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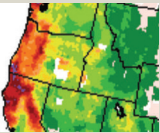
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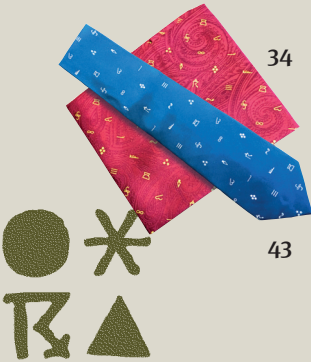
Bulletin of the American Meteorological Society
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FEATURES

29 **Machine learning can improve the entire NWP value chain**—from handling observations to issuing forecasts—but it requires great care in design and training.
BOUKABARA ET AL.



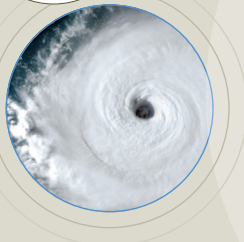
34 The **traditional symbols used in weather mapping** are deeply rooted in developments in art, science, technology, and international communication.
ROBERT HOUZE AND REBECCA HOUZE



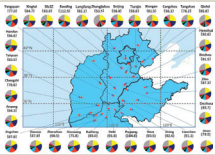
43 An inventory of historical instrumental records, many of them not yet digitized, points to **the potential of weather data rescue**.
BRÖNNIMANN ET AL.



48 In **seasonal outlooks** of Arctic sea ice and Atlantic hurricanes, **value is not just a matter of improving skill**.
CARON ET AL.



53 Observations help **clarify the composition, source, and formation of haze over the Northern China Plain**, where progress is being made to reduce particulate emissions.
DAO ET AL.



59 The advantages of **scorecard diagrams**—at-a-glance comparisons of performance—are **now extended to convection-allowing models**.
GALLO ET AL.



Prof. Zhang in summer 2019 in the prairie of Inner Mongolia—the region that inspired the famous poetry:

*The sky is like a dome
Covering the wild land.
The sky is a blue cast;
The grass extends vast.*

See “**Urban Haze in the North China Plain**”

PAGE 53

“Over the last two decades, China has been experiencing PM pollution due to the rapid growth of urbanization and industrialization. My initial interests were to develop new techniques to determine aerosol compositions and to identify potential sources of PM by a making a new approach, such as isotope techniques. I think my scientific results provide information for the Chinese government to make policies to improve air quality.”

— Yan-Lin Zhang, Nanjing University of Information Science and Technology



Photo credit: NOAA/NSSL/James Murnan

“I’ve always been interested in the weather since I grew up in an area that got lake-effect snows every winter. I was also afraid of storms when I was very young, which prompted me to learn as much as I could about them. I became fascinated by those same storms, which led to my pursuing severe storms meteorology as a career.

I became interested in verification through my work in the Spring Forecasting Experiment. The blending of the subjective evaluations provided by participants with objective metrics shows many different angles to how a forecast can be ‘good.’”

— Burkely T. Gallo, CIMMS/Univ. of Oklahoma and NOAA/NWS/Storm Prediction Center.
See “**Scorecards for Convection-Allowing Models**.”

PAGE 59