

# CURRICULUM VITAE

## PERSONAL:

Name: ALINA CRISTIANA GAVRILUT

Birthday: July 8, 1975

Citizenship: Romanian

Address: Al. I. Cuza University, Faculty of Mathematics, Bd. Carol I, 11, Iasi-700506, ROMANIA

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## HIGHER EDUCATION:

- Faculty of Mathematics, Al. I. Cuza University of Iasi, Romania (October 1993 - June 1997);
- Master degree, section *Abstract Analysis and Applications*, Faculty of Mathematics, Al. I. Cuza University of Iasi (October 1997 - June 1999);
- PhD thesis, *Properties of regularity for set multifunctions (in Romanian)*, University Al. I. Cuza, Iasi, June 2006, supervisor Prof. dr. Anca-Maria Precupanu.

## POSITIONS:

- 1997-2002: teacher of mathematics at a Lyceum in Iasi, Romania
- 2002-2004: instructor professor, Faculty of Mathematics, University Al.I.Cuza, Iasi
- 2004 -2008: assistant professor, Faculty of Mathematics, University Al. I.Cuza, Iasi
- 2008- present: lecturer, Faculty of Mathematics, University Al. I. Cuza, Iasi.

## GRANTS:

- **MEMBER 2003-2005**, CNCSIS GRANT 39-1313 : *Set-valued and variational methods in measure theory, optimization and approximation theory*, director - prof. dr. Teodor Precupanu.
- **INTERNATIONAL GRANT CONFERENCE Abdus Salam International Center for Theoretical Physic** supporting participation to Infinite Dimensional Analysis and Topology Conference, IDAT, Yaremche, Ukraine, 27 May-1 June, 2009.

## MEMBER:

- AMS
- Al. Myller Mathematical Seminary Foundation, Iasi.
- THE EDITORIAL BOARD of JP Journal of Mathematical Sciences Ishaan Publishing House, Ishaan Research Center, Jaunpur, India.

**AWARDS:** Best PhD Thesis, Mathematics, Al.I. Cuza Iasi, 2006.

## REVIEWER:

- Mathematical Reviews.
- Zentralblatt

## OCCASIONAL REFEREE FOR:

- i) Fuzzy Sets and Systems Journal
- ii) Iranian Journal of Fuzzy Systems
- iii) Information Sciences
- iv) An. St. Univ. Iasi
- v) Knowledge-Based Systems Journal
- vi) Mathematical and Computer Modelling
- vii) International Journal of the Physical Sciences

## RESEARCH INTEREST:

1. Measure theory, general (hyper)topology, real functions;
2. (Non)additive set functions and multifunctions.

## BOOKS:

- 1) *Properties of regularity for set multifunctions* (in Romanian), Venus Publishing House, Iasi, 2006, ISBN: 973-756-045-0; 978-973-756-045-2.
- 2) *Numerical Series. Problems* (jointly with A. Croitoru) (in Romanian), Venus Publishing House, Iasi, 2007, ISBN: 978-973-756-056-8.
- 3) *Regular multisubmeasures – chapter* in the book *Modern Trends in Set-Valued Analysis and Optimization Theory*, A. Croitoru - coordinating, A.M. Precupanu, T. Precupanu, M. Turinici, N. Apreutesei Dumitriu, C. Stamate, B.R. Satco, C. Vaideanu, G. Apreutesei, D. Rusu, **A.C. Gavrilit**, M. Apetrii, Venus Publishing House Iasi, 2006 (in Romanian).
- 4) *Numerical series. Sequences of functions. Series of functions* (jointly with A. Croitoru and C. Vaideanu) (in Romanian), PIM Publishing House Iasi, 2012.
- 5) *Regular set multifunctions*, PIM Publishing House, Iasi, 2012.
- 6) *A mathematical approach in the dynamics of the complex systems* (jointly with M. Agop), (in Romanian), ArsLonga Publishing House, Iasi, 2013.

