What Is Engagement?

The definition of an engagement is an appointment, a promise to marry someone or a period of employment. An example of an engagement is a holiday party or accepting an offer of marriage.

For today it means... Get involved!
The Unified Forecast System (UFS) is a community-based, coupled, comprehensive Earth modeling system.

R2O - a broad collaboration among scientists launched in July 2020 to accelerate innovation into its operational modeling for weather and climate prediction.

EPIC accelerates advances in our nation’s operational forecast modeling systems.
Engagement so far

- 2019: First EPIC Summer Community Workshop in Boulder, CO
- 2020: UFS R2O Kickoff Meeting
- 2021: AGU: Engagement on UFS and UFS R2O
- 2022: AMS: Engagement on UFS, UFS R2O, and EPIC Strategy

AMS: Engagement on UFS, EPIC, and UFS R2O

- UFS metrics workshop
- AGU: Engagement on UFS and UFS R2O
- AMS: Engagement on UFS, UFS R2O, and EPIC
- AGU Ocean Sciences: Engagement on UFS, UFS R2O, and EPIC
- METplus users workshop
- EPIC Summer Hackathon
- EPIC Summer Code Sprint
- AMS Short Course on the UFS SRW
- Unifying Innovations in Forecasting Capabilities Workshop

You are here
July 18-22, 2022
What we’ve heard from you...

- Inclusion of additional topics (e.g., waves, ocean, ecosystem, hydrology)
- Recorded presentations, virtual options, resources available after engagements
- Open forums for discussion
- Easier-to-use systems, accessible systems
- Provide community vetted metrics for each gate between the R2O stages
- Define authoritative metrics for evaluating UFS applications in operation
- Clarification between EPIC, UFS, UFS R2O
What’s happening in our community?

**Everyone**
Websites (EPIC portal and UFScommunity.org), GitHub, forums, FAQs, governance, webinars

**New Users & Students**
Hackathons, code sprints, short courses, coming soon: training videos and tutorials

**Developers**
UFS Working Groups, UFS R2O Project including Application Teams and Cross-Cutting Development Teams

**Super User**
Coming soon: CI/CD pipeline access, use cases on cloud, ticketing system
The UFS-R2O Website provides communication with the wider community

- Announcements/events
- UFS Webinars
- Weeks 3-4/S2S Webinar
- Data products and prototypes
- UFS R2O Town Hall
- UFS R2O Annual meeting
- Contact information
UFS Community Site: At Your Service!

Get current on UFS...

- Navigate to What’s New?
- Community News
- Graduate Student Test: Got Code?
- Archived newsletters, videos, etc.
EPIC Portal: At your service!

- Github forums
- User support
- News
- Events
- Get code
- Metrics
- Cloud Cost Estimator
UFS-R2O Project Structure

**Project leads**
Whitaker, Tallapragada, and Kinter

**Project Engineers**
Adimi and Kumar

**NWS/OSTI OAR/WPO**
Sims, Huang, and Kondragunta

**MRW/S2S Integrated Application Team (including T&E)**
Mehra/Stan

**SRW/CAM Integrated Application Team (including T&E)**
Alexander/Carley

**Hurricane Integrated Application Team (including T&E)**
Z. Zhang/K. Zhang

- **Atmospheric Composition**
  - Stajner/Frost

- **Marine Components**
  - Meixner/Hallberg

- **Atmospheric Physics and Dynamics, (including stochastic physics & land)**
  - Yang/Bengtsson

- **Data Assimilation, Reanalysis & Reforecast**
  - Kleist/Frolov

- **Application Support**
  - Wolff/Bernardet

- **Modeling Infrastructure**
  - Dunlop/Chawla

- **Verification & Post-Processing Infrastructure**
  - Levit/Jensen
Aligning UFS-R2O priorities to investment areas

Key UFS-R2O Priorities
- Reduce near-surface biases
- Implement a coupled ensemble prediction system
- Advance initialization through improved use of observations and advances in data assimilation algorithms
- Develop a unified regional system and retire legacy regional systems

Key Investment Areas for UFS-R2O
- Model Infrastructure (Physics, Coupling, and Verification)
- Coupled system
- Data Assimilation, Observations, and Reanalysis
- RRFS & Code Retirement
- Physics parameterization
Over 400 of you registered to be here this week!

800+ Twitter followers

Avg. of 100 webinar attendees

2,000+ regular page visits

Have you gotten engaged?
Psst...no ring is needed!
A few other places to get involved...

**Fellowship**

WPO is establishing a dissertation fellowship to fund PhD students to focus their research on UFS...we’re starting small, but hope to have a big impact!

**Working Groups**

Join a UFS Working Group! See the list here: UFSWG

For more information: secretariat@ufscommunity.org
Notice of Funding Opportunity at NWS/OSTI-Modeling
https://vlab.noaa.gov/web/osti-modeling

Schedule:
Every two years, FY18, FY20, FY22

Eligible Applicants:
US institutions of higher education, industry, non-profit, state, local, Indian government

Three competitions:
NGGPS, Weeks 3-4/S2S, HFIP

Point of Contact (POC) & Readiness Level (RL):
POC from NCEP centers or UFS R2O teams;
RL from 4 to 7 with target operational systems

Publication date:
Around Nov 3

LOIs due:
Around Dec 6

Application due:
Around Feb 7

Project start date:
Sep 1

Contact:
nws.sti.modeling.team@noaa.gov

NGGPS:
Advance the UFS Medium-Range Weather Application, coupling among atmosphere, ocean, wave, ice, land and atmospheric composition, data assimilation and ensemble techniques, post-processing forecast tools

Weeks 3-4/S2S:
Advance the UFS Subseasonal and Seasonal Applications, coupled data assimilation, reanalysis, process-level diagnostic tools and validation/verification metrics

HFIP:
Advance the UFS Hurricane Application, improve operational hurricane forecasts to meet societal requirements to save lives and mitigate loss of economic disruption
Engaging Forecasters in the UFS (a case study...)

- User feedback helps clarify model errors and define development priorities
- Close coordination is critical!
- What is your diamond ring?
How’re we doing?

Tell us what else you need!
What’s next?

- Hackathons
- Code Sprints
- AMS
- AGU
- Short Courses
- Tutorials
Connect with us

@noaaEPIC
@UFSCCommunity
secretariat@ufscommunity.org
support.epic@noaa.gov
Thanks!

Do you have any questions?

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