

CURRICULUM VITAE

Name and surname: Irina Elena Cristea

Web of Science Researcher ID: [B-6846-2011](#)

(h-index: 14, citations: 704)

Scopus ID: 23049176300 (h-index: 14, citations: 697)



Education:

- PhD in Mathematics, University "Ovidius" Constanta, Romania, 2007
- M.Sc. in Algebra and Geometry, University "Al.I.Cuza" Iasi, Romania, 2003
- B.Sc. in Mathematics, University "Al.I.Cuza" Iasi, Romania, 2001

Scientific title: associate professor since 22.9.2017, habilitation at University of Nova Gorica

Work experience:

- 2017-..., University of Nova Gorica- associate professor
- 2012-2017 University of Nova Gorica, - assistant professor
- 2009-2011, University of Udine, Italy, Department of Mathematics and Computer Science, postdoctoral position
- 2003-2007, University of Iasi, Romania, Faculty of mathematics- Teaching assistant

Management positions:

- Acting head of the Centre for Information Technologies and Applied Mathematics, University of Nova Gorica, 10.2017- to date
- Acting head of the Centre for Systems and Information Technologies, University of Nova Gorica, 03.2015-03.2016.
- Co-chief editor of Italian Journal of Pure and Applied Mathematics, 10.2020-to date

Awards:

- "Young scientist 2008 bet paper prize" for Mathematics, awarded by University of Udine, Italy, for the paper "On the fuzzy grade of Hypergroups", published in Fuzzy Sets of Systems, 159(2008).
- "1%Top Peer Reviewer 2019" in the field of Mathematics, awarded by Publons in 2019, as part of Web of Science Group

Projects and grants:

- Principal investigator of the Erasmus+ project KA107 with University of Montenegro, 2020-2022.
- Principal investigator of the Bilateral project Slovenia-Montenegro (ARRS-MS-BI-ME-JR) 2018-2020.
- Member of the ARRS research program P1-0285 “Algebra, discrete mathematics, probability and game theory”, 2012-2021.
- Member of the EU project “European Researchers’ Night 2020”-Slovenian project “Noč ima svojo moč”-coordinator for University of Nova Gorica
- Member of the ARRS project “L2-8174 Method for the forecasting of local radiological pollution of atmosphere using Gaussian process models”, principal investigator at University of Nova Gorica, 2.2018 - 4.2020.
- Member of the ARRS project “N2-0078 Semantical mining of freely available related data”, 11.2019 - 5.2021.
- Principal investigator of the regional project “Borsa regionale-settore agricolo, agro-alimentare e veterinario Friuli Venezia Giulia, L.R. 2/2006 commi 54-57”, University of Udine, 01.2009-09.2011.
- Principal investigator of the Italian project (assegno di ricerca) “Hyperstructures, Fuzzy Sets, Rough Sets”, University of Udine, Italy, 04.2007-11.2008.
- Pedagogical mentor of the project “Po kreativni poti do znanja-After a creative way to knowledge”, University of Nova Gorica, 03.2017-06.2017.
- Coordinator and pedagogical mentor of the project “Po kreativni poti do praktičnega znanja-After a creative way to practical knowledge”, University of Nova Gorica, 04.2014-08.2014.
- Member of the project "European regional funds–Creative Cores" Active and Healthy Aging -Molecular Mechanisms, Nutrition and Targeted Delivery with Nanoparticles (AHA-MOMENT), University of Nova Gorica, 03.2015-05.2015.
- Member of the project 23/3.09.2007 of Romanian Accademy “Hipergroups and Abelian groups. Applications", University of Iasi, Romania, 09.2007-12.2007, 05.2008-10.2008.
- Member of the project CEX 05D11-11/2005 of the Romanian Ministry of Education and Science, "Combinatorial, algebraic, topological methods in Algebra and Geometry", University of Constanta, Romania, 2005-2008.

