Curriculum Vitae

• Personal ID:

Name	:	Abdolali BASIRI
Date of Birth	:	Sept. 11, 1969
Sex	:	Male
Marital Status	:	Married
Nationality	:	Iranian

• Work Address:

School of Mathematics and Computer Science,
Damghan University,
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Damghan, Iran.

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• Education:

2000–2003
Ph. D. in Informatics, Paris VI University,
Thesis Title : *Gröbnerr basis and LLL Algorithm, Fast Arithmetic of C_{ab} Curves.*
Supervisors: J.-C. Faugère., D. Lazard.

19992–1994
Master of Science in Pure Mathematics, Tehran University, GPA: 17.07/20.0.
Thesis Title: Local Defining Ideal of a Generic Quadruple Point.
Supervisor: R. Zaare-Nahandi.

1987–1992
Bachelor of Science in Mathematics(application in computer), Ferdowsi University of Mashhad, GPA: 15.31/20.0.

• Teaching:

Algebra, Linear algebra, Computational aspects of commutative algebra, Computational aspects in algebraic geometry, Maple, Computational complexity.

• Research Topics:

My main interests lie in Gröbner Basis and its applications in Cryptography.

- **Conference Papers :**

1. Sh. Fakouri, S. Rahmany and **A. Basiri**, *A new algorithm for computing SAGBI bases up to an arbitrary degree*, Proceeding of 25^{st} Iranian Algebra Seminar Hakim Sabzevari University, July 20-21, 2016.

2. M. Mirkarim, **A. Basiri** and S. Rahmany, *Numerical Approach For Solving Stiff Systems Using Gröbner Basis*, Proceeding of 25^{st} Iranian Algebra Seminar Hakim Sabzevari University, July 20-21, 2016.

3. M. Mirkarim, **A. Basiri**, S. Rahmany and B. M.-Alizadeh, *A New Approach to Obtain Infinitesimal Generators of Lie Symmetry Group of ODEs*, Proceeding of 47^{st} Annual Iranian Mathematics Conference (AIMC47), Kharazmi University, August 28-31, 2016.

4. Sh. Fakouri,, **A. Basiri**, S. Rahmany and B. M.-Alizadeh, *Some Improvements on Algebraic Representation of PDE Systems*, Proceeding of 47^{st} Annual Iranian Mathematics Conference (AIMC47), Kharazmi University, August 28-31, 2016.

5. **A. Basiri**, S. Rahmany, and M. Riahi, *A new algorithm to compute secondary invariants* , Proceeding of 46^{st} Annual Iranian Mathematics Conference, Yazd University, August 25–28, 2015.

6. B. M.-Alizadeh, S. Rahmany and **A. Basiri**, *An Efficient Computational Algebraic Method for Convex Polynomial Optimization* , Proceeding of 46^{st} Annual Iranian Mathematics Conference, Yazd University, August 25–28, 2015.

7. H. Harfshenu, H. Nosratipour, A. Hashemi Borzabadi, S. Rahmany and **A. Basiri**, *Global polynomial optimization via Gröbner Basis* , Proceeding of 45^{st} Annual Iranian Mathematics Conference, Yazd University, August 26–29, 2014.

8. M. Boroujeni, **A. Basiri**, and S. Rahmany *On Homogenization SAGBI-Gröbner Bases in Invariant Rings* The Workshop on Computational Differential Algebra and Related Topics, School of Mathematics, IPM, Tehran, June 21–25, 2014.

9. B. M.-Alizadeh, S. Rahmany and **A. Basiri** *Interval Gröbner Systems* The Workshop on Computational Differential Algebra and Related Topics, School of Mathematics, IPM, Tehran, June 21–25, 2014.

10. S. Rahmany, **A. Basiri** and N. Arabamery, *A Parametric Gröbner Basis Approach For Finding Solutions Of Interval Polynomials Systems*, Proceeding of 44^{st} Annual Iranian Mathematics Conference, Ferdowsi University of Mashhad, August 27–30, 2013.

11. M.S. Chaharbashloo, **A. Basiri** and S. Rahmany, *Some proofs of Geometrical theorems using Gröbner Basis*, 12^{st} Iranian Mathematics Education Conference, 3–6 September 2012.