## PAPERS:

### I) ISI PAPERS

1. *A Gould type integral with respect to a multisubmeasure*, *Mathematica Slovaca* 58 (2008), no 1, 1-20.
2. *Types of extensions for multisubmeasures*, *An. St. Univ. Iasi*, LIV, 2008, f.1, 65-74.
3. *Properties of regularity with respect to the Vietoris topology*, *An. St. Univ. Iasi*, LIV, f.2, 2008, 347-360.
4. *Non-atomicity and the Darboux property for fuzzy and non-fuzzy Borel/Baire multivalued set functions*, *Fuzzy Sets and Systems*, 160 (2009), 1308-1317.
5. *Non-atomicity for fuzzy and non-fuzzy multivalued set functions* (jointly with A. Croitoru), *Fuzzy Sets and Systems*, 160 (2009), 2106-2116.
6. *The general Gould type integral with respect to a multisubmeasure*, *Mathematica Slovaca* 60 (2010), no. 3, 289–318.
7. *Regularity and autocontinuity of set multifunctions*, *Fuzzy Sets and Systems*, Vol. 161 (2010), 681-693.
8. *A Fuzzy Gould Type Integral* (jointly with A. Precupanu and A. Croitoru), *Fuzzy Sets and Systems*, 161 (2010), 661-680.

9. *A Lusin type theorem for regular monotone uniformly autocontinuous set multifunctions*, Fuzzy Sets and Systems, 161 (2010), 2909–2918.
10. *Pseudo-atoms and Darboux property for set multifunctions* (jointly with A. Croitoru), Fuzzy Sets and Systems, 161 (2010), 2897–2908.
11. *Fuzzy Gould integrability on atoms*, Iranian Journal of Fuzzy Systems, Vol. 8, no. 3, (2011), 113–124.
12. *A set-valued Egoroff type theorem* (jointly with A. Precupanu), Fuzzy Sets and Systems, 175 (2011), 87–95.
14. *Set-valued Lebesgue and Riesz type theorems* (jointly with A. Precupanu), An. St. Univ. Iasi, 2013, Vol. LIX, f.1, DOI: 10.2478/v10157-012-0028-5.
15. *Abstract regular null-null-additive set multifunctions in Hausdorff topology*, An. St. Univ. Iasi, 2013, Vol. LIX, Issue 1, 129–147.
16. *Alexandroff theorem in Hausdorff topology for null-null-additive set multifunctions*, An. St. Univ. Iasi, 2013, Vol. LIX, Issue 2, 237–251.
17. *Pseudo-convergences of sequences of measurable functions on monotone multimeasure spaces* (jointly with A. Precupanu), An. St. Univ. Iasi, 2013, Vol. LVIII, Issue 1, 67–84.
18. *Continuity properties and Alexandroff theorem in Vietoris topology*, Fuzzy Sets and Systems, Vol. 194, 2012, 76–89.
19. *On the regularities of fuzzy set multifunctions with applications in variation, extensions and fuzzy set-valued integrability problems*, Information Sciences, Vol. 224, 2013, 130–142.
20. *Set-norm exhaustive set multifunctions* (jointly with A. Croitoru), Iranian Journal of Fuzzy Systems, Vol. 10, No. 1 (2013), 123–134.
21. *Set-valued Lusin type theorem for null-null-additive set multifunctions* (jointly with A. Precupanu), Fuzzy Sets and Systems, Vol. 204, 2012, 106–116.
22. *Remarks on monotone interval-valued set multifunctions*, Information Sciences, Vol. 259, 2014, 225–230.