Theses supervision:

- B.Sc. (University of Nova Gorica): Karolina Koren (2014), Tanja Abram (2014)
- M.Sc. (University of Nova Gorica): Tamara Hohannisyan (2015), Andi Jamšek (2021)
- Ph.D. - ongoing (University of Montenegro): Milica Kankaraš (expected in 2022)

Expert work:

- Since 10.2020, Editor in Chief of Italian Journal of Pure and Applied Mathematics, journal covered by Scopus and Web of Science
- Since 2007, peer reviewer for more than 60 SCI mathematical journals and for Mathematical Reviews (<https://publons.com/author/1545735/irina-cristea#profile>)
- guest editor in Mathematics, ISSN 2227-7390, Q1 journal, with the special issue “Algebraic Structures and Graph Theory” (https://www.mdpi.com/journal/mathematics/special_issues/Algebraic_Structures_Graph_Theory)
- guest editor in Mathematics, ISSN 2227-7390, Q1 journal, with the special issue “State-of-the-Art Mathematical Applications in Europe” (https://www.mdpi.com/journal/mathematics/special_issues/Math_Appl_Europe)
- guest editor in Symmetry, ISSN 2073-8994, Q2 journal, with the special issue "Symmetry in Classical and Fuzzy Algebraic Hypercompositional Structures" (https://www.mdpi.com/journal/symmetry/special_issues/Fuzzy_Algebraic_Hypercompositional_Structures)
- member of the editorial board of the international journals:

1. Mathematics (Scopus, WoS), ISSN 2227-7390, 2020-...
2. Scientific World Journal (Scopus, WoS) ISSN 1537-744X, 2013-2016
3. Italian journal of pure and applied mathematics (Scopus, WoS), ISSN 2239-0227, 2010-...
4. Ratio mathematica ISSN 1592-7415, 2013-...
5. Journal of algebra and applied mathematics (Scopus) ISSN 2319-7234, 2018-...
6. Scientific Bulletin, "Mircea cel Batrân" Naval Academy Press, ISSN 2392-8956, 2011-...
7. Journal of Hyperstructures ISSN 2251-8436, 2012-...
8. Journal of mathematical extension (WoS) ISSN 1735-8299, 2019-...

- International evaluator of the PhD thesis "On the study of automata and languages based on fuzzy sets, fuzzy multisets and rough sets" by Binod Kumar Sharma, submitted to the Indian Institute of Technology, Dhanbad, India, 2018

Membership in scientific conferences:

- co-chair of the symposium "Hypercompositional Algebra – new Developments and Applications (1st HAnDA) within 15th International Conference on Numerical Analysis and Applied Mathematics (ICNAAM 2017)", Thessaloniki, Greece, 25-30.09.2017
- member of the organizing committee of the conferences/workshops:

1. 11th International Congress on Algebraic Hyperstructures and Applications (AHA 2011), Chieti, Italy, 17-21.10. 2011

2. A new approach in theoretical and applied methods in algebra and analysis, Constanta, Romania, 4-6.04.2013

- member of the technical committee of the conferences:

1. International Conference on Computer Science & Computational Mathematics, Malaysia, since 2012-to date each year.

2. 12th International Congress on Algebraic Hyperstructures and Applications (AHA 2014), Xanthi, Greece, 2-7.09.2014

3. 13th International Congress on Algebraic Hyperstructures and Applications (AHA 2017), Istanbul, Turčija, 24-27.07.2017

4. 14th International Congress on Algebraic Hyperstructures and Applications (AHA 2020), Iasi, Romania, 22-25.06.2020

Cooperation with international institutions and groups:

Italy (University of Udine), Romania (University "Ovidius" of Constanta, University of Bucharest, University of Iasi), Iran (University of Tehran, University of Yazd, University of Kerman, University of Rafsanjan, Babol University of Technology, University of Bojnord, Shahid Bahonar University), Czech Republic (University of Defence of Brno, Brno University of Technology), China (Hubei Institute of Nationalities), Montenegro (University of Montenegro), Saudi Arabia (Majmaah University), Korea (Gyeongsang National University), India (Gandhi University)

Teaching experience: Over 18 years of teaching experience in mandatory courses including Basic mathematics, Linear algebra, Technical mathematics, Business mathematics, Group theory (1st, 2nd and 3rd level of study).

LIST OF PUBLICATIONS

Scientific monograph:

B. Davvaz, I. Cristea, Fuzzy algebraic hyperstructures: an introduction, (Studies in fuzziness and soft computing, vol. 321), Springer, 2015.

Editor of the scientific monograph:

Symmetry in classical and fuzzy algebraic hypercompositional structures, (Symmetry (Basel)): MDPI, 2020. ISBN 978-3-03928-708-6.

