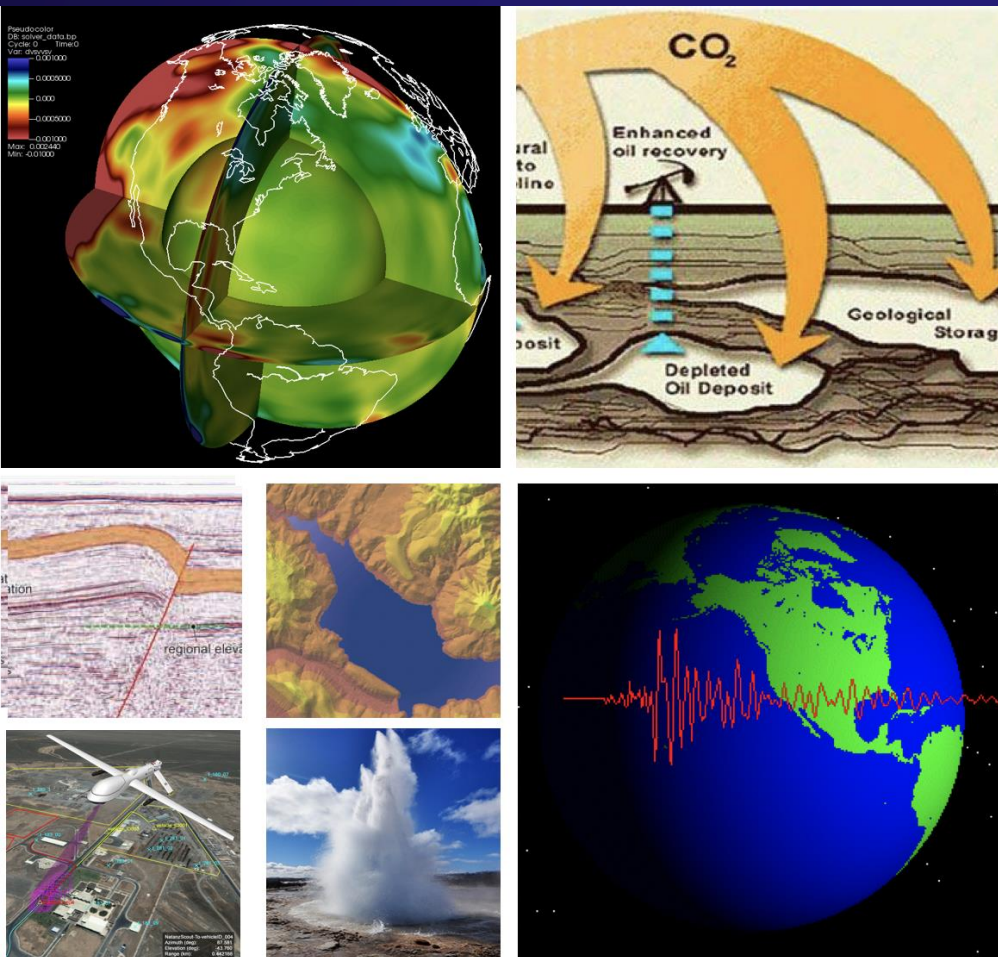


Multi-physics Data Fusion for Subsurface Applications

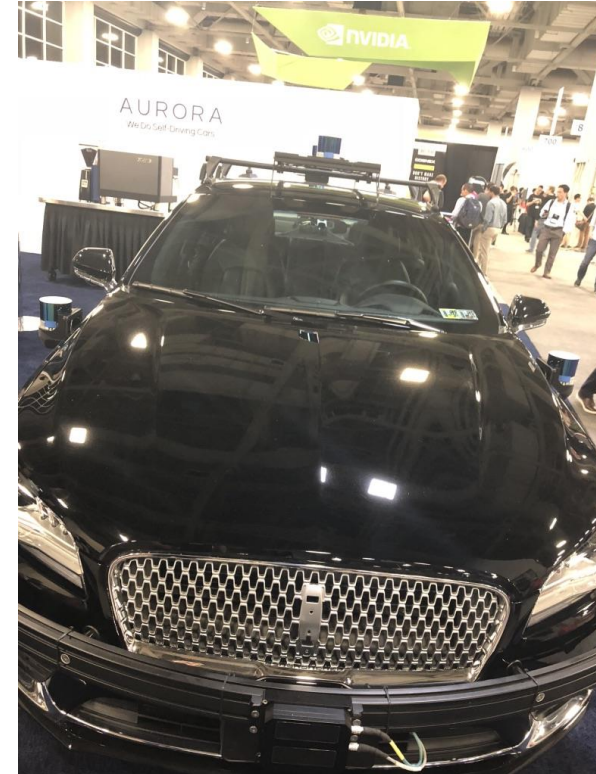


Youzuo Lin, Andrew Delorey, Dylan Harp,
Paul Johnson, Satish Karra, Dan O'Malley,
Rajesh Pawar, Emily Schultz-Fellenz,
Monty Vesselinov, George Guthrie

