



SEYFOLLAH MOSAZADEH

Associate Professor

Department of Pure Mathematics
Faculty of Mathematical Sciences
University of Kashan
Kashan, IRAN

Tel.: +98-31-55912321

E-Mail: s.mosazadeh@kashnu.ac.ir

<https://faculty.kashanu.ac.ir/smosazadeh>

EDUCATION

Ph.D. : Connection Between the Singularity and Turning Point in the Inverse Problem for Sturm-Liouville Operator, University of Mazandaran, 2012

M.Sc. : Inverse Problem for Differential Equations with Singularities and Turning Points, University of Mazandaran, 2008

B.Sc. : Shahrood University (Shahrood University of Technology), 2001

RESEARCH INTERESTS

- Theory of Ordinary Differential Equations
- Asymptotic Analysis
- Boundary Value Problems
- Sturm-Liouville Problems
- Inverse Problems

PUBLICATIONS

1- Journal Papers

- S. Mosazadeh, **Inverse nodal problem for the integro-differential Dirac operator with a delay in the kernel**, *Journal of Integral Equations and Applications*, Accepted for publication.
- H. Koyunbakan and S. Mosazadeh, **Inverse nodal problem for discontinuous Sturm–Liouville operator by new Prüfer Substitutions**, *Mathematical Sciences*, 15 (2021), 387-394.
- S. Mosazadeh