Articles in WoS/ Scopus journals

67. DEHGHAN, Omid Reza, NOROUZI, Morteza, CRISTEA, Irina Elena. Composition vector spaces as a new type of tri-operational algebras. *Mathematics*, ISSN 2227-7390, 2021, vol. 9, iss. 18, str. 1-9, [COBISS.SI-ID [77144835](#)]
66. CRISTEA, Irina Elena, NOVAK, Michal, ONASANYA, Babatunde Oluwaseun. Links between HX-groups and hypergroups. *Algebra colloquium*, ISSN 1005-3867, 2021, vol. 28, iss. 3, str. 441-452, doi: [10.1142/S10053867121000341](#). [COBISS.SI-ID [65771011](#)],
65. BORDBAR, Hashem, CRISTEA, Irina Elena. About the normal projectivity and injectivity of Krasner hypermodules. *Axioms*, ISSN 2075-1680, 2021, vol. 10, iss. 2, str. 1-15, doi: [10.3390/axioms10020083](#). [COBISS.SI-ID [61846531](#)]
64. BORDBAR, Hashem, CRISTEA, Irina Elena. Regular parameter elements and regular local hyperrings. *Mathematics*, ISSN 2227-7390, 2021, vol. 9, iss. 3, str. 1-13, doi: [10.3390/math9030243](#). [COBISS.SI-ID [48837891](#)]
63. CRISTEA, Irina Elena, KANKARAS, Milica. The reducibility concept in general hyperrings. *Mathematics*, ISSN 2227-7390, 2021, vol. 9, iss. 17, str. 1-14, doi: [10.3390/math9172037](#). [COBISS.SI-ID [73968899](#)]
62. ZADEH, Azam Adineh, NOROUZI, Morteza, CRISTEA, Irina Elena. The commutative quotient structure of m-idempotent hyperrings. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2020, vol. 28, no. 1, str. 219-236, doi: [10.2478/auom-2020-0015](#). [COBISS.SI-ID [5593595](#)]
61. BORDBAR, Hashem, NOVAK, Michal, CRISTEA, Irina Elena. A note on the support of a hypermodule. *Journal of algebra and its applications*, ISSN 0219-4988, 2020, vol. 19, no. 1, str. 1-19. doi: [10.1142/S021949882050019X](#). [COBISS.SI-ID [5335291](#)]
60. CRISTEA, Irina Elena, MAHBOOB, Ahsan, KHAN, Noor Mohammad. A new type of fuzzy quasi-ideals of ordered semigroups. *Journal of multiple-valued logic and soft computing*, ISSN 1542-3980, 2020, vol. 34, no. 3/4, str. 283-304. [COBISS.SI-ID [15243779](#)]

