Milen Yakimov is a Full Professor at Northeastern University, Boston and an R4 Leading Researcher (Chair) at the International Center for Mathematical Sciences, Sofia.

In 1991 he obtained a master's degree in mathematics from Sofia University with a thesis on the Representation theory of the $W_{1+\infty}$ algebra, bispectrality, and Sato's Grassmannian, supervised by E. Horozov. In 2021, he completed his Ph.D. in Mathematics at the University of California, Berkeley with a thesis on the Geometry of complex reductive Poisson-Lie groups supervised by Prof. N. Reshetikhin.

Yakimov pursues a vigorous and broad research program spanning the areas of Representation Theory, Cluster Algebras, Tensor Categories, Noncommutative Algebra, Poisson Geometry, and Integrable Systems. Already as an undergraduate student in the early 90s, Yakimov, with Bakalov and Horozov found a deep relation between the representation theory of W-algebras and the bispectral problem leading to the introduction of powerful methods for constructing bispectral operators which continue to be widely used to date. In his PhD thesis, Yakimov solved the problem for describing the symplectic foliations of all Poisson algebraic groups equipped with the Poisson structures from the celebrated Balavin-Drinfed classification, an important open problem from the early 80s. Subsequently, Yakimov wrote a series of single authored papers in which he resolved major open problems on the prime spectra of quantum groups and the quantum Schubert cell algebras of De Concini-Kac-Procesi. As a culmination, he settled the famous Andruskiewitsch-Dumas conjecture giving an explicit description of the automorphism groups of the positive parts of all quantized enveloping algebras. In the subsequent years Yakimov resolved a number of open problems in the fast-developing area of Cluster Algebras. With Goodearl, he proved that every algebra in the important, axiomatically defined class of quantum nilpotent algebras possesses a canonical cluster algebra structure and used this to settle the Berenstein-Zelevinsky conjecture on the quantized coordinate rings of double Bruhat cells. Subsequently Goodearl and Yakimov also proved that the quantum unipotent cells of all symmetrizable Kac-Moody groups possess integral quantum cluster algebra structures. Returning to representation theory, Andruskiewitsch-Angiono-Yakimov built a Poisson geometric framework for the study of the irreducible representations of quantum supergroups at roots of unity. By combining Poisson geometry and noncommutative projective algebraic geometry Walton-Wang-Yakimov classified the irreducible representations of all 3 and 4-dim Sklyanin algebras associated to finite order elements of elliptic curves. With Casper, Grunbaum and Zurrian, in a paper in the Proceeding of the National Academy of Sciences of the USA, Yakimov showed that all points of the famous Wilson's Adelic Grassmannian give rise to integral operators possessing a commuting differential operator, a far-reaching generalization of results of Slepian, Mehta and Tracy-Widom playing a key role in signal processing and random matrix theory.

Yakimov is serving as an editor of the *Proceedings of the London Mathematical Society*, one of the leading journals in Mathematics worldwide. He is also an editor of the *Journal of Pure and Applied Algebra* and *Algebras and Representation Theory*, which are two of the top journals in Algebra. Yakimov has graduated 10 PhD students to date and is currently advising 3 additional ones. He has mentored many postdocs and collaborated with numerous junior mathematicians. Yakimov has organized over 25 conferences, workshops and thematic schools.

Research interests:

- Representation Theory
- Cluster Algebras
- Tensor Categories and Triangulated Categories
- Poisson Geometry
- Integrable Systems

Honors & Acknowledgements:

- Fellow of the American Mathematical Society, 2018
- Invited article to a special issue of the Proceedings of the National Academy of Sciences of the USA on Cluster Algebras, 2014
- Invited Address, American Mathematical Society Meeting, Tulane University, 2012
- Kavli Fellow, National Academy of Sciences, USA, 2008
- Alfred P. Sloan Foundation Research Fellow, 2005
- Clay Foundation Liftoff Fellow, 2001
- Charles B. Morrey, Jr. Award for outstanding PhD student, Univ. California, Berkeley, 1998