

BOGDAN ICHIM

CURRICULUM VITAE

— ADDRESS

Simion Stoilow Institute of Mathematics
Romanian Academy
Calea Grivitei nr. 21
010702 Bucharest
Romania

— EDUCATION

- **Ph.D. in Natural Sciences** (December 2004), Carl von Ossietzky Universität, Oldenburg, Germany.
- **M.Sc. in Algebra** (February 2001), Faculty of Mathematics and Computer Science, University of Bucharest, Romania.
- **Candidate for B.Sc. in Computer Science** (September 1999 – June 2001), Faculty of Automatic Control and Computer Science, Politehnica University of Bucharest, Romania.
- **B.Sc. in Mathematics** (June 1999), Faculty of Mathematics and Computer Science, University of Bucharest, Romania.

— ACADEMIC POSITIONS

2026 – present : **Scientific Researcher I**, Simion Stoilow Institute of Mathematics, Romanian Academy, Bucharest, Romania.
2019 – present : **Associate Professor**, Faculty of Mathematics and Computer Science, University of Bucharest, Bucharest, Romania.
2019 – 2025 : **Scientific Researcher II**, Simion Stoilow Institute of Mathematics, Romanian Academy, Bucharest, Romania.
2008 – 2018 : **Scientific Researcher III**, Simion Stoilow Institute of Mathematics, Romanian Academy, Bucharest, Romania.
2005 – 2009 : **Wissenschaftliche Mitarbeiter**, Institut für Mathematik, Osnabrück Universität, Osnabrück, Germany.
2002 – 2004 : **Wissenschaftliche Hilfskraft**, Institut für Mathematik, Carl von Ossietzky Universität, Oldenburg, Germany.
2001 – 2008 : **Assistant Researcher**, Simion Stoilow Institute of Mathematics, Romanian Academy, Bucharest, Romania.

— **RESEARCH GRANTS (PRINCIPAL INVESTIGATOR)**

- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Researcher Mobility Grant PN-III-P1-1.1-MC-2019-0297
period 05.09.2019 – 01.10.2019.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Researcher Mobility Grant PN-III-P1-1.1-MC-2018-0339
period 01.11.2018 – 28.11.2018.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Researcher Mobility Grant PN-III-P1-1.1-MC-2017-0194
period 30.10.2017 – 11.12.2017.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Young Research Team Grant PN-II-RU-TE-2012-3-0161
period 01.05.2013 – 30.09.2016 / 11 articles.
- Romanian National Authority for Scientific Research (UEFISCSU)
Career Integration Grant PN-II-RU-RP-2008-12-01
period 01.07.2009 – 30.06.2011 / 6 articles.

— **RESEARCH GRANTS (CO-INVESTIGATOR, TEAM MEMBER)**

- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Exploratory Research Grant PN-III-P4-ID-PCE-2020-0878
period 01.05.2021 – 31.12.2023.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Economic Transfer Grant PN-III-P2-2.1-PTE-2019-0817
period 01.10.2020 – 31.03.2022.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Exploratory Research Grant PN-III-P4-ID-PCE-2016-0157
period 01.01.2018 – 31.12.2019.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Experimental Demonstrative Grant PN-III-P2-2.1-PED-2016-0436
period 01.02.2017 – 30.04.2017.
- Romanian National Authority for Scientific Research (CNCS - UEFISCDI)
Ideas Grant PN-II-ID-PCE-2011-3-1023
period 01.01.2012 – 31.12.2016.
- Romanian National Authority for Scientific Research (UEFISCSU)
Young Research Team Grant PN-II-RU-TE-2010-2-46
period 01.08.2010 – 31.07.2013.
- Deutsche Forschungsgemeinschaft (DFG)
Grant Ref. BR688/17-1
period 01.01.2007 – 31.12.2008.
- Deutsche Forschungsgemeinschaft (DFG)
Grant Ref. BR688/16-1
period 01.01.2005 – 31.12.2006.