59. KANKARAS, Milica, CRISTEA, Irina Elena. Fuzzy reduced hypergroups. *Mathematics*, ISSN 2227-7390, 2020, vol. 8, iss. 2, str. 1-12, doi: [10.3390/math8020263](https://doi.org/10.3390/math8020263). [COBISS.SI-ID [5566715](#)]
58. HEIDARI, Dariush, CRISTEA, Irina Elena. On factorizable semihypergroups. *Mathematics*, ISSN 2227-7390, 2020, vol. 8, iss. 7, str. 1-7, doi: [10.3390/math8071064](https://doi.org/10.3390/math8071064). [COBISS.SI-ID [21221891](#)]
57. SONEA, Andromeda Cristina, CRISTEA, Irina Elena. The class equation and the commutativity degree for complete hypergroups. *Mathematics*, ISSN 2227-7390, 2020, vol. 8, iss. 12, str. 1-15, doi: [10.3390/math8122253](https://doi.org/10.3390/math8122253). [COBISS.SI-ID [43881731](#)]
56. CRISTEA, Irina Elena, HASSANI SADRABADI, Elhan, DAVVAZ, Bijan. A fuzzy application of the group Z_n to complete hypergroups. *Soft computing*, ISSN 1432-7643, 2020, vol. 24, iss. 5, str. 3543-3550, doi: [10.1007/s00500-019-04121-0](https://doi.org/10.1007/s00500-019-04121-0). [COBISS.SI-ID [5404667](#)]
55. ZADEH, Azam Adineh, NOROUZI, Morteza, CRISTEA, Irina Elena. A comparison of complete parts on m -idempotent hyperrings. *Symmetry*, ISSN 2073-8994, 2020, vol. 12, iss. 4, str. 1-12, doi: [10.3390/sym12040554](https://doi.org/10.3390/sym12040554). [COBISS.SI-ID [5598971](#)]
54. VAHEDI, Vahid, JAFARPOUR, Morteza, AGHABOZORGI, Hossien, CRISTEA, Irina Elena. Extension of elliptic curves on Krasner hyperfields. *Communications in algebra*, ISSN 0092-7872, 2019, vol. 47, iss. 11, str. 4806-4823, doi: [10.1080/00927872.2019.1596279](https://doi.org/10.1080/00927872.2019.1596279). [COBISS.SI-ID [5367547](#)]
53. NOVAK, Michal, CRISTEA, Irina Elena. Composition in EL-hyperstructures. *Hacettepe journal of mathematics and statistics*, ISSN 2651-477X, 2019, vol. 48, no. 1, str. 45-58, doi: [10.15672/HJMS.2017.513](https://doi.org/10.15672/HJMS.2017.513). [COBISS.SI-ID [4944891](#)]
52. AGHABOZORGI, Hossien, JAFARPOUR, Morteza, DOLATABADI, M., CRISTEA, Irina Elena. An algorithm to compute the number of Rosenberg hypergroups of order less than 7. *Italian journal of pure and applied mathematics*, ISSN 2239-0227, 2019, no. 42, str. 262-270, [COBISS.SI-ID [5433851](#)]
51. CRISTEA, Irina Elena, KOCIJAN, Juš, NOVAK, Michal. Introduction to dependence relations and their links to algebraic hyperstructures. *Mathematics*, ISSN 2227-7390, 2019, vol. 7, iss. 10, str. 1-14, doi: [10.3390/math7100885](https://doi.org/10.3390/math7100885). [COBISS.SI-ID [5453307](#)]
50. IRANMANESH, Mahdiyeh, JAFARPOUR, Morteza, CRISTEA, Irina Elena. The non-commuting graph of a non-central hypergroup. *Open Mathematics*, ISSN 2391-5455, 2019, vol. 17, iss. 1, str. 1035-1044, doi: [10.1515/math-2019-0084](https://doi.org/10.1515/math-2019-0084). [COBISS.SI-ID [5452539](#)]
49. HEIDARI, Dariush, CRISTEA, Irina Elena. Breakable semihypergroups. *Symmetry*, ISSN 2073-8994, 2019, vol. 11, iss. 1, str. 1-10, doi: [10.3390/sym11010100](https://doi.org/10.3390/sym11010100). [COBISS.SI-ID [5313787](#)]

48. DAKIĆ, Jelena, JANČIĆ-RAŠOVIĆ, Sanja, CRISTEA, Irina Elena. Weak embeddable hypernear-rings. *Symmetry*, ISSN 2073-8994, 2019, vol. 11, iss. 8, str. 1-10, doi: [10.3390/sym11080964](https://doi.org/10.3390/sym11080964). [COBISS.SI-ID [5433595](#)]
47. VAHEDI, Vahid, JAFARPOUR, Morteza, CRISTEA, Irina Elena. Hyperhomomorphisms on Krasner hyperfields. *Symmetry*, ISSN 2073-8994, 2019, vol. 11, iss. 12, str. 1-19, doi: [10.3390/sym11121442](https://doi.org/10.3390/sym11121442). [COBISS.SI-ID [5484795](#)]
46. JANČIĆ-RAŠOVIĆ, Sanja, CRISTEA, Irina Elena. Division hypernear-rings. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2018, vol. 26, no. 3, str. 109-126, doi: [10.2478/auom-2018-0036](https://doi.org/10.2478/auom-2018-0036). [COBISS.SI-ID [5263099](#)]
45. JANČIĆ-RAŠOVIĆ, Sanja, CRISTEA, Irina Elena. Hypernear-rings with a defect of distributivity. *Filomat*, ISSN 0354-5180, 2018, vol. 32, no. 4, str. 1133-1149. doi: [10.2298/FIL1804133J](https://doi.org/10.2298/FIL1804133J). [COBISS.SI-ID [5175803](#)]
44. YAQOOB, Naveed, CRISTEA, Irina Elena, et al. Left almost polygroups. *Italian journal of pure and applied mathematics*, ISSN 2239-0227, 2018, no. 39, str. 465-474, [COBISS.SI-ID [5131259](#)]
43. NOROUZI, Morteza, CRISTEA, Irina Elena. Hyperrings with n-ary composition hyperoperation. *Journal of algebra and its applications*, ISSN 0219-4988, 2018, vol. 17, no. 2, str. 1-17. doi: [10.1142/S0219498818500226](https://doi.org/10.1142/S0219498818500226). [COBISS.SI-ID [4840187](#)]
42. ABBASIZADEH, N., CRISTEA, Irina Elena, DAVVAZ, Bijan, ZHAN, Jianming. Subpolygroups related to a fuzzy topology. *Journal of multiple-valued logic and soft computing*, ISSN 1542-3980. 2018, vol. 31, no. 1/2, str. 155-173. [COBISS.SI-ID [5190907](#)]
41. NOROUZI, Morteza, CRISTEA, Irina Elena. Transitivity of the ϵ_m -relation on (m-idempotent) hyperrings. *Open Mathematics*, ISSN 2391-5455, 2018, vol. 16, iss. 1, str. 1012-1021. doi: [10.1515/math-2018-0085](https://doi.org/10.1515/math-2018-0085). [COBISS.SI-ID [5201915](#)]
40. NOVAK, Michal, KŘEHLÍK, Štěpán, CRISTEA, Irina Elena. Cyclicity in EL-hypergroups. *Symmetry*, ISSN 2073-8994, 2019, vol. 10, iss. 11, str. 1-13, doi: [10.3390/sym10110611](https://doi.org/10.3390/sym10110611). [COBISS.SI-ID [5266939](#)]
39. NOROUZI, Morteza, CRISTEA, Irina Elena. A note on composition (m; n)-hyperrings. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2017, vol. 25, no. 2, str. 101-122. doi: [10.1515/auom-2017-0023](https://doi.org/10.1515/auom-2017-0023). [COBISS.SI-ID [4843259](#)]
38. BORDBAR, Hashem, CRISTEA, Irina Elena. Height of prime hyperideals in Krasner hyperrings. *Filomat*, ISSN 0354-5180, 2017, vol. 31, iss. 19, str. 6153-6163, doi: [10.2298/FIL1719153B](https://doi.org/10.2298/FIL1719153B). [COBISS.SI-ID [4978939](#)]