## II) ISI PROCEEDINGS

- 1) *Fuzzy multisubmeasures and applications* (jointly with A. Croitoru), Advanced Topics on Fuzzy Systems, Proceedings of the 9<sup>th</sup> International Conference on Fuzzy Systems (FS 08), Sofia, Bulgaria, 2008, May 2-4, 113–119.
- 2) *On Darboux Property of Fuzzy Multimeasures* (jointly with A. Croitoru, G. Apreutesei and N. Mastorakis), Proceedings of the 10th WSEAS Int. Conf. on Fuzzy Systems (FS 09), Prague, Czech Republic, March 23-25, 2009, 54–58.
- 3) *On regular multisubmeasures and their applications* (jointly with N. Mastorakis), WSEAS Computational Intelligence Conference, Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia, June 26-28, 2009, 109–114.
- 4) *Finitely purely (pseudo) atomic set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Computational Intelligence Conference, Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia, June 26-28, 2009, 103–108.
- 5) *Topological properties for the translation of a non-linear topology* (jointly with G. Apreutesei, A. Croitoru and N.E. Mastorakis), 8<sup>th</sup> WSEAS International Conference of Non-linear Analysis, Non-linear Systems and Chaos (NOLASC 09), University of La Laguna, Tenerife, Canary Islands, Spain, July 1-3, 2009, 305–309.

- 6) *Continuity properties of fuzzy set multifunctions* (jointly with A. Croitoru and N. Mastorakis), 9<sup>th</sup> WSEAS International Conference on Simulation, Modelling and Optimization (SMO 09), Budapest, Hungary, September 3-5, 2009, 201-206.
- 7) *On different types of convergences for sequences of totally-measurable functions* (jointly with A. Croitoru and N. Mastorakis), 9<sup>th</sup> WSEAS International Conference on Simulation, Modelling and Optimization (SMO 09), Budapest, Hungary, Sept. 3-5, 2009, 196-200.
- 8) *Non-atomic set multifunctions*, WSEAS Conference on Computational Intelligence (CI 10), Bucharest, Romania, April 20-22, 2010, 74-79.
- 9) *Fuzzy diffused set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Conference on Computational Intelligence (CI 10), Bucharest, Romania, April 20-22, 2010, 148-153.
- 10) *Null-additive fuzzy set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Conference on Fuzzy Systems (FI 10), Iasi, Romania, June 13-15, 2010.
- 11) *About L-infinity space for fuzzy measures* (jointly with A. Croitoru), Recent Researches in Neural Networks, Fuzzy Systems, Evolutionary Computing & Automation, Proceedings of the 12-th WSEAS International Conference on Fuzzy Systems (FS'11), Brasov, Romania, April 11-13, 2011, 88-91.

### III) OTHER REFEREED PAPERS

1. *Properties of regularity for multisubmeasures*, An. St. Univ. Iasi, L, s. I a, 2004, f. 2, 373-392.
2. *Regularity and o-continuity for multisubmeasures*, An. St. Univ. Iasi, L, s. I a, 2004, f. 2, 393-406.
3. *K-tight multisubmeasures, K-D-regular multisubmeasures*, An. St. Univ. Iasi, LI, s. I a, 2005, f. 2, 387-404.
4. *On some properties of the Gould type integral with respect to a multisubmeasure*, An. St. Univ. Iasi, 52, 2006, no.1, 177-194.
5. *Properties of regularity for multisubmeasures with respect to the Vietoris topology*, An. St. Univ. Iasi, 2006, LII, s. I, 389-400.
6. *A Gould type integral with respect to a submeasure* (jointly with A. Petcu), An. St. Univ. Iasi, LIII, 2007, f. 2, 351-368.
7. *Properties of regularity for multisubmeasures with respect to the Wijsman topology*, Novi Sad Journal, vol. 38, no 2, 2008, 41-46.
8. *On the Darboux property in the multivalued case* (jointly with A. Croitoru), Annals of the University of Craiova, Mathematics and Computer Sciences 35 (2008), 130-138.
9. *On different types of non-additive set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Journal Transactions on Mathematics, 8 (2009), 246-257.
10. *Measurability and Gould integrability in finitely purely atomic multisubmeasure spaces* (jointly with A. Croitoru and N.E. Mastorakis), WSEAS Journal Transactions on Mathematics, 435-444, 2009.
11. *On the translation of an almost linear topology* (jointly with G. Apreutesei, N.E. Mastorakis and A. Croitoru), WSEAS Journal Transactions on Mathematics, 2009, 479-488.
12. *Convergence theorems for totally-measurable functions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Journal Transactions on Mathematics, 2009, 614-623.
13. *Properties of non-additive set multifunctions* (jointly with A. Croitoru), Annals of the University of Timisoara, Mathematics and Informatics, XLVII, 1, (2009), 9– 19.
14. *An extension by preserving non-atomicity of set multifunctions* (jointly with A. Croitoru) – Bul. Instit. Pol. Iasi, Mathematics. Theoretical Mechanic. Physics, LIII (LVII), 5, 2007, 111-121.

