Gabbay Prize for Alexandru Baltag

27 November 2025

This is in praise of our Award winner today. But since praise is a dangerous drug, requiring ever larger quantities to keep its recipients happy, I will keep my presentation brief.

Alexandru Baltag's meteoric rise became observable in Europe, when Jon Barwise wrote to us that he was the best PhD student he had ever had in his distinguished career. Jon was not given to American-style exaggerations. Alexandru's dissertation on Non-wellfounded Set Theory and Modal Logic was quickly recognized as a major achievement, and he catapulted onto the international scene.

Alexandru's broader impact started with his work on Dynamic-Epistemic Logic. He is one of the author team Baltag-Moss-Solecki who wrote the classic defining 1998 document for this by now well-established approach to modeling subtle phenomena in information flow and knowledge change. In the decades since, together with distinguished collaborators, he has kept adding both depth and width to this logical framework, while extending its interfaces with mathematical logic (model theory, coalgebra), computational logic (multi-agent systems) and philosophical logic (knowledge change and belief revision). We are all looking forward to the authoritative chapter that Alexandru is going to write for the new Handbook of Modal Logic, which will no doubt show us both the past of the Dynamic-Epistemic Logic paradigm and where it is going.

In addition to being a strong mathematician, Alexandru is also a perceptive philosophical thinker. He has become a leading light in formal epistemology, more in particular, in the field of Epistemic Topology, where he has been instrumental in bringing sophisticated ideas from topology to bear on classical philosophical problems of evidence, justification, and learning. Alexandru's 'Erlanger Program' for epistemology is an ambitious attempt at unifying this diverse philosophical field in terms of invariants across various information-producing and belief-changing actions, linking up with Formal Learning Theory.

In addition to Dynamic-Epistemic Logic and Epistemic Topology, Alexandru has published on many other topics, including social opinion and information flow, but also new foundations for quantum mechanics in the form of a dynamic logic of quantum measurement.

All this work is generally admired: by his many students and research collaborators, but also more broadly. If you consult the website for the Workshop organized for his 55th birthday, https://soroushrrad.wixsite.com/my-site-1/workshop-1, you will see a lot of this resonance, plus congratulatory statements by some of the great names of our field.

Even so, Alexandru Baltag might not be as much of a household name as some of the creative peers in his (small!) international comparison class. This is because his field of action combines mathematics, computer science and philosophy in ways which do not quite fit existing more discipline-bounded categories for honoring outstanding members of professions. This is why today's Gabbay Prize is so appropriate, as we wanted, following the multi-dimensional achievements and influence of Dov Gabbay, to have an open eye for just this sort of talent. It took our Jury little time to recognize the quality of this candidate, and a unanimous decision followed. Alexandru, we hope that receiving the Gabbay Prize will be good for you and your broader recognition, but we are also confident that selecting you for this honor will benefit the Gabbay Prize and its future standing.

Alexandru Baltag has many decades of achievements, and his reputation spans several continents, from Europe to the US and Asia. And this brilliance continues. As everyone knows who has interacted with him, he also has an incisive quick mind incapable of trite or mediocre thoughts. We are happy to have him as the winner of the Gabbay prize 2025, and we are looking forward to what he will share with us in his acceptance talk.

Johan van Benthem