— HONORS AND AWARDS

- University of Bucharest, Faculty of Mathematics and Computer Science Prize for the best article published by the faculty staff in 2021, awarded in 2022.
- 2016 Gheorghe Lazăr Prize of the Romanian Academy, awarded in 2018.
- German Academic Exchange Service (DAAD) Graduate Scholarship period 01.04.2004 – 31.12.2004
- von Schad'schen Stiftung Graduate Scholarship, Germany period 01.04.2004 – 31.12.2004
- Carl von Ossietzky Universität Graduate Scholarship, Germany period 01.10.2001 - 31.03.2004
- University of Bucharest Travel Grant, Romania period 01.05.2000 - 31.05.2000
- University of Bucharest Undergraduate Scholarship, Romania period 01.10.1995 – 30.06.1999.
- Member of the Romanian big team for the International Mathematical Olympiad, 1995.
- II-nd prize at the Romanian Mathematical Olympiad, 1995.
- Honor Student, Vasile Alecsandri College, Galati, Romania, 1994.
- III-rd prize at the Romanian Mathematical Olympiad, 1994.

— SELECTED INVITED CONFERENCE PRESENTATIONS

- B. Ichim. *On the score sheets of a round-robin football tournament*. International meeting on numerical semigroups with applications, Levico Terme, Italy, 2016.
- B. Ichim. *How to compute the Stanley depth of a module ?* Joint Meeting of the American Mathematical Society, the European Mathematical Society and the Portuguese Mathematical Society, Porto, Portugal, 2015.
- B. Ichim. *How to compute the multigraded Hilbert depth of a module ?* Joint Meeting of the American Mathematical Society and the Romanian Mathematical Society, Alba-Iulia, Romania, 2013.
- B. Ichim. *Introduction to Normaliz 2.9*. Seventh Meeting for Mathematicians in Segovia (YMIS 13), Segovia, Spain, 2013.
- B. Ichim. *Introduction to Normaliz 2.7*. Third International Conference on Matrix Methods in Mathematics and Applications (MMA 2011), Moscow, Russia, 2011.
- B. Ichim. *Introduction to Normaliz 2.5*. Third International Congress on Mathematical Software (ICMS 2010), Kobe, Japan, 2010.
- B. Ichim. *How to compute the Hilbert polynomial ?* Commutative Algebra and its Interactions with Algebraic Geometry, Luminy, France, 2008.
- B. Ichim. *On toric face rings*. Conference on Homological and Combinatorial Aspects in Commutative Algebra, Busteni, Romania, 2007.



- B. Ichim. *On the coefficients of Hilbert quasipolynomials*. Commutative Algebra and its Interactions with Algebraic Geometry, Luminy, France, 2006.
- B. Ichim and B. Hovinen. *Free divisors from plane curves*. Minnowbrook Workshop on Commutative Algebra, Minnowbrook, USA, 2005.
- B. Ichim and U. Vetter. *Generalized Koszul complexes*. Workshop on Cohen-Macaulay Rings and Related Structures, Constanta, Romania, 2005.

— SELECTED CONTRIBUTED CONFERENCE PRESENTATIONS

- B. Ichim, *On Predicting Electoral Outcomes Using TikTok Comments*. The 18-th International Conference on Agents and Artificial Intelligence (ICAART 2026), Marbella, Spain, 2026.
- B. Ichim, *On Improving the Efficiency of AI-Generated Text Detection*. The 20-th International Conference on Evaluation of Novel Approaches to Software Engineering (ENASE 2025), Porto, Portugal, 2025.
- B. Ichim, *Improving Machine Learning Performance in Credit Scoring by Data Analysis and Data Pre-processing*. The 17-th International Conference on Agents and Artificial Intelligence (ICAART 2025), Porto, Portugal, 2025.
- B. Ichim, *On the adjacency matrix of spatio-temporal neural network architectures for predicting traffic*. The 9-th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2023), Prague, Czech Republic, 2023.
- B. Ichim. *Computations of probabilities in five candidates elections*. The 23-rd Conference of the Romanian Society of Probability and Statistics (SPSR 2022), Bucharest, Romania, 2022.
- B. Ichim, *Predicting Multiple Traffic Features using a Spatio-Temporal Neural Network Architecture*. The 8-th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2022), Online Streaming, 2022.
- B. Ichim. *An algorithm for volumes of polytopes with applications to social choice*. The Ninth Congress of Romanian Mathematicians, Galați, Romania, 2019.
- B. Ichim. *On the score sheets of a round-robin football tournament*. Second Normaliz Workshop, Osnabrück, Germany, 2016.
- B. Ichim. *On Hilbert decompositions*. Second Mini-Workshop IMAC – SINGACOM in La Plana : Topics in Monoid Theory and its applications, Castellón, Spain, 2015.
- B. Ichim. *How to compute the Stanley depth of a module ?* The Eighth Congress of Romanian Mathematicians, Iasi, Romania, 2015.
- B. Ichim. *Recent results in computational voting theory*. First Mini-Workshop IMAC – SINGACOM in La Plana : Trends in Commutative Algebra, Castellón, Spain, 2014.

