Curriculum Vitae

Dr. Vasudeva Rao Allu

Assistant Professor
Department of Mathematics
Indian Institute of Technology Kharagpur
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Education

Ph.D. in Mathematics
Indian Institute of Technology Madras, Chennai, India
Thesis Title : A study of regions of variability type problems for classes of univalent functions, *July 2010,*
Thesis Advisor: Prof. S. Ponnusamy

M.Sc. in Mathematics
University of Hyderabad, Hyderabad, India *July, 2002*

Research Interests

Complex Analysis, Univalent Function Theory, Harmonic Mappings (in the Plane)

Research Experience

(i) Assistant Professor at IIT Kharagpur, India from 26–6–2013 to till date.

(ii) Assistant Professor(On Tunure Track) at IIT Kharagpur, India from September 08, 2011 to 26–6–2013.

(iii) Post-Doctoral Fellow at Technion-Israel Institute of Technology, Haifa, Israel from September 04, 2010 – January 31, 2011.

(iv) NBHM Post-Doctoral Fellow at IIT Madras, India from April 01, 2010 to September 04, 2010 and from February 01, 2011 to September 06, 2011.

(v) Research Associate (NBHM Project title: Apollonian Metric and Problems in Geometric Function Theory) from January 21, 2010 to March 31, 2010.

Fellowships and Achievements

- NBHM (Govt. of India) Post-Doctoral Fellowship.
- Post-Doctoral Fellowship at Technion-Israel Institute of Technology, Haifa, Israel.

- Distinguished CIMO (Center for International Mobility) (Grant no: 15.5.2007/ TM-07-5076/CIMO fellowship), Finland.
- Received Gold Medal and Aryabhatta Award for securing State First Rank in Andhrapradesh Mathematical Olympiod at M.Sc. level conducted by Andhrapradesh Association of Mathematics Teachers (A.P.A.M.T.) in 2002.
- Received The Best Paper Presentation Award for the paper "Region of variability for certain subclasses of univalent functions" in 22nd Annual conference of Ramanujan Mathematical Society organized by the Department of Mathematical and Computational Sciences, National Institute of Technology Surathkal, India during June 6-8, 2007.

Publications

1. Md Firoz Ali and A. Vasudevarao, On logarithmic coefficients of some close-to-convex functions, *Proc. Amer. Math. Soc.* (2017) (Accepted for publication). DOI: https://doi.org/10.1090/proc/13817

2. Md Firoz Ali and A. Vasudevarao, Logarithmic coefficients of some close-to-convex functions, *Bull. Aust. Math. Soc.* **95** (2017), 228-237.

3. Md Firoz Ali and A. Vasudevarao, On Coefficient Estimates of Negative Powers and Inverse Coefficients for Certain Starlike Functions, *Proc. Indian Acad. Sci. (Math. Sci.)* **127**(3)(2017), 449–462.

4. Nirupam Ghosh and A. Vasudevarao, Coefficient estimates for certain subclass of analytic functions defined by subordination, *Filomat* **31**(11) (2017), 3307–3318.

5. A. Vasudevarao, Fekete-Szegö inequality for certain spirallike functions, *C. R. Math. Acad. Sci. Paris* **354** (2016), 1065-1070.

6. M. Okada, S. Ponnusamy, A. Vasudevarao and H. Yanagihara, Circular Symmetrization, Subordination and Arclength problems on Convex Functions, *Math. Nachr.* **289** (2016), 1044-1051.

7. Md Firoz Ali and A. Vasudevarao, Coefficient inequalities and Yamashitas conjecture for some classes of analytic functions, *J. Aust. Math. Soc.* **100**(1)(2016), 1-20.

8. A. Vasudevarao, Fekete-Szegö problem for certain subclasses of univalent functions, *Bull. Korean Math. Soc.* **52** (6)(2015), 19371943

9. Md Firoz Ali and A. Vasudevarao, Integral Means and Dirichlet integral for certain class of analytic function, *J. Aust. Math. Soc.* **99**(3)(2015), 315–333.

10. A. Vasudevarao, An Arclength problem for some subclasses of m-fold symmetric functions, *Mathematica (Cluj)* **56**(79)(2014), 182-192.

11. A. Vasudevarao, An arclength problem for some subclasses of univalent functions, *Journal of Analysis* **22** (2014), 145-149.

12. A. Vasudevarao, Region of variability for some subclasses of univalent functions, *Springer Proceedings in Mathematics & Statistics* **91** (2013), 151170.

13. A. Vasudevarao and Hiroshi Yanagihara, On the growth of analytic functions in the class $\mathcal{U}(\lambda)$. *Comput. Methods Funct. Theory* **13**(4) (2013), 613-634.

14. S. Ponnusamy, A. Vasudevarao and M. Vuorinen, Region of variability for exponentially convex functions, *Complex Anal. Oper. Theory* **5**(3) (2011), 955–966.

15. S. Ponnusamy and A. Vasudevarao, Region of variability for functions with positive real part *Ann. Polon. Math.* **99**(3)(2010), 225–245.

16. S. Ponnusamy, A. Vasudevarao, and H. Yanagihara, Region of variability for close-to-convex functions-II, *Appl. Math. Comput.* **215**(3)(2009), 901–915.

17. S. Ponnusamy, A. Vasudevarao and M. Vuorinen, Region of variability for certain classes of univalent functions satisfying differential inequalities, *Complex Var. Elliptic Equ.* **54**(10)(2009), 899–922.

18. S. Ponnusamy, A. Vasudevarao and M. Vuorinen, Region of variability for spirallike functions with respect to a boundary point, *Colloq. Math.* **116**(1)(2009), 31–46.