15. *Some properties of the Gould type integral with respect to a submeasure* (jointly with A. Petcu) – Bul. Instit. Pol. Iasi, Mathematics. Theoretical Mechanic. Physics, LIII (LVII), 5, 2007, 121-131.
16. *A set valued Gould integral* (jointly with A. Croitoru) – Proceedings of 6-th Congres of Romanian Mathematicians, June 28 - July 4, 2007, Bucharest, Romanian Academy Publishing House, Proceedings of the Sixth Congress of Romanian Mathematicians, Bucharest, 2007, vol. 1, 135–143.
17. *On order-continuous set multifunctions in Hausdorff topology* (jointly with A. Croitoru), Proceedings of the International Conference of Analysis and Topology, Lviv, Ukraine, June 2-7, 2008, Matematychni Studii 31 (2009), 149-156.
18. *Pseudo-atoms of fuzzy multisubmeasures* (jointly with A. Croitoru), The 2-nd International Conference on Mathematics and Informatics (ICMI), Scientific Studies and Research, Series Mathematics and Informatics, Proceedings of ICMI 2 (2009), vol. 19 (2009), no. 2, 185-195.
19. *A set-valued Lusin type theorem*, The 2-nd International Conference on Mathematics and Informatics (ICMI), Scientific Studies and Research, Series Mathematics and Informatics, Proceedings of ICMI 2 (2009), vol. 19 (2009), no. 2, 265-274.
20. *On totally-measurable functions* (jointly with A. Croitoru), The 2-nd International Conference on Mathematics and Informatics (ICMI), Scientific Studies and Research, Series Mathematics and Informatics, Proceedings of ICMI 2 (2009), vol. 19 (2009), no. 2, 275-287.
- 21) *Semivariation and exhaustivity of set multifunctions*, Scientific Studies and Research, Series Mathematics and Informatics, Vol. 20 (2010), No. 1, 61 – 82.
- 22) *Convergence theorems for a (set-valued) fuzzy integral* (jointly with A. Croitoru), Aplimat Journal of Applied Mathematics, vol. III (2010), no. 1, 221-232.
- 23)  *$L^p$  spaces generated by a fuzzy Gould integral* (jointly with A. Croitoru), Aplimat Journal of Applied Mathematics, vol. III (2010), no. 1, 233-244.
- 24) *Diffusion and semi-convexity of fuzzy set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Journal Transactions on Mathematics, 2010.
- 25) *Non atomic set multifunctions*, Computer and Simulation in Modern Science, Vol. 5, 2011, 118-123.

## CONFERENCES

- 1) *Properties of regularity for multisubmeasures* – Celebration of Al.I. Cuza University from Iasi, Romania, October, 2003.
- 2) *A Gould type integral with respect to a multisubmeasure* – Celebration of Al.I. Cuza University from Iasi, Romania, October, 2004.
- 3) *Sequences of Gould integrable functions with respect to a multisubmeasure* Celebration of Al.I. Cuza University from Iasi, Romania, October, 2005.
- 4) *Regularity and order continuity for multisubmeasures* – Celebration of Univ. Al.I. Cuza University from Iasi, Romania, October, 2006.
- 5) *A set valued Gould integral* (jointly with A. Croitoru) – 6-th Congres of the Romanian Mathematicians, June 28 - July 4, 2007, Bucharest, Romania.
- 6) *On the Darboux property in the multivalued case* (jointly with A. Croitoru) – 9<sup>th</sup> National Conference of Mathematical Analysis and Applications, Iasi, Romania, October 26-27, 2007.
- 7) *A Gould type integral with respect to a submeasure* (jointly with A. Petcu) – 9<sup>th</sup> National Conference of Mathematical Analysis and Applications, Iasi, Romania, October 26-27, 2007.
- 8) *Properties of regularity with respect to the Vietoris topology for multisubmeasures*