- B. Ichim and A. Zarojanu. *An introduction to Hilbert depth*. Third Conference of Mathematical Society of Moldova (IMCS-50), Chisinau, Moldova, 2014.
- B. Ichim. *Introduction to Normaliz 2.8*. The 20-th National School on Algebra, Mangalia, Romania, 2012.
- B. Ichim. *Introduction to Normaliz 2.7*. The Seventh Congress of Romanian Mathematicians, Brasov, Romania, 2011.
- B. Ichim. *Introduction to jNormaliz*. International Student Conference on Pure and Applied Mathematics (ISCOPAM), Iasi, Romania, 2010.

— SELECTED OTHER PRESENTATIONS

- B. Ichim. *Computations of probabilities in five candidates elections*. Mathematics Seminar, Universidad Jaume I de Castellón, Spain, 2024.
- B. Ichim. *On Applications of Combinatorial Learning*. Mathematics Seminar, Osnabrück Universität, Germany, 2023.
- B. Ichim. *On a class of Gorenstein polytopes*. Mathematics Seminar, Osnabrück Universität, Germany, 2019.
- B. Ichim. *Polytope volume by descent in the face lattice and applications in social choice*. Mathematics Seminar, Osnabrück Universität, Germany, 2018.
- B. Ichim. *An introduction to voting theory*. Mathematics Seminar, Osnabrück Universität, Germany, 2017.
- B. Ichim. *On the score sheets of a round-robin football tournament*. Mathematics Seminar, Goethe Universität Frankfurt am Main, Germany, 2016.
- B. Ichim. *How to compute the Stanley depth of a module ?* Mathematics Seminar, Universidad Jaume I de Castellón, Spain, 2015.
- B. Ichim. *An algorithm for computing the multigraded Hilbert depth of a module*. Mathematics Seminar, Osnabrück Universität, Germany, 2013.
- B. Ichim. *How to compute the multigraded Hilbert depth of a module ?* Mathematics Seminar, Universidad de Valladolid, Spain, 2013.
- B. Ichim. *How to compute the multigraded Hilbert depth of a module ?* Mathematics Seminar, Osnabrück Universität, Germany, 2012.
- B. Ichim. *Challenging computations of Hilbert quasipolynomials*. Mathematics Seminar, Universität Rostock, Germany, 2012.
- B. Ichim. *Challenging computations of Hilbert bases*. Mathematics Seminar, Rikkyo University, Tokyo, Japan, 2010.
- B. Ichim. *Introduction to Normaliz 2.0*. Mathematics Seminar, Technische Universität Berlin, Germany, 2008.
- B. Ichim. *On toric face rings*. Mathematics Seminar, Università di Genova, Italy, 2006.
- B. Ichim. *Properties of toric face rings*. Mathematics Seminar, Universität Duisburg-Essen, Germany, 2006.
- B. Ichim. *Koszul complexes in projective dimension one*. Mathematics Seminar, Osnabrück Universität, Germany, 2004.



— **LANGUAGES**

Reading, writing and speaking competence in English and German. Reading competence in French, Italian and Spanish.

— **SKILLS**

- General-purpose programming languages : C, C++, OpenMP, Python, Spark, Java, Pascal, x86 ASM.
- Specialized programming languages : R, Mathematica, Maple, MATLAB, Excel, CoCoA, Singular, Macauley2, FreeFem++.

— **LIST OF COURSES**

In 2019 I got a position of Associate Professor in the Department of Computer Science of the Faculty of Mathematics and Computer Science (University of Bucharest). There I have offered the following courses :