19. S. Ponnusamy, A. Vasudevarao and H. Yanagihara, Region of variability of univalent functions $f(z)$ for which $zf'(z)$ is spirallike, *Houston J. Math.* **34**(4)(2008), 1037–1048.

20. S. Ponnusamy, A. Vasudevarao and H. Yanagihara, Region of variability for close-to-convex functions, *Complex Var. Elliptic Equ.* **53**(8)(2008), 709 – 716.

21. S. Ponnusamy and A. Vasudevarao, Region of variability of two subclasses of univalent functions, *J. Math. Anal. Appl.* **332**(2007), 1323–1334.

Submitted papers

1. On Certain Families of Analytic Functions in the Hornich Space (with Md Firoz Ali)

2. On Some Subclass of Harmonic Close-to-convex Mappings (with Nirupam Ghosh)

3. Logarithmic coefficients for certain subclasses of close-to-convex functions (with U. Pranav Kumar)

4. On logarithmic coefficients of univalent functions (with Pranav Upadrashta)

5. A note on Toeplitz determinant whose elements are the coefficients of univalent functions (with Md Firoz Ali)

Research Visit(s)

(i) Visiting Professor at the Department of Applied Sciences, `Yamaguchi University, Ube, Japan` during December 11–25, 2011.

(ii) Post-Doctoral Fellow at `Technion-Israel Institute of Technology, Haifa, Israel` from September 04, 2010 to January 31, 2011.

(iii) Visiting scholar at the Department of mathematics, `University of Turku, Finland` from August 03, 2009 to September 30, 2009.

(iv) Visited ``1 `December` 1918''`University of Alba Iulia`, `Romania` for presenting the paper entitled *"Regions of variability for certain subclasses of univalent functions"* at International conference on Complex Analysis and Related Topics, 11^{th} Romannian –Finnish Seminar from August 14–19, 2008.

(v) Visiting scholar at the Department of mathematics, `University of Turku, Finland` from November 01, 2007 to February 28, 2008.

Guiding the students

at Ph.D. level : 01 (completed) and 02 (ongoing)

at M.Sc. level : 08 (completed), 02 (ongoing)

at Under graduate level: One (completed)

Sponsored Projects

1. Project Title : Certain conjectures on univalent and harmonic mappings
   Principal Investigator : Prof. Vasudeva Rao Allu
   Co-Principal-Investigators : None
   Sponsor : SERB, Govt. of India (under the scheme "Start Up Research Grant (Young Scientist))"

2. Project Title : Problems and Conjectures in Geometric Function Theory
   Principal Investigator : Prof. Vasudeva Rao Allu
   Co-Principal-Investigators : None
   Sponsor : National Board for Higher Mathematics (Department of Atomic Energy), Govt. of India

3. Project Title : Coefficient bounds, distortion condition for subclasses of univalent functions and Nitsche type conjectures for harmonic univalent functions
   Principal Investigator : Prof. Vasudeva Rao Allu
   Co-Principal-Investigators : None
   Sponsor : ISIRD, SRIC, IIT Kharagpur

Professional service

(a) Served as one of the organizing Secretaries of ICM 2010 Satellite Conference: International Workshop on Harmonic and Quasiconformal Mappings (HQM2010) at IIT Madras, India, during August 09-17, 2010.

(b) American Mathematical Society Mathematical Reviewer (since 2009) Zentralblatt reviewer (since 2010)

(c) Member of American Mathematical Society (from January 2011)

(d) Life member in Indian Mathematical Society, India

(e) Life member in Ramanujan Mathematical Society, India

Invited talks

1. Invited talk entitled "On the Growth of Some Subclasses of the Class of Univalent Functions" at International Symposium in Geometric Function Theory and Applications at Isik University, Turkey during August 26- September 4 , 2013.

2. Invited talk entitled *Introduction to Harmonic Univalent Mappings* at the Department of Applied Sciences, `Yamaguchi University, Ube, Japan` during December 19–23, 2011.

3. Invited talk entitled *"Region of variability for functions with positive real part"* in `Helsinki Analysis seminar` on September 28, 2009 at `Analysis Research Group`, Department of Mathematics and Statistics, `University of Helsinki, Finland`.

4. Invited talk entitled *"Region of variability and Fekete Szegö problem for exponentially convex univalent functions"* in `Helsinki Analysis seminar` on September 14, 2009 at `Analysis Research Group`, Department of Mathematics and Statistics, `University of Helsinki, Finland`.

5. Invited talk entitled *"Region of variability for exponentially convex univalent functions"* on August 07, 2009 in `Turku Analysis seminar` at Department of Mathematics, University of Turku, Turku, Finland.

6. Seminar talk entitled *"Region of variability for functions with positive real part"* at the **Department of Mathematics, IIT Madras** on July 02, 2009.

7. Invited talk entitled *"Certain classes of univalent functions and radius problems"* in `Turku Analysis Seminar` on January 30, 2008 at Department of Mathematics, University of Turku, Turku, Finland.

8. `International Congress of Mathematicians (ICM 2010)` at Hyderabad, August 19–27, 2010
   Topic: *" Region of variability for spirallike functions with respect to a boundary point"*

9. `ICM 2010 Satellite Conference: International Workshop on Harmonic and Quasiconformal Mappings (HQM2010)` at IIT Madras, August 09-17, 2010
   Topic: *" Region of variability for functions with positive real part"*

10. International conference on Complex Analysis and Related Topics, 12^{th} Romannian –Finnish Seminar at `University Turku, Finland`, August 17-21, 2009
    Topic: *"Region of variability for exponentially convex univalent functions"*

11. Finnish Mathematical Days 2008 at Helsinki University of Technology, Helsinki, Finland, January 3-4, 2008
    Topic: *"Region of variability for certain classes of univalent functions satisfying differential inequalities"*

References

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