

IBPSA Project 2: BOPTEST

Task 2

Virtual Progress Meeting

12/18/2025
9:00 AM – 10:00 AM U.S. Eastern Time

Participation

Name	Institution
Jaap Neven	KU Leuven
David Blum	LBNL
Ettore Zanetti	
Nikolai Drigalenko	NTNU
Bertrand Kerres	Terion
Hongwen Dou	ETS

Agenda

Generally, updates to ongoing initiatives and discussion of possible new initiatives.

1. Repo Management and Refactor [Dave]
 - Released v0.9.0 on Nov 18
 - Open API Spec – Bertrand made PR, Dave to review. Bertrand presents:
 - i. Implemented in .yaml file.
 - ii. Interactive for trialing, using swagger ui, which is deployed in the BOPTEST web container. Opens in <url>/docs.
 - iii. Can be used to automatically generate a python API e.g. with openapi-python-client. It is deterministic, so could use in unit tests to test that the open API spec definition is accurate. Can point to .yaml file or to url deployed swagger doc (so can use even if don't have BOPTEST downloaded locally).
 - Another PR there for using Podman
 - i. One part of that PR is a port change, which would be more acceptable to restrictions that may be imposed by IT departments. Confirmed issues from group.
2. Online Dashboard and Service [Dave]
 - AWS web service running v0.9.0 on Dec 2.
 - Kyle made last edits to dashboard.
 - Dashboard deployment delayed - Dave needs to submit paperwork for determination of human subjects research at LBNL. Next steps to follow.
3. DOPTEST [Javier]
 - No update
4. OpenModelica compilation testing and library updates [Ettore]
 - Ettore finished updates and PR, Dave reviewing.
5. Semantic modeling [Dave/Others]

- No update
6. New KPI – Actuator Travel [Dave, Xing, Jan Marco]
 - No update.
 7. Sensor Uncertainty [Jaap and Harald]
 - Jaap presents student's proposal for understanding effect of sensor and weather uncertainty on MPC performance. Sensor uncertainty not yet in BOPTEST.
 - i. Propose three added uncertainty terms:
 1. White noise
 2. Bias
 3. Radiative score and sensitivity (applicable to operative temperature sensors). Student will develop radiative score model to be based on boundary conditions (OAT, solar radiation), with sensitivity to be from a user selection (e.g. low, medium, high).
 - ii. Student focus is on operative temperature sensors.
 - Implement in Modelica model, or impose afterwards?
 - i. Open question in BOPTEST from before. Harald tried to implement basic noise before in Modelica, but computationally difficult. Best approach still to be discussed.
8. Component Failures [Nikolai and Harald]
 - No time
9. Test Cases [Ettore]
 - No time
10. Ideas for new initiatives [All]
 - No time