Earth and Environment Sciences Division
Los Alamos National Laboratory

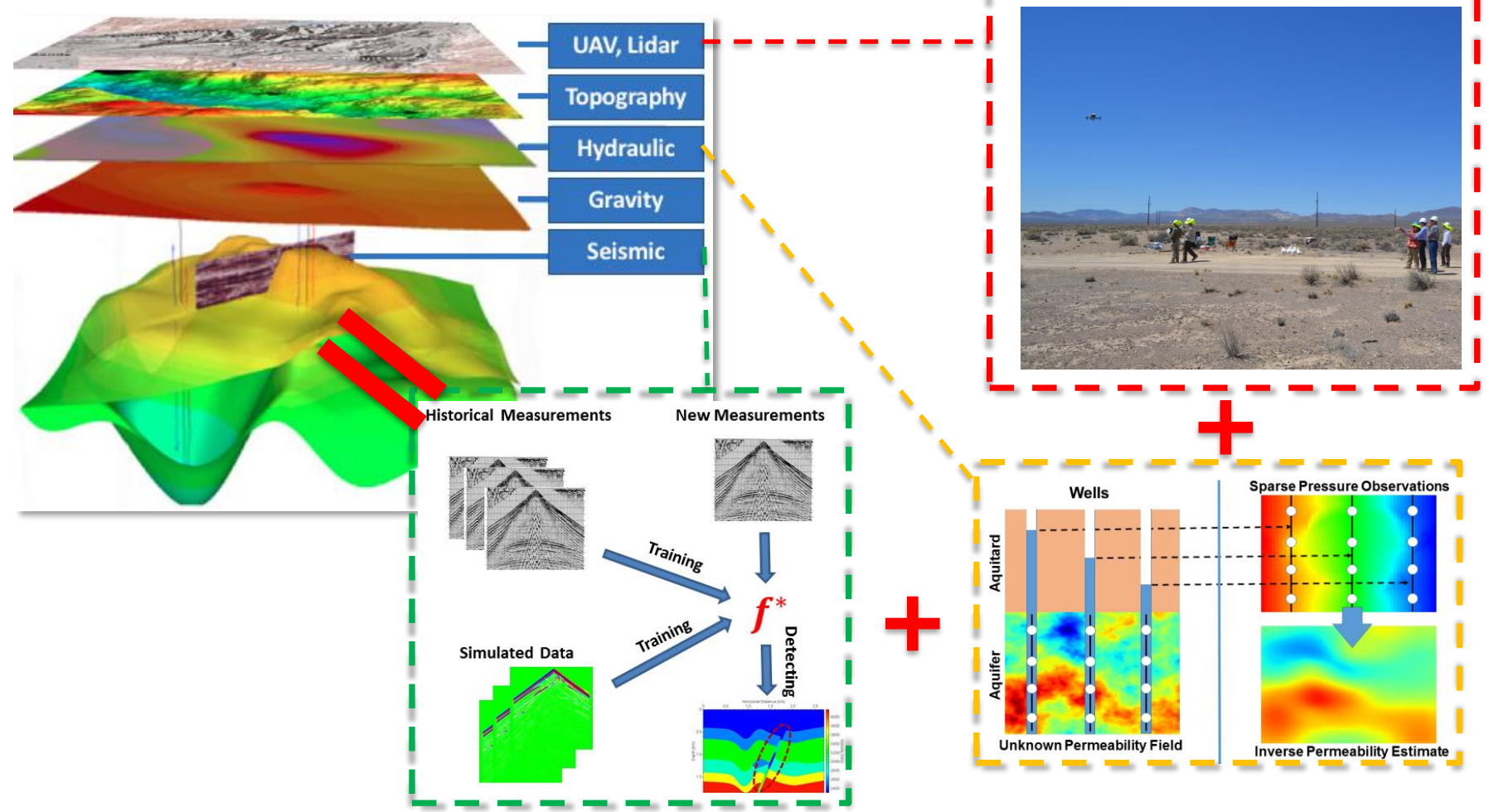
Autonomous Vehicle In Industry

Pictures Taken at Computer Vision and Pattern Recognition (CVPR) Conference 2018



Data Fusion is the Key to Autonomous Vehicles

Data Fusion for Subsurface Application at LANL



Techniques have been successfully developed for various problems and datasets:

- *Employ seismic data + deep learning to infer the subsurface structure*
- *Employ flow data + dictionary learning to infer permeability*
- *Employ remotely sensed imagery + deep learning to infer surface geologic features*