37. NOROUZI, Morteza, CRISTEA, Irina Elena. A new type of fuzzy subsemihypermodules. *Journal of intelligent & fuzzy systems*, ISSN 1064-1246, 2017, vol. 32, no. 3, str. 1711-1717, doi: [10.3233/JIFS-151867](https://doi.org/10.3233/JIFS-151867). [COBISS.SI-ID [4701179](#)]
36. NOROUZI, Morteza, CRISTEA, Irina Elena. Fundamental relation on m-idempotent hyperrings. *Open Mathematics*, ISSN 2391-5455, 2017, vol. 15, iss. 1, str. 1558-1567, doi: [10.1515/math-2017-0128](https://doi.org/10.1515/math-2017-0128). [COBISS.SI-ID [4988667](#)]
35. BORDBAR, Hashem, CRISTEA, Irina Elena, NOVÁK, Michal. Height of hyperideals in Noetherian Krasner hyperrings. *Scientific Bulletin. Series A, Applied mathematics and physics*, ISSN 1223-7027, 2017, vol. 79, iss. 2, str. 31-42. [COBISS.SI-ID [4790011](#)]
34. JAFARPOUR, Morteza, CRISTEA, Irina Elena, TAVAKOLI, Ali. A method to compute the number of regular reversible Rosenberg hypergroup. *Ars combinatoria*, ISSN 0381-7032, Jul. 2016, vol. 128, str. 309-329, [COBISS.SI-ID [4489211](#)]
33. AGHABOZORGI, Hossien, CRISTEA, Irina Elena, JAFARPOUR, Morteza. On complementable semihypergroups. *Communications in algebra*, ISSN 0092-7872, 2016, vol. 44, no. 4, str. 1740-1753, doi: [10.1080/00927872.2015.1027395](https://doi.org/10.1080/00927872.2015.1027395). [COBISS.SI-ID [4155643](#)]
32. CRISTEA, Irina Elena. Fuzzy subhypergroups degree. *Journal of multiple-valued logic and soft computing*, ISSN 1542-3980, 2016, vol. 27, no. 1, str. 75-88. [COBISS.SI-ID [4410363](#)]
31. DAVVAZ, Bijan, HASSANI SADRABADI, E., CRISTEA, Irina Elena. Atanassov's intuitionistic fuzzy grade of complete hypergroups of order less than or equal to 6. *Hacettepe journal of mathematics and statistics*, ISSN 1303-5010, 2015, vol. 44, no. 2, str. 295-315, doi: [10.15672/HJMS.2015449427](https://doi.org/10.15672/HJMS.2015449427). [COBISS.SI-ID [3888123](#)]
30. CRISTEA, Irina Elena, DAVVAZ, Bijan, HASSANI SADRABADI, E. Special intuitionistic fuzzy subhypergroups of complete hypergroups. *Journal of intelligent & fuzzy systems*, ISSN 1064-1246, 2015, vol. 28, no. 1, str. 237-245, doi: [10.3233/IFS-141294](https://doi.org/10.3233/IFS-141294). [COBISS.SI-ID [3454203](#)]
29. JAFARPOUR, Morteza, CRISTEA, Irina Elena, ALIZADEH, F. On dihedral hypergroups. *European journal of combinatorics*, ISSN 0195-6698, 2014, vol. 44, part B, str. 242-249, doi: [10.1016/j.ejc.2014.08.010](https://doi.org/10.1016/j.ejc.2014.08.010). [COBISS.SI-ID [3520251](#)]
28. ZHAN, Jianming, CRISTEA, Irina. Characterizations of fuzzy soft Γ -hemirings. *Journal of intelligent & fuzzy systems*, ISSN 1064-1246, 2014, vol. 26, no. 2, str. 901-911, doi: [10.3233/IFS-130781](https://doi.org/10.3233/IFS-130781). [COBISS.SI-ID [2718715](#)]
27. CRISTEA, Irina. Regularity of intuitionistic fuzzy relations on hypergroupoids. V: *Workshop on a new approach in theoretical and applied methods in algebra and analysis, Constanta, Romania, April 4-6, 2013 [...] and Workshop on Algebraic and Analytic Number Theory and their Applications, Constanta, Romania, May 23-24, 2013*, (Analele Universității "Ovidius" Constanța, ISSN 1224-1784, vol. 22, no. 1). Constanța: Ovidius University Press. 2014, vol. 22, no. 1, str. 105-119, doi: [10.2478/auom-2014-0009](https://doi.org/10.2478/auom-2014-0009). [COBISS.SI-ID [3277563](#)]

