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**Global Systems Laboratory**

# Global Systems Laboratory Explorer

Happy Spring! The stories listed here were posted on the [GSL News page](#) during the past three months and reflect the work of GSL federal, Cooperative Institute for Research in the Atmosphere (CIRA), Cooperative Institute for Research in Environmental Sciences (CIRES), contract staff, and other partners. Enjoy!

[Visit our Website](#)

## 2022 Women's History Month at GSL

In honor of the 2022 Women's History Month, we asked five GSL scientists about their career paths and what they are most proud of.



Meet GSL/CIRES software engineer, computer scientist, and meteorologist **Christina Holt!** Christina is an expert in cloud computing and code management and has adopted a nomadic lifestyle to more effectively balance a life of travel, exploration, work, and family.

[Read Christina Holt's spotlight here.](#)



Meet GSL/CIRES scientist **Christina Kumler** working on machine learning projects in the Advanced Technology Division. Christina likes to run races on vacation and is trying to stay away from the cactus lining the route in this photo!

[Read Christina Kumler's spotlight here.](#)



Meet GSL's **Isidora Jankov**, Chief of GSL's Advanced Technology Division High-Performance Computing Branch. Isidora is one of four meteorologists in her family! She took a huge leap by leaving her home in Serbia to come to the U.S.

[Read Isidora's spotlight here.](#)



Meet GSL's **Ligia Bernardet**, Earth Prediction Advancement Division Deputy Chief. Ligia is a meteorologist and computer scientist from Brazil and once worked as a forecaster for a mudslide evacuation center.

[Read Ligia's spotlight here.](#)

Meet **Shan Sun**, Chief of GSL's Earth and Chemistry Modeling Branch in the Earth Prediction Advancement Division and is an expert in coupled ocean-atmosphere models for sub-seasonal to seasonal applications. She is from Qingdao, China and is the first in her family to study abroad.

[Read Shan's spotlight here.](#)



## Spotlight: NOAA Outstanding Publication Award



### Improvements to Lake-Effect Snow Forecasts Using a One-Way Air-Lake Model Coupling Approach

GSL scientists are co-authors on a publication in the AMS Journal of Hydrometeorology that has been awarded the 2021 NOAA Research Outstanding Publication - Weather.

[Read the full story here](#)

## The Marshall Fire: A NOAA Story Map

The historic Marshall firestorm destroyed the homes of



several GSL staff. This story map by NOAA Boulder illustrates some of the ways NOAA responds when disaster strikes. It also shows how the GSL- developed HRRR model accurately predicted extreme winds and was critical in the decision-making of the NOAA National Weather Service in Boulder.

[See the story map here.](#)

## Transitions to operations



### GSL releases Hydrology Hazard Simplification Phase I to NWS operations

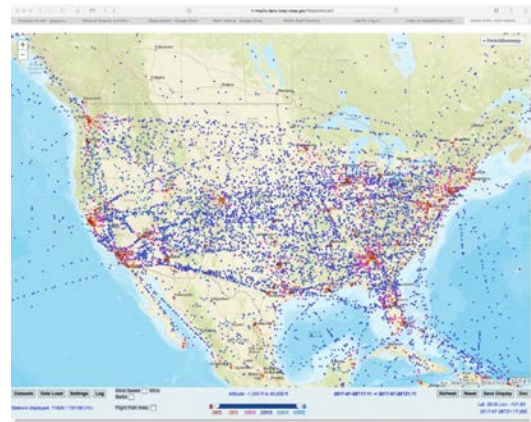
The GSL-developed Hazard Services “Hazard Simplification” Phase I messaging and consolidation process for hydrology hazards was activated at all NOAA National Weather Service (NWS sites) nationwide in November 2021 in collaboration with the NWS. Phase I includes updated messaging for river flooding, flash flooding, and area flooding.

[Full story here](#)

### GSL hands off a major MADIS release for September 2022 deployment

GSL’s Meteorological Assimilation and Data Ingest System (MADIS) team handed off MADIS version 4.0 code to NCEP Central Operations on January 29, 2022, with operational deployment scheduled for 30 September 2022.

[Read the full story here.](#)



### GSL experimental model simulates Hunga Tonga-Hunga Ha'apai eruption

After the Tonga volcano eruption, NOAA Global Systems Laboratory and CIRES scientists ran their experimental GEFS Aerosols model to simulate how and where aerosols emitted from the eruption would be carried by the wind over the next 12 days.

[Read the full story here.](#)

## Community Spotlight

### Reaching underserved communities with GSL's Science On a Sphere Explorer™

This month we stepped back to look at the bigger picture of how to inspire young people to pursue a career in STEM by sharing the following Q&A with GSL’s Deputy Director, Dr. DaNa Carlis, and SEM (Science, Engineering and Math) Executive Director, Tokiwa Smith.

[Read the full story here.](#)

