2017 Community GSI Tutorial

July 11-14, 2017, College Park, MD

Hui Shao

Developmental Testbed Center (DTC)

Developmental Testbed Center
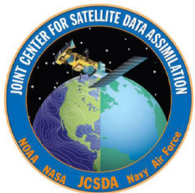
NCEP

Who Made This Happen?

- **Developmental Testbed Center** (DTC, http://www.dtcenter.org/)

  Jeff Beck (NOAA), Guoqing Ge (NOAA), Ming Hu (NOAA), Jessica Johnson* (NCAR), Hui Shao* (NCAR, stationed at NCEP), Donnald Stark (NCAR), Chunhua Zhou* (NCAR)

- **NCEP/Environmental Modeling Center** (EMC, http://www.emc.ncep.noaa.gov/)

  Kristen Bathmann*, Jacob Carley, Andrew Collard, John Derber*, Mary Hart*, Daryl Kleist*, Rahul Mahajan, Mark Potts

- **Joint Center for Satellite Data Assimilation** (JCSDA, https://www.jcsda.noaa.gov/index.php)

  Thomas Auligné*, Ana Carrion*, Yannic Tremolet, James G. Yoe*

- **NASA/Global Modeling and Assimilation Office** (GMAO)

  Ricardo Todling

- **University of Maryland**

  Kayo Ide

  *Tutorial planning committee members and coordinators

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Public Releases and Community Outreach

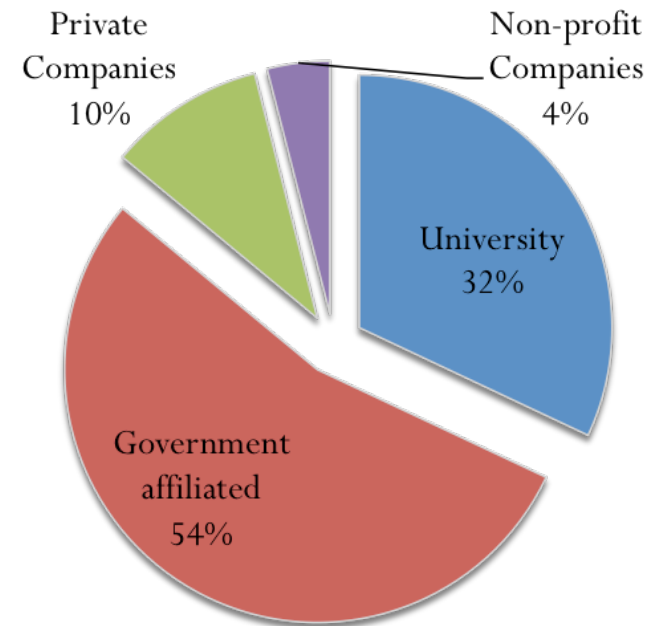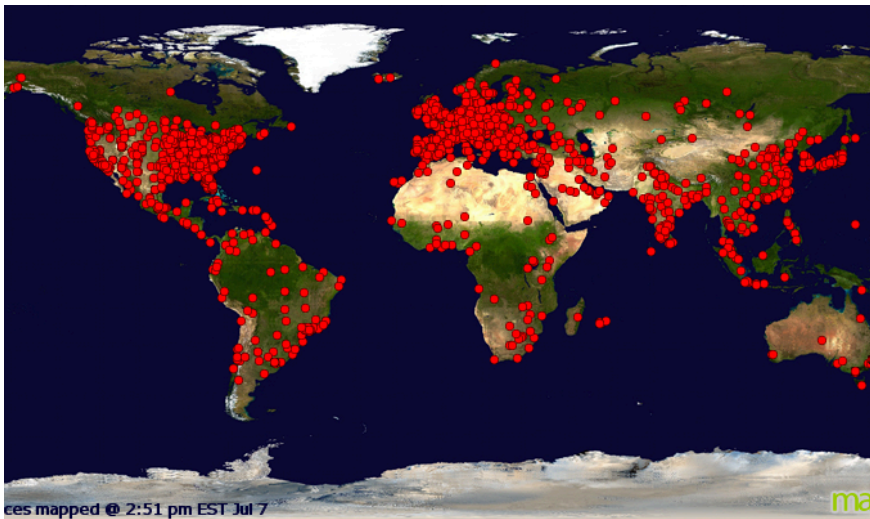|	2009	2010	2011	2012	2013	2014	2015	2016	2017
GSI	v1.0	v2.0 v2.5	v3.0	v3.1	v3.2	v3.3	v3.4	v3.5	v3.6*
EnKF	-	-	-	-	-	-	v1.0	v1.1	v1.2*
GSI_chem	-	-	-	-	-	-	v3.4	included	Included*
BUFR/ PrepBUFR tools	-	-	-	V1.0	-	-	-	-	-
Tutorials	-	GSI	GSI BUFR	GSI	GSI	GSI	GSI EnKF	-	GSI EnKF
Workshops	-	-	GSI	-	GSI	-	-	-	-

All the public released code is obtained from the GSI/EnKF code repository, which shares code with active developers and operational applications (e.g., GFS, RAP, HRRR, etc)

* 2017 code will be released by end of September, 2017

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Community Users

- Registered users:
  - ~1900 (up to June 2017)
  - Additional registered through the HWRF community release

ces mapped @ 2:51 pm EST Jul 7

Private Companies 10%

Non-profit Companies 4%

University 32%

Government affiliated 54%

- For this tutorial:
  - 53 participants (40+ for both lectures/practical sessions)