26. CRISTEA, Irina, ZHAN, Jianming. Lower and upper fuzzy topological subhypergroups. *Acta mathematica Sinica, English series*, ISSN 1439-8516, 2013, vol. 29, no. 2, str. 315-330, doi: [10.1007/s10114-012-1170-4](https://doi.org/10.1007/s10114-012-1170-4). [COBISS.SI-ID [2634747](#)]
25. CRISTEA, Irina, JANČIĆ-RAŠOVIĆ, Sanja. Composition hyperrings. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2013, vol. 21, no. 2, str. 81-94. [COBISS.SI-ID [2850555](#)]
24. ANGHELUȚĂ, Carmen, CRISTEA, Irina. On Atanassov's intuitionistic fuzzy grade of complete hypergroups. *Journal of multiple-valued logic and soft computing*, ISSN 1542-3980, 2013, vol. 20, no. 1/2, str. 55-74. [COBISS.SI-ID [2623995](#)]
23. DAVVAZ, Bijan, HASSANI SADRA BADI, E., CRISTEA, Irina. Atanassov's intuitionistic fuzzy grade of I.P.S. hypergroups of order 7. *Journal of multiple-valued logic and soft computing*, ISSN 1542-3980, 2013, vol. 20, no. 5/6, str. 467-506. [COBISS.SI-ID [2728955](#)]
22. CRISTEA, Irina, JANČIĆ-RAŠOVIĆ, Sanja. Operations on fuzzy relations : a tool to construct new hyperrings. *Journal of multiple-valued logic and soft computing*, ISSN 1542-3980, 2013, vol. 21, no. 1/2, str. 183-200. [COBISS.SI-ID [2823419](#)]
21. HEDAYATI, Hossein, CRISTEA, Irina. Fundamental Γ -semigroup through Hv- Γ -semigroups. *Scientific Bulletin. Series A, Applied mathematics and physics*, ISSN 1223-7027, 2013, vol. 75, no. 2, str. 33-46. [COBISS.SI-ID [2743291](#)]
20. CRISTEA, Irina, JAFARPOUR, Morteza, MOUSAVI, Seyed S. On fuzzy preordered structures and (Fuzzy) hyperstructures. *Acta mathematica Sinica, English series*, ISSN 1439-8516, 2012, vol. 28, no. 9, str. 1787-1798, doi: [10.1007/s10114-012-0314-x](https://doi.org/10.1007/s10114-012-0314-x). [COBISS.SI-ID [2490107](#)]
19. DAVVAZ, Bijan, HASSANI SADRA BADI, E., CRISTEA, Irina. Atanassov's intuitionistic fuzzy grade of I. P. S. hypergroups of order less than or equal to 6. *Iranian journal of fuzzy systems*, ISSN 1735-0654, 2012, vol. 9, no. 4, str. 71-97. [COBISS.SI-ID [2606075](#)]
18. ANGHELUȚĂ, Carmen, CRISTEA, Irina. Fuzzy grade of the complete hypergroups. *Iranian journal of fuzzy systems*, ISSN 1735-0654, 2012, vol. 9, no. 6, str. 43-56. [COBISS.SI-ID [2684411](#)]
17. CRISTEA, Irina, ȘTEFĂNESCU, Mirela, ANGHELUȚĂ, Carmen. About the fundamental relations defined on the hypergroupoids associated with binary relations. *European journal of combinatorics*, ISSN 0195-6698, 2011, vol. 32, no. 1, str. 72-81. [COBISS.SI-ID [2062587](#)]
16. ZHAN, Jianming, CRISTEA, Irina. Γ -hypermodules: isomorphisms and regular relations. *Scientific Bulletin. Series A, Applied mathematics and physics*, ISSN 1223-7027, 2011, vol. 73, no. 4, str. 71-78. [COBISS.SI-ID [2062331](#)]
15. CRISTEA, Irina, JAFARPOUR, Morteza, MOUSAVI, Seyed S., SOLEYMANI, Ali. Enumeration of Rosenberg hypergroups. *Computers & Mathematics with Applications*, ISSN 0898-1221, 2010, vol. 60, no. 10, str. 2753-2763. [COBISS.SI-ID [2063867](#)]

