CCM | Certified Consulting Meteorologist (#784)
- Passed Physiological Training certification from Civil Aerospace Medical Institute (CAMI)

## Representative Consulting Assignments

- Commercial Buildings | Hail | Numerous assessments to determine if and what size hail affected the building. Often these assessments included wind assessment to determine prevailing wind direction and maximum gust.
- Residential Structures | Hail | Numerous assessments to determine if and what size hail affected the building. Often these assessments included wind assessment to determine prevailing wind direction and maximum gust.
- Construction Sites | Rainfall | Assessment for how much rain affected an ongoing construction site as well as prevailing wind direction and speed.
- Historical building | Snowfall | Assessment to determine ground-level snow pack to aid in evaluations of snow-loading effect on historical structure.

## Professional Experience

- 2023 - Current | Meteorologist | YA Engineering Services
- 2023 - Current | Owner | Ganson Weather Group (GWG)
- 2023 - 2023 | Principal Product Architect | Verisk Weather Solutions
- 2021 - 2023 | Director, Software Engineering | Verisk Weather Solutions
- 2018 - 2021 | Senior Software Engineer | Verisk Weather Solutions
- 2015 - 2018 | Senior Software Engineer | Garmin International
- 2012 - 2015 | Software Engineer (GS12-4) | NEXRAD Radar Operations Center
- 2011 - 2012 | Software Engineer | Centuria Corporation, Contractor for NEXRAD Radar Operations Center
- 2008 - 2012 | Research Assistant | Cooperative Institute for Mesoscale Meteorological Studies (CIMMS), now Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO)
- 2006 - 2011 | Senior Software Engineer | Weather Decision

## Area of Practice

- Forensic Meteorology
- Litigation Support

## Publications and Presentations

- 2012 - Ganson, S. M., Investigations of polarimetric radar characteristics using advanced T-matrix computations, M.S. thesis, School of Meteorology, The University of Oklahoma, 73 pp
- 2011 - Kumjian, M. R., A.V. Ryzhkov, J. Krause, J.C. Picca, and S. M. Ganson, Hail size discrimination for polarimetric WSR-88D radars, Extended Abstracts, 27th Conf. on Interactive Information Processing Systems, Amer. Met. Soc., Seattle, WA, 14.2
- 2011 - Kumjian, M. R., A. V. Ryzhkov, S. Ganson, A. Khain, Quantification of errors in polarimetric radar variables simulated from bulk microphysics parameterizations, 35th Conf. on Radar Meteorology, Amer. Met. Soc., Pittsburgh, PA, 8A.6
- Kumjian, M., J. Picca, S. Ganson, A. Ryzhkov, D. Zrnić, Kumjian, M., J. Picca, S. Ganson, A. Ryzhkov, D. Zrnić., NSSL Tech. Note, 12pp
- 2012 - Kumjian, M. R., S. M. Ganson, and A. V. Ryzhkov, Freezing of raindrops in deep convective updrafts: Polarimetric and microphysical model, J. Atmos. Sci., 69, 3471–3490
- 2010 - Kumjian, M. R., S. M. Ganson, A. V. Ryzhkov, Polarimetric characteristics of freezing drops: Theoretical model and observations, 6th Eur. Conf. On Radar Meteorology and Hydrology, Sibiu, Romania
- 2010 - Kumjian, M. R., S. M. Ganson, J. Krause, J. C. Picca, and A. V. Ryzhkov, Polarimetric radar characteristics of large hail, 25th Conf. on Severe Local Storms, Amer. Met. Soc., Denver, CO, 11.2
- 2011 - Porter, C. W., S. Ganson, W. Ladwig, B. Clarke, Implementation of a hydrometeor classification algorithm for consumer-oriented dual-polarization radar products, Extended Abstracts, 27th Conf. on Interactive Information Processing Systems, Amer. Met. Soc., Seattle, WA, 14.6
- Ryzhkov, A., D. Zrnic, J. Krause, M. Kumjian, S. Ganson, Discrimination between large and small hail, NSSL Tech. Note, 18pp
- 2013 - Ryzhkov, A. V., M. R. Kumjian, S. M. Ganson, A. P. Khain, 2013a, Climatol, Polarimetric radar characteristics of melting hail. Part I: Theoretical simulations using spectral microphysical modeling, J. Appl. Meteor, 52, 2849–2870
- doi: - Ryzhkov, A. V., M. R. Kumjian, S. M. Ganson, and P. Zhang, 2013b, Climatol, Polarimetric radar characteristics of melting hail, Part II: Practical implications. J. Appl. Meteor, 52, 2871–2886
- 2009 - Ryzhkov, A. V., S. Ganson, A. Khain, M. Pinsky, and A. Pokrovsky, Polarimetric characteristics of melting hail at S and C bands, Preprints, 34th Conf. on Radar Meteorology, Amer. Met. Soc., Williamsburg, VA, 4A.6
- 2012 - Ryzhkov, A. V., S. Ganson, M. Kumjian, R. Kaltenboeck, Polarimetric characteristics of dry and melting hail at different radar wavelengths, Preprints, 7th Eur. Conf. on Radar Meteorology and Hydrology, Toulouse, France
- 2011 - VandenHeuvel, D., C. Goering, C. Barrere, S. Ganson, W. Ladwig, M. Eilts, and B. Shaw, SWARM: A highly-scalable WMS and tile-based weather image solution, 27th Conf. on Interactive Information Processing Systems, Amer. Met. Soc., Seattle, WA, 12A.4
- Ganson, S.M., Applying computer science to real world problems through

distributed and performance computing, University of Oklahoma Computer Science Department

- 2008 - Ganson, S., J. T. Johnson, Challenges of displaying dynamic weather content in interactive mapping solutions, 88th Annual Conf, Amer. Met. Soc., New Orleans, LA
- 2015 - Ganson, S. M., M. R. Kumjian, Quantifying the relationship between the ZDR arc signature and low-level vertical wind shear, 37th Conf. on Radar Meteorology, Amer. Met. Soc., Norman, OK, 13B.6
- 2019 - Guy, N., S. M. Ganson, Research to operations: Establishing a next generation hail size estimation algorithm, 39th Intl. Conf. on Radar Meteorology, Amer. Met. Soc., Nara, Japan, 7A-04
- 2023 - Ganson, S.M.,, GWG Projector: First Steps Toward an Operational Polarimetric Radar Forward Operator, 40th Conf. on Radar Meteorology, Amer. Met. Soc., Minneapolis, MN, 164

## Education

- The University of Oklahoma - Master of Science - Meteorology - Norman - Oklahoma
- The University of Oklahoma - Bachelor of Science - Meteorology - Norman - Oklahoma

## Affiliations

- American Meteorological Society
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