- 9<sup>th</sup> National Conference of Mathematical Analysis and Applications, Iasi, Romania, October 26-27, 2007.
- 9) *An extension by preserving non-atomicity of set multifunctions* (jointly with A. Croitoru) – First National Conference of Pure and Applied Mathematics, Department of Mathematics, Technical University Gh. Asachi Iasi, Romania, November 9-10, 2007.
  - 10) *Some properties of the Gould type integral with respect to a submeasure* (jointly with A. Petcu) – First National Conference of Pure and Applied Mathematics, Department of Mathematics, Technical University Gh. Asachi Iasi, Romania, November 9-10, 2007.
  - 11) *Fuzzy multisubmeasures and applications* (jointly with A. Croitoru), the 9<sup>th</sup> International Conference on Fuzzy Systems (FS 08), WSEAS, Sofia, Bulgaria, May 2-4, 2008.
  - 12) *Decompositions by pseudo-atoms of fuzzy multifunctions in Hausdorff topology* (jointly with A. Croitoru), VII Iberoamerican Conference on Topology and Its Applications, Valencia, Spain, June 25-28, 2008.
  - 13) *On order-continuous set multifunctions in Hausdorff topology* (jointly with A. Croitoru), International Conference of Analysis and Topology, Lviv, Ukraine, June 2-7, 2008.
  - 14) *On a generalized Gould type set-valued integral* (jointly with A. Precupanu and A. Croitoru), 3<sup>rd</sup> International Conference on Vector Measures, Integration and Applications (VMIA), Eichstatt, Germany, September 24-26, 2008.
  - 15) *Relationships among fuzzy multimeasures and other types of set multifunctions* (jointly with A. Precupanu and A. Croitoru), Celebration of the A.I. Cuza University from Iasi, Romania, October, 2008.
  - 16) *Atoms and pseudo-atoms for set multifunctions* (jointly with A. Croitoru), Celebration of A.I. Cuza University from Iasi, Romania, October, 2008.
  - 17) *Regular non-atomic set multifunctions*, Celebration of A.I. Cuza University from Iasi, Romania, October, 2008.
  - 18) *On Darboux Property of Fuzzy Multimeasures* (jointly with A. Croitoru, N. Mastorakis and G. Apreutesei), Proceedings of the 10th WSEAS Int. Conf. on FUZZY SYSTEMS, Prague (FS 09), Czech, March 23-25, 2009.
  - 19) *Regularity for set multifunctions in Hausdorff topology*, Infinite Dimensional Analysis and Topology, IDAT, Yaremche, Ukraine, 27 May-1 June, 2009.
  - 20) *Semiconvex set multifunctions* (jointly with A. Croitoru), Infinite Dimensional Analysis and Topology, IDAT, Yaremche, Ukraine, 27 May-1 June, 2009.
  - 21) *On regular multisubmeasures and their applications* (jointly with N. Mastorakis), WSEAS Computational Intelligence Conference, Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia, June 26-28, 2009.
  - 22) *Finitely purely (pseudo) atomic set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Computational Intelligence Conference, Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia, June 26-28, 2009.
  - 23) *Topological properties for the translation of a non-linear topology* (jointly with G. Apreutesei, A. Croitoru and N.E. Mastorakis), 8<sup>th</sup> WSEAS International Conference of Non-linear Analysis, Non-linear Systems and Chaos (NOLASC 09), University of La Laguna, Tenerife, Canary Islands, Spain, July 1-3, 2009.
  - 24) *On atoms and pseudo-atoms of set multifunctions* (jointly with A. Croitoru, C. Stamate and B. Satco), Positivity VI, El Escorial, Madrid, Spain, July 20-24, 2009.
  - 25) *Continuity properties of fuzzy set multifunctions* (jointly with A. Croitoru and N. Mastorakis), 9<sup>th</sup> WSEAS International Conference on Simulation, Modelling and Optimization (SMO 09), Budapest, Hungary, September 3-5, 2009.
  - 26) *On different types of convergences for sequences of totally-measurable functions* (jointly