14. CRISTEA, Irina, ȘTEFĂNESCU, Mirela. Hypergroups and n-ary relations. *European journal of combinatorics*, ISSN 0195-6698, 2010, vol. 31, no. 3, str. 780-789. [COBISS.SI-ID [2061307](#)]
13. CRISTEA, Irina, DARAFSHEH, Mohammad Reza. About a decomposition of the group Z_{pq} , where p and q are distinct odd primes. *European journal of combinatorics*, ISSN 0195-6698, 2010, vol. 31, no. 7, str. 1880-1886. [COBISS.SI-ID [2062075](#)]
12. CRISTEA, Irina, DAVVAZ, Bijan. Atanassov's intuitionistic fuzzy grade of hypergroups. *Information sciences*, ISSN 0020-0255, 2010, vol. 180, no. 8, str. 1506-1517. [COBISS.SI-ID [2065915](#)]
11. CRISTEA, Irina. About the fuzzy grade of the direct product of two hypergroupoids. *Iranian journal of fuzzy systems*, ISSN 1735-0654, 2010, vol. 7, no. 2, str. 95-108. [COBISS.SI-ID [2061563](#)]
10. CRISTEA, Irina, DARAFSHEH, Mohammad Reza. A decomposition of the cyclic groups of order p and p^2 , where p is a prime number. *Journal of intelligent & fuzzy systems*, ISSN 1064-1246, 2010, vol. 21, no. 4, str. 255-259. [COBISS.SI-ID [2066171](#)]
9. CRISTEA, Irina. Several aspects on the hypergroups associated with n-ary relations. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2009, vol. 17, no. 3, str. 99-110. [COBISS.SI-ID [2066939](#)]
8. CRISTEA, Irina. Hyperstructures and fuzzy sets endowed with two membership functions. *Fuzzy sets and systems : international journal of soft computing and intelligence*, ISSN 0165-0114, 2009, vol. 160, no. 8, str. 1114-1124. [COBISS.SI-ID [2065659](#)]
7. CRISTEA, Irina, HOSKOVA, S. Fuzzy pseudotopological hypergroupoids. *Iranian journal of fuzzy systems*, ISSN 1735-0654, 2009, vol. 6, no. 4, str. 11-19. [COBISS.SI-ID [2067195](#)]
6. CRISTEA, Irina, ȘTEFĂNESCU, Mirela. Binary relations and reduced hypergroups. *Discrete Mathematics*, ISSN 0012-365X, 2008, vol. 308, no. 16, str. 3537-3544. [COBISS.SI-ID [2063611](#)]
5. ȘTEFĂNESCU, Mirela, CRISTEA, Irina. On the fuzzy grade of hypergroups. *Fuzzy sets and systems : international journal of soft computing and intelligence*, ISSN 0165-0114, 2008, vol. 159, no. 9, str. 1097-1106. [COBISS.SI-ID [2065147](#)]
4. CRISTEA, Irina. A property of the connection between fuzzy sets and hypergroupoids. *Italian journal of pure and applied mathematics*, ISSN 1126-8042, 2007, no. 21, str. 73-82. [COBISS.SI-ID [2063355](#)]
3. CORSINI, Piergiulio, CRISTEA, Irina. Fuzzy sets and non complete 1-hypergroups. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2005, vol. 13, no. 1, str. 27-53. [COBISS.SI-ID [2062843](#)]
2. CORSINI, P., CRISTEA, Irina. Fuzzy grades of i.p.s. hypergroups of order 7. *Iranian journal of fuzzy systems*, ISSN 1735-0654, 2004, vol. 1, no. 2, str. 15-32. [COBISS.SI-ID [2061819](#)]

