**CURRICULUM VITAE**
**Arthur A. Danielyan**
**Department of Mathematics and Statistics**

**Professional Membership --** Member of American Mathematical Society (AMS)

**Served as referee for research mathematical journals**
1.

USF Internal Conference Grant for SEAM 2016 (PI, Award amount $5,000).
USF CAS Professional Development Leave Award (Fall semester, 2012).
USF Faculty International Travel Grant (Award amount $2,500) (Spring/Summer 2012).
USF CAS Professional Development Leave Award (Spring semester, 2009).

German DAAD grant for Visiting Research Professor (December 1, 1996-February 28, 1997). My research has been supported by University of Oldenburg, Germany, during my visits to that school in 1996-97 and in 2009. While working in Russia in 1994-98 my research has been supported by RFBR (Russian Foundation for Basic Research). The same foundation has supported my participation at international conferences and research visits by travel grants.

**RESARCH INTERESTS: Complex analysis, Approximation theory**. In particular: Boundary behavior of analytic functions; Pointwise and uniform approximation by polynomials, rational and entire functions in the complex plane; Functional analysis methods in approximation theory; Complex measures, Conformal mapping methods in approximation theory; Applications of real analysis and of topological and set theory methods in complex analysis.

# The main focus of my recent (ongoing) research:
(I)A project in the theory of bounded analytic functions. In particular, my paper [28] solves an open problem proposed by Lee Rubel in 1973. Note that this problem has been included in the well-                                                                                    function theory.
**My new paper [36]** (submitted for publication) clarifies and solves a problem proposed by M. von Renteln in 1980 which is yet ano                                                             .

**(II)** Joint project with Vilmos Totik on problems of potential theory, complex and harmonic analysis on the work of 1940s of R. Salem, A. Zygmund, and A. Beurling. In [25], published in 2016, we solved the problem of proving the converse to a theorem of Salem and Zygmund. We also gave some applications of this result in the theory of univalent functions.

**INTERNATIONAL COLLABORATION AND TALKS**

June 8, 2023. Talk at the Institute of Mathematics of the National Academy of Sciences of Armenia, (Yerevan, Armenia) Talk:

October 4-30, 2019, Research visits to Europe: Moscow (Russia), Szeged (Hungary).

July 20, 2017, Talk at the Institute of Mathematics of the National Academy of Sciences of Armenia, (Yerevan, Armenia) Talk: Interpolation by Bounded Analytic Functions.

June 23, 2016, Talk at the Institute of Mathematics of the National Academy of Sciences of Armenia, (Yerevan, Armenia) Talk:
interpolation problem.

June 12, 2015, Talk at the University College Dublin (Dublin, Ireland). Talk: Bounded approximation by polynomials and the Rudin-Carleson theorem.

May 18, 2015, Talk at Bar-Ilan University, Israel. Talk: Bounded approximation and radial interpolation in the unit disc and related questions.

April 29, 2015, Talk at the Michigan State University (E Lansing). Talk: Polynomial approximation in the unit disc and the Rudin-Carleson theorem

May 28 - June 4, 2011, Research and talk at Bar-Ilan University, Israel.
May 30, 2011; Talk at Bar-Ilan Analysis Seminar:
convergent polynomial series and complex approximation theory

April 28 -May 17, 2009; Research and talk at the University of Oldenburg, Germany.
May 14, 2009; Talk:  Bounded approximation in complex domain and applications

April 4-9, 2009. Short research visit and talks at Cornel University, Ithaca.
April 5, 2009; Cornell Analysis Seminar, Talk: Bounded approximation on subsets of the complex

2017, July 10-15, Computational Methods and Function Theory 2017, Lublin, Poland.
Talk: Interpolation by bounded analytic functions and related questions.

2017, June 4-8, 2017, Complex and Harmonic  Holon/Haifa, Israel
Talk: An

2016, July 25-29, New Trends in Approximation Theory - A Conference in Memory of Andre
Boivin. Fields Institute, Toronto, Canada. Invited 1-hour talk. Talk:

2006, August 22  30, International Congress of Mathematicians 2006, Madrid, Spain.
Talk (in analysis section): On a question of A.M. Davie on bounded approximation

2005, June 13
Finland. Talk: On the uniqueness property of analytic function and related questions

2005, May 23  29, International Conference (Function Spaces, Approximation Theory, Nonlinear
Analysis) dedicated to the centennial of S.M. Nikolskii, Moscow, Russia.
Talk: On analytic functions defined in the unit disk.

2002, August 20- 28, International Congress of Mathematicians, 2002, Beijing, China.
Attendance supported by NSF and AMS.