- with A. Croitoru and N. Mastorakis), 9<sup>th</sup> WSEAS International Conference on Simulation, Modelling and Optimization (SMO 09), Budapest, Hungary, September 3-5, 2009.
- 27) *Pseudo-atoms of fuzzy multisubmeasures* (jointly with A. Croitoru), The 2-nd International Conference on Mathematics and Informatics (ICMI), Bacau, Romania, September 8-10, 2009.
- 28) *A set-valued Lusin type theorem*, The 2-nd International Conference on Mathematics and Informatics (ICMI), Bacau, Romania, September 8-10, 2009.
- 29) *On totally-measurable functions* (jointly with A. Croitoru), The 2-nd International Conference on Mathematics and Informatics (ICMI), Bacau, Romania, Sept. 8-10, 2009.
- 30) *Properties of totally-measurable functions* (jointly with A. Croitoru), Celebration of A.I. Cuza University from Iasi, Romania, October 23-24, 2009.
- 31) *Gould type integrability on atoms*, Celebration of A.I. Cuza University from Iasi, Romania, October 23-24, 2009.
- 32) *Non-atomic set multifunctions*, WSEAS Conference on Computational Intelligence (CI 10), Bucharest, Romania, April 20-22, 2010.
- 33) *Fuzzy diffused set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Conference on Computational Intelligence (CI 10), Bucharest, Romania, April 20-22, 2010.
- 34) *Null-additive fuzzy set multifunctions* (jointly with A. Croitoru and N. Mastorakis), WSEAS Conference on Fuzzy Systems (FI 10), Iasi, Romania, June 13-15, 2010.
- 35) *About L-infinity in non-additive case* (jointly with A. Croitoru), The 18-th Conference on Applied and Industrial Mathematics (CAIM-2010), Iasi, Romania, October 14-17, 2010.
- 36) *About L-infinity space for fuzzy measures*, Recent Researches in Neural Networks, Fuzzy Systems, Evolutionary Computing & Automation, Proceedings of the 12-th WSEAS International Conference on Fuzzy Systems (FS'11), Brasov, Romania, April 11-13, 2011.
- 37) *Fundamental theorems regarding convergences and pseudoconvergences with respect to non-additive set multifunctions* (jointly with A. Precupanu), Celebration of A.I. Cuza University from Iasi, Romania, October, 2011.
- 38) *Considering Gould integrable functions* (jointly with A. Croitoru), The 4-th International Scientific Conference Mathematics & IT: Research and Education (MITRE-2013) Chisinau, Republic of Moldova, August 19-21, 2013.
- 39) *Considerations on Gould integrable multifunctions* (jointly with A. Croitoru), The 16-th General Meeting of EWM (European Women in Mathematics), Bonn, Germany, September 2-6, 2013.
- 40) *Remarks on Birkhoff integrability* (jointly with A. Croitoru), CAIM Conference, Bucharest, 2013.
- 41) *Continuity properties in hypertopologies*, CAIM Conference, Bucharest, 2013.
- 42) *Lusin theorem in Vietoris topology*, International Conference on Applied and Pure Mathematics, November 1-3, 2013, Iasi.
- 43) *Properties of a Gould type set-valued integral* (jointly with A. Croitoru and D. Bors), International Conference on Applied and Pure Mathematics, November 1-3, 2013, Iasi.
- 44) *Continuity properties for set multifunctions in Wijsman topology* (jointly with G. Apreutesei), International Conference on Applied and Pure Mathematics, November 1-3, 2013, Iasi.
- 45) *Set-valued integration in spaces with set-norm* (jointly with A. Croitoru and D. Bors), Celebration of A.I. Cuza University from Iasi, Romania, October, 2013.