- Exploratory Data Analysis. Winter 2025/2026, optional course for all Computer Science Master's Degree Programs (77 students), University of Bucharest, Romania.
- Big Data. Summer 2025, course for the Artificial Intelligence, Data Science and Natural Language Processing Master's Degree Programs (49 students), University of Bucharest, Romania.
- Exploratory Data Analysis. Winter 2024/2025, optional course for all Computer Science Master's Degree Programs (56 students), University of Bucharest, Romania.
- Big Data. Summer 2024, course for the Artificial Intelligence, Data Science and Natural Language Processing Master's Degree Programs (63 students), University of Bucharest, Romania.
- Exploratory Data Analysis. Winter 2023/2024, optional course for all Computer Science Master's Degree Programs (72 students), University of Bucharest, Romania.
- Big Data. Summer 2023, course for the Artificial Intelligence, Data Science and Natural Language Processing Master's Degree Programs (51 students), University of Bucharest, Romania.
- Exploratory Data Analysis. Winter 2022/2023, optional course for all Computer Science Master's Degree Programs (51 students), University of Bucharest, Romania.
- Big Data. Summer 2022, course for the Artificial Intelligence, Data Science and Natural Language Processing Master's Degree Programs (53 students), University of Bucharest, Romania.
- Exploratory Data Analysis. Winter 2021/2022, optional course for all Computer Science Master's Degree Programs (81 students), University of Bucharest, Romania.



- Big Data. Summer 2021, course for the Artificial Intelligence, Data Science and Natural Language Processing Master's Degree Programs (68 students), University of Bucharest, Romania.
- Exploratory Data Analysis. Winter 2020/2021, optional course for all Computer Science Master's Degree Programs (73 students), University of Bucharest, Romania.
- Big Data. Summer 2020, optional course for all Computer Science Master's Degree Programs (184 students), University of Bucharest, Romania.
- Exploratory Data Analysis. Winter 2019/2020, course for the Artificial Intelligence and the Data Science Master's Degree Programs (90 students), University of Bucharest, Romania.

I have also offered a course in Computer Algebra at Scoala Normala Superioara Bucharest (see www.imar.ro/~snsb/) in the period 2010 – 2011. This was a top-quality master program organized in the past by the Simion Stoilow Institute of Mathematics.

I was in charge of computer labs or exercises solving sessions for the following courses :

- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2025/2026, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2025, University of Bucharest, Romania.
- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2024/2025, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2024, University of Bucharest, Romania.
- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2023/2024, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2023, University of Bucharest, Romania.
- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2022/2023, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2022, University of Bucharest, Romania.
- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2021/2022, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2021, University of Bucharest, Romania.
- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2020/2021, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2020, University of Bucharest, Romania.



- Exploratory Data Analysis, Assoc. Prof. Bogdan Ichim. Winter 2019/2020, University of Bucharest, Romania.
- Big Data, Assoc. Prof. Bogdan Ichim. Summer 2019, University of Bucharest, Romania.
- Modern Computing and Simulation Methods, Asst. Prof. Florentina Suter. Summer 2019, University of Bucharest, Romania.
- Mathematik II, Prof. Tim Römer. Winter 2008/2009, Osnabrück Universität, Germany.
- Einführung in die Algebra, Prof. Oliver Röndigs. Summer 2008, Osnabrück Universität, Germany.
- Körper und Galois Theorie, Prof. Winfried Bruns. Winter 2007/2008, Osnabrück Universität, Germany.
- Zahlentheorie, Prof. Winfried Bruns. Summer 2007, Osnabrück Universität, Germany.
- Differentialgleichungen, Prof. Heinz Spindler. Winter 2006/2007, Osnabrück Universität, Germany.
- Einführung in die Algebra, Prof. Winfried Bruns. Summer 2006, Osnabrück Universität, Germany.
- Lineare Algebra, Prof. Winfried Bruns. Winter 2005/2006, Osnabrück Universität, Germany.
- Vektoranalysis, Prof. Heinz Trapp. Summer 2005, Osnabrück Universität, Germany.
- Lineare Algebra, Prof. Udo Vetter. Winter 2004/2005, Carl von Ossietzky Universität, Oldenburg, Germany.

— SERVICE

- Co-organizer of the 20th National School on Algebra, September 2012, Mangalia, Romania.
- Co-organizer of the Special Session on Commutative Algebra in Honor of Prof. Dorin Popescu, 2nd Workshop for Young Researchers in Mathematics, May 2012 Constanta, Romania.
- Co-organizer of the 19th National School on Algebra, September 2011, Bucharest, Romania.
- Co-organizer of the 18th National School on Algebra, September 2010, Bucharest, Romania.
- Co-organizer of the IMAR Seminar in Algebraic Combinatorics, 2009 – 2019.

— PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- A. Reviewer : Journal of Symbolic Computation ; Journal of Algebraic Combinatorics ; Journal of Algebra ; European Journal of Mathematics ; Glasgow Mathematical Journal.
- B. Referee for The Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI, 2015 - present).