1. CRISTEA, Irina. Complete hypergroups, 1-hypergroups and fuzzy sets. *Analele Universității "Ovidius" Constanța, Seria Matematică*, ISSN 1224-1784, 2002, vol. 10, no. 2, str. 25-37. [COBISS.SI-ID [2063099](#)]

Articles in Proceedings indexed by Scopus/ Web of Science

4. CRISTEA, Irina Elena, JANČIĆ-RAŠOVIĆ, Sanja, OSTADHADI-DEHKORDI, Sohrab. How to define tensor products of hypermodules. In: *International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2017), 5-30 September 2017, Thessaloniki, Greece*, (AIP conference proceedings, ISSN 0094-243X, vol. 1978, iss. 1). Melville (New York): American Institute of Physics. 2018, pp. 340003-1-340003-4. [COBISS.SI-ID [5175547](#)]
3. JANČIĆ-RAŠOVIĆ, Sanja, CRISTEA, Irina Elena. A note on near-rings and hypernear-rings with a defect of distributivity. In: *International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2017), 5-30 September 2017, Thessaloniki, Greece*, (AIP conference proceedings, ISSN 0094-243X, vol. 1978, iss. 1). Melville (New York): American Institute of Physics. 2018, pp. 340007-1-340007-4. [COBISS.SI-ID [5175035](#)]
2. BORDBAR, Hashem, NOVÁK, Michal, CRISTEA, Irina Elena, et al. Properties of reduced meet ideals in lower BCK-semilattices. In: *Proceedings, 17th Conference on Applied Mathematics, APLIMAT 2018, February 6-8, 2018, Bratislava, Slovak Republic*. 1st ed. Bratislava: Institute of Mathematics and Physics, Faculty of Mechanical Engineering, Slovak University of Technology. 2018, 97-109. [COBISS.SI-ID [5067003](#)]
1. NOVÁK, Michal, CRISTEA, Irina Elena, KŘEHLÍK, Štěpán. A class of hyperlattices induced by quasi-ordered semigroups. In: *APLIMAT 2017 proceedings*. 1st ed. Bratislava: Institute of Mathematics and Physics, Faculty of Mechanical Engineering, Slovak University of Technology. 2017, 1124-1135. [COBISS.SI-ID [4660987](#)]

Chapters in books indexed by Springer

3. GUBIANI, Donatella, CRISTEA, Irina Elena, URBANČIČ, Tanja. Introducing e-learning to a traditional university : a case-study. In: *Qualitative and quantitative models in socio-economic systems and social work*, (Studies in systems, decision and control, vol. 208). Cham: Springer. 2020, 225-241, [COBISS.SI-ID [5406971](#)]
2. LEPELLERE, Maria Antonietta, CRISTEA, Irina Elena, GUBIANI, Donatella. The E-learning system for teaching bridging mathematics course to applied degree studies. In: *Models and theories in social systems*, (Studies in systems, decision and control, vol. 179). Basel: Springer International. cop. 2019, 295-309, [COBISS.SI-ID [5246459](#)]
1. CRISTEA, Irina. Intuitionistic fuzzy preference relations and hypergroups. In: *Multicriteria and multiagent decision making with applications to economics and social sciences*, (Studies in fuzziness and soft computing, 305). Heidelberg [etc.]: Springer. cop. 2013, 85-96, [COBISS.SI-ID [2737915](#)]