

IBPSA Project 2: BOPTEST
Task 1 Virtual Meeting: Outreach and Community Building

18/01/2024
16:00 – 17:00 CET

Participation

	Name	Affiliation
	Lieve Helsen	KU Leuven
1	Javier Arroyo	
	Jelger Jansen	
1	Jaap Neven	
	Filip Jorissen	Builtwins
1	David Blum	LBNL
	Michael Wetter	
	Christoph Gehbauer	
1	Ettore Zanetti	Hong Kong University of Science and Technology
	Zhe (Walter) Wang	
	Dan Wang	
	Wanfu Zheng	
	Valentin Gavan	ENGIE Lab
	Piljae Im	ORNL
	Yeonjin Bae	
	Sen Huang	
	Yan Chen	PNNL
	Xing Lu	
	Draguna Vrabie	
	Laura Zabala	R2M
	Roel De Coninck	dnergy
1	Iago Cuepero	
	Bart Merema	
	Harald Taxt Walnum	SINTEF
	Gaurav Chaudhary	NTNU Norway
1	Esther Borkowski	ETH Zurich
	Kyle Benne	NREL
	Matt Robinson	University of Colorado-Boulder
	Patrick Henkel	
	Fabian Wullhorst	
	Laura Maier	
	Peder Bacher	DTU
	Konstantin Filonenko	
	Sicheng (James) Zhan	National University Singapore
	Rossella Alesci	Politecnico di Milano
	Davide Fop	Politecnico di Torino
	Justin Prince	Arup
	Xu Han	Harvard University, University of Kansas
	Zheng Oneill	Texas A&M University
	Mingzhe Liu	
	Kun Zhang	École de Technologie Supérieure (ÉTS)
	Xuezheng Wang	Syracuse University
	David Wolfle	FZI

Total: 6

Notes

Introduction to the meeting:

- Introduction to Jaap Neven. Currently research assistant at The Sysi's team and starting PhD at the same team in March. He will be intensively using BOPTTEST throughout his PhD.
- Javier recalls the objective of Task1: activities that encourage, facilitate, and disseminate BOPTTEST usage, adoption, and feedback to development. This includes engaging with research and practitioner communities, collecting known case studies, developing and delivering workshops, and reporting usage statistics such as citations or web service metrics.

Javier points out events and workshops in the pipeline for 2024:

- Adrenalin smart building HVAC control challenge. See more info [here](#).
- CCAI Summer School 2024: did not yet received an answer. Javier will send a reminder to Marcus Voss, the contact person there.
- Javier is considering a stay at the University of Seville during Summer where he could take advantage to teach BOPTTEST.
- Dave: for IBPSA USA SimBuild Dave is preparing a seminar proposal with an overview of BOPTTEST and Alfalfa, as requested by Amir Roth (from DOE). PNNL is willing to present the large office test case that they are developing. They are allocated 60 minutes in total: three 20-minute presentations. The seminar is on simulation in the loop for controller benchmarking and testing (Alfalfa also does hardware in the loop).

Discussion on a BOPTTEST contest developed internally at IBPSA Project 2:

- The idea is to create a BOPTTEST exclusive contest. We cannot guarantee money prizes so motivation for participants should be visibility and recognition.
- We should define requirements for participants like (1) specify test cases and scenarios, all participants should commit to giving results of them all, (2) share results e.g. in an organized workshop or conference (3) share controller description along with requirements for its implementation and main assumptions (4) share insights.
- We might want to consider opening a special issue e.g. at the Journal of Building Performance Simulation. However, if there is no novel contribution may not be as easy as to get in a special issue in the journal. Iago: an alternative could be a quality certificate: e.g. BOPTTEST/IBPSA Certified, but this may require a substantial amount of resources to be defined.
- We may prefer to link the competition to a conference like the Building Simulation conference where the top performant participants can present their work.
- Esther: we may want to reach out to [Clayton Miller](#). They hold a platform for data science competitions. They can post there static data for machine learning.
- Dave: during the preparation for the Adrenalin contest we are learning there is a lot of nitty-gritty when preparing for such a competition.
- Creating a new test case per competition may not be realistic. It is not necessarily an issue to use an existing test case for the contest, but it may be worthwhile considering two test cases to cover more types of systems. If we propose two: how to evaluate?

- The more complex the systems the more opportunity there is for advanced control. On the other hand, it should not be overly complex so as not to scare participants and end up without any submission.
- We do not announce the test case until we close the registrations. It should be an application process rather than a registration.
- How to avoid cheating? It would be preferred to use a more engineering solution not to cheat, rather than just a moral agreement because participants could cheat even if they do not want to e.g. people are training during the test periods. We could use another weather file for the actual competition, different from the one that is shared with participants from training their controllers. We could have participants run their controllers in the competition ONLY ONCE. This is what resembles the best reality since in a real building every control step is unique due to the unprecedented combination of boundary condition data in the building (combination of weather + occupancy + emission factors + pricing).

BOPTTEST website and other media:

- Javier: are we filtering BOPTTEST citations that we announce on the website? Dave: Yes, only those that derive from Project 2 are announced on the website but may be others.
- Should we go into social media? We should be careful since it is better not to have it than to have it and not use it. For Annex projects they have Twitter accounts. It may be a good idea to have a LinkedIn page and link the LinkedIn profile to the website. May make sense for Project 2 as a whole.