12. F. Shahid and **A. Basiri**, *On the F_5 and F_5B algorithms*, The 9th Seminar on Commutative Algebra and Related Topics, Ferdowsi University of Mashhad, November 7-8, 2012.

13. S. Rahmany, **A. Basiri** and M. Mohaghegh nezhad, *A New Method For Solving Systems Of Polynomial Equations With Symmetry*, First National Conference on Computational Science, Damghan, Iran, Septembere 6-7, 2012.

14. M.S. Chaharbashloo, **A. Basiri** and S. Rahmany, *The Ansatz Approach in Quantum Mechanics using Gröbner Basis*, First National Conference on Computational Science, Damghan, Iran, Septembere 6-7, 2012.

15. H. Noori, **A. Basiri** and S. Rahmany, *Some Applications of Gröbner Bases*, Proceeding of International Conference on Computer, Electrical, and Systems Sciences, and Engineering, Paris, France, pages 141-144, July 27-29, 2011.

16. S. Rahmany, **A. Basiri** and H. Noori, *A New Algorithm for Computing Sagbi-Gröbner Bases*, Proceeding of 41^{st} Annual Iranian Mathematics Conference, University of Urmia, 12-15 September 2010.

17. **A. Basiri**, S. Rahmany and D. Khatibi, *A new implementation of Miura-Arita algorithm for Miura curves*, Proceeding of International Conference on Engineering and Technology, Penang, Malaysia, Pages 51–54, February 24-26, 2010.

18. S. Rahmany, **A. Basiri**, *Computing SAGBI-Gröbner Basis of Ideals of Invariant Rings by Using Gaussian Elimination*, Proceeding of International Conference on Engineering and Technology, Penang, Malaysia, Pages 55–58, February 24-26, 2010.

19. **A. Basiri**, M. Borujeny, *Chang the Ordering of Gröbner Bases from DRL Order to Lex Order in General Case with LLL Algorithm*, Proceeding of 40^{th} Annual Iranian Mathematics Conference, Sharif University of Technology, 17–20 Auguest 2009.

20. **A. Basiri**, *A New Method for Computing the Inverse Ideal in a Coordinate Ring*, Proceedings of 4th International Conference on Computer, Electrical, Systems Science and Engineering International Journal Of Mathematical, Physical and Engineering Sciences, pages 38 – 40, Bangkong, Thailand, 2007.

21. **A. Basiri**, *Formulae for arithmetic on non-hyperelliptic curves*, Proceeding of Algebraic Geometry and Geometric Modeling, Barcelona, Spain, Pages 37–39, September 2006.

22. **A. Basiri** and Ali Tahmasbi, *Arithmetic in the ideal class group; Some special cases*, *Proceeding of Computational and Mathematical Methods on Science and Engineering, Madrid, Spain, Pages 83–89, September 2006.*

23. **A. Basiri**, A. Enge, J.-C. Faugère, N. Gürel, *The Arithmetic of Jacobian Group of C_{34} Curves,* 16^{th} *Seminar on Algebra. IASBS, Zanjan, Iran, 17-19 November 2004.*

24. **A. Basiri** and J-C. Faugère, *Changing the ordering of Gröbner Bases with LLL: Case of Two Variables In J. Rafael Sendra, editor,* Proceedings of ISSAC (International Symposium in Symbolic and Algebraic Computation)*, pages 23–29. ACM Press, 2003.*

25. **A. Basiri**, *Arithmétique des Jacobiennes de courbes superelliptiques cubiques, Journée National de Calcul Formel, CIRM, Luminy, France, January 20-24, 2003.*

26. **A. Basiri**, *An Application of LLL Algorithme in Gröbner Basis, École Jeune Chercheurs en Algorithmique et Calcul Formel, Marne-La-Vallé, France, 31 Mars to 4 April 2003.*

- **International invited talks :**

1. **A. Basiri** *Fast Arithmetic for C_{ab} curves*, 2005 Workshop on Cryptography and Related Mathematics, Chuo University, Japan, 8-10 August 2005.