2002, August 14-17, Complex Analysis (a satellite conference of ICM 2002), Shanghai, China.
Talk:  On the boundary behavior of analytic functions

2002, June 16-20, Conference on Analysis and Probability on Fractals, Cornell University,
USA. Talk: Singularity points of a class of analytic functions and fractals

2001, June 25-29, Computational Methods and Function Theory 2001 (CMFT'2001), Aveiro,
Portugal. Talk: On a localization problem for limit functions of unbounded sequences of rational
functions

2001, January 9-13, Joint Mathematics Meetings, AMS Session on Real Analysis, New Orleans.
Talk: On the convergence of functions defined on compact Hausdorff Spaces

2000, July 3-14, Seminaire de Mathematiques Superieures 39th session, "Approximation,
Complex Analysis, and Potential Theory", Universite de Montreal, Montreal, Canada.

1998, August 11-16, Int. Congress of Mathematicians 1998 (ICM'98), Satellite Conference
"Conformal geometry and geometric function theory", Berlin, Germany. Talk: On a conformal
mapping approach in approximation theory

LIST OF PUBLICATIONS

37. On the conjugate functions, (Submitted)

36. Radial limits and boundary uniqueness, Accepted for publication in: Comptes Rendus
    Mathématique de l'Académie des Sciences

35. (With Spyros Pasias) On          first class functions and Blaschke products, Real Analysis
    Exchange, V. 49 (2), 2024, 397- 400.

34. (With Spyros Pasias) On a boundary property of Blaschke products, Analysis Mathematica,
    V. 49, 2023, 403 - 408.

33
    No. 45, 5 pp.

32. On a Joint Approximation Question in Hp Spaces, Arch. Math. (Basel), V. 115, 2020,
    419 - 422.

31.

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Approximation Theory, 215 - 224, Fields Inst. Commun. V. 81, Springer, New York, 2018.

29. Letter to the Editor: A Complex Approximation Lemma, Journal
of Fourier Analysis and Applications, V. 23, 2017, 991 - 993.

28                                              udin-Carleson theorem, Journal
of Fourier Analysis and Applications, V. 23, 2017, 656 - 659.

27                     n bounded analytic functions, Ann. Acad. Sci. Fenn. Math, V. 41, 2016,
813-816.

26.  A theorem of Lohwater and Piranian, Proc. Amer. Math. Soc., V. 144, 2016, 3919-3920.

25. Bounded approximation on compact Hausdorff spaces, (Manuscript)

24. (With Vilmos Totik) A converse to a theorem of Salem and Zygmund, Bull. Sci. Math., V. 140,
2016, 260 -272.

23. On the zero-free polynomial approximation problem, J. Approx. Theory, V. 205, 2016, 60-63.

22. Weak-star convergence and a polynomial approximation problem, Results Math, V. 69, 2016,
257-262.

21. On the peak points, Complex Var. Elliptic Equ., V. 60, 2015, 1475-1479.

20. The peak-interpolation theorem of Bishop. *Complex analysis and dynamical systems IV.
Part 1,* 27  30, Contemp. Math., 553, *Amer. Math. Soc., Providence, RI,* 2011.

19. (With G. Harutyunyan) On a subclass of approximable functions on closed subset, Comput.
Methods and Function Theory, V. 11, no. 1, 2011,  123-133.

18. On a polynomial approximation problem, J. Approx.  Theory, V. 162, 2010, 717-722.

17. On limits of sequences of rational functions, Comput Methods  and Function Theory, V. 1,
no. 2, 2001, 339-344.

16. (With E.B. Saff) An extension of E. Bishop's localization theorem, Journ. of Approx. Theory,
V. 109, 2001, 148-156.

15.  On a problem of M.A. Lavrentyev concerning the representability of functions by
series of polynomials in the complex domain, Russian Acad. Sci. Izv. Math., V. 63, no. 2,
1999, 29-40. (English trans.: Izvestiya Math., V. 63, no. 2,1999, 245-254.)

14. (With L.A. Rubel) Uniform Approximation by entire function which are all
bounded on a given set, Constructive Approx.,V.14, no.4, 1998, 469-473.
Erratum: Constructive Approx., V.15, no.1, 1999.

13. M.A. Lavrentyev's problems on pointwise polynomial approximation and related
questions, in: Computational Methods and Function Theory 1997,
N. Papamichael, S. Ruscheweyh, and E. Saff (eds.), World Scientific,
1999, 161-170.

12. (With G. Schmieder) On topological properties of filled level sets of entire
functions, Results in Mathematics, V. 33, 1998, 266-273.

11. (With U.G. Pirumov et al.) Numerical analysis of two - phase flow in gas - dynamic

filter, Russian Acad. Sci. Matematicheskoe Modelirovanie, V. 10, no. 11, 1998, 19-28.

10. Certain problems arising from Rubel's Problem of simultaneous approximation,
    Russian Acad. Sci. Dokl., V.341, no. 1, 1995, 10-12.
   (English trans.: Doklady Math., V. 51, no. 2, 1995, 164-165.


9. The set of divergence of polynomials, that are uniformly bounded on a