User's Websites and Helpdesk

- GSI user's webpage:
  http://www.dtcenter.org/com-GSI/users/index.php

- EnKF user's webpage:
  http://www.dtcenter.org/EnKF/users/

  - Shares the same download page with GSI

- BUFR tools:

  http://www.dtcenter.org/com-GSI/BUFR/index.php

- Helpdesk:

  gsi-help@ucar.edu

  enkf-help@ucar.edu

  - Shared ticketing system. Separate email addresses help to categorize tickets
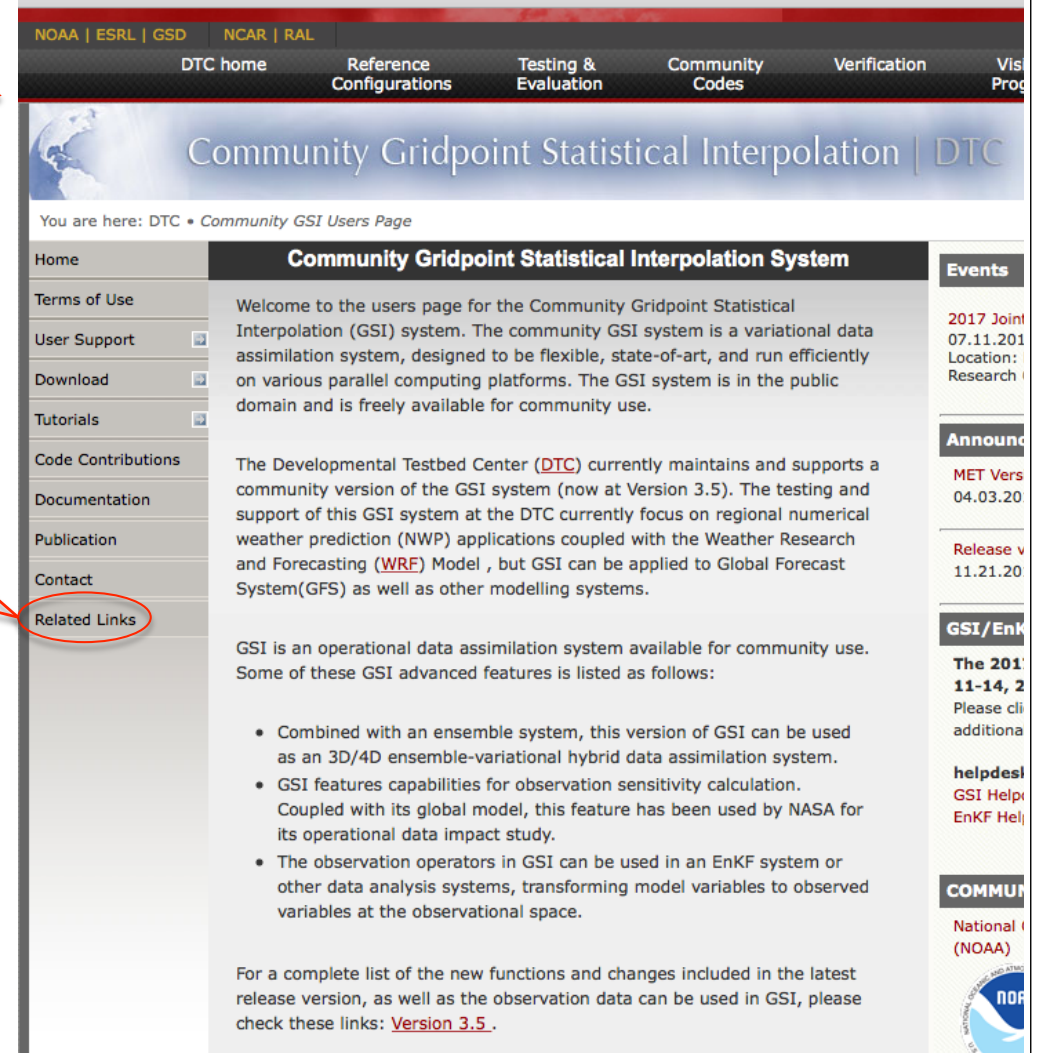
About this tutorial...

- **Concept and theories and system overviews**:
  - Fundamentals of data assimilation: Kayo Ide (University of Maryland), Tuesday
  - Overview of GSI: John Derber (EMC), Tuesday
  - EnKF Overview and theory: Rahul Mahajan (EMC), Thursday
- **Fundamental talk series**: provide basics for configuring and running GSI (6 talks, Tuesday and Wednesday) and EnKF (2 talks, Thursday)
  - Ming Hu, Chunhua Zhou, Jeff Beck, Guoqing Guo (DTC), & Mark Potts (EMC)
- **Featured talk**: Specific features of GSI and EnKF
  - Radiance: Andrew Collard (EMC), Wednesday
  - Radar/Lightining: Jacob Carley (EMC), Wednesday
  - Hybrid/4D EnVar: Daryl Kleist (EMC), Thursday
  - GSI Infrastructure: Ricardo Todling (GMAO), Thursday
- **Community contributions and future directions**
  - Community code transition: Hui Shao (DTC), Thursday
  - Joint Effort for Data Assimilation Integration (JEDI): Yanick Tremolet (JCSDA), Thursday

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Misc.

- Group photo: Tuesday morning break (~10:15am), in front of main entrance

- Complimentary refreshments for paid participants and speakers for the day

- Lunch order: link provided

- Practical sessions:
  - Tuesday-Thursday: NCWCP
  - Friday (optional): University of Maryland

- Please introduce yourself:
  - Name
  - Affiliation
  - Plans for using GSI/ EnKF…

Who?