- **Journal Papers :**

1. M. Borujeni , **A. Basiri**, S. Rahmany and A. Valibouze, *Finding Solutions of Fuzzy Polynomial Equations Systems by an Algebraic Method* , Volume 30, pages 791–800, Journal of Intelligent and Fuzzy Systems,

2. M. Borujeni , **A. Basiri**, S. Rahmany and A. Valibouze, *Solving Fuzzy Systems in Dual Form using Wu's Method*, Volume 17(2), pages 170–180, International Journal of Fuzzy Systems, 2015.

3. M. Borujeni , **A. Basiri**, S. Rahmany and A. Valibouze, *F_4-invariant algorithm for computing SAGBI-Gröbner Bases*, Theoretical Computer Science, Volume 573, Pages 54–62, 2015.

4. H. Farahani, S. Rahmany and **A. Basiri**, *Determining of Level Sets for a Fuzzy Surface Using Gröbner Basis*, International Journal of Fuzzy System Applications (IJFSA), Volume 4(2), pages 1–14, 2015.

5. H. Farahani, S. Rahmany, **A. Basiri**, and A. Abbasi Molai, *Resolution of a system of fuzzy polynomial equations using eigenvalue method*, Volume 19(2), pages 283–291, Soft Computing, 2014.

6. M.S. Chaharbashloo, **A. Basiri**, S. Rahmany and S. Zarrinkamar, *An Application of Gröbner Basis in Differential Equations of Physics*, Zeitschrift für Naturforschung,Volume 68, Pages 646–650, 2013.

7. A. Abbasi Molai, **A. Basiri** and S. Rahmany, *Resolution of a system of fuzzy polynomial equations using the Gröbner basis*, Information Sciences, Volume 220, pages 541-558, 2013

8. M. Borujeni , **A. Basiri**, S. Rahmany and A. H. Borzabadi, *A modified LLL Algorithm for Change of Ordering of Gröbner Basis*, International Journal of Nonlinear Analysis and Applications, Volume 4, Number 1, pages 59-65, 2013.

9. A. H. Borzabadi , **A. Basiri** and S. Rahmany, *Optimal Control of Fredholm Integral Equations with Polynomial Kernels Based on the Benefits of Gröbner Bases*, Journal of Advanced Research in Applied Mathematics, Volume 5, Issue 3, pages 29-40, 2013.

10. **A. Basiri** and S. Rahmany, *C_{ab} Curves: A quick short-cut*, TWMS Journal of Pure and Applied Mathematics , Volume 4, Number 1, pages 69-77, 2013.

11. S. Rahmany, **A. Basiri**, H. Farahani and A. H. Borzabadi, *A Gröbner basis approach to solve fully fuzzy polynomial equations systems*, Journal of Intelligent and Fuzzy Systems, (25), pages 395-402, 2013.

12. **A. Basiri**, A. Enge, J.-C. Faugère and N. Gürel *The Arithmetic of Jacobian Groups of Superelliptic Cubics.* Mathematics of Computation, Volume 74, Number 249, pages 389-410, 2005.

13. **A. Basiri**, A. Enge, J.-C. Faugère and N. Gürel *Implementing the Arithmetic of $C_{3,4}$ Curves*, *Proceedings of ANTS (Algorithmic Number Theory Symposium)*, Lecture Notes in Computer Science, pages 87–101, Springer-Verlag, 2004.

• Research Projects:

1. Co-operator: S. Rahmany, Title: *An efficient Algorithm for computing Sagbi-Gröbner Basis,* Damghan University, N 531/07/88/math, Iran, 2009.

2. Co-operator: J.-C. Faugère, Title: *Changing the ordering of Gröbner Bases with LLL: Case of Two Variables,* INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE, N 4746, France, 2003.

3. Co-operators: A. Enge, J.-C. Faugère and N. Gürel, Title: *The arithmetic of Jacobian groups of superelliptic cubics,* INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE, N 4618, France, 2002.

• Experiences:

1. President of Damghan university, 2014 – now

2. Chairman of International and Scientific Cooperation Office (Damghan university), 2010 – 2014

3. Vice chancellor in education affairs(Damghan university), 2006 – 2010

4. Dean of school of Mathematics and Computer Science(Damghan university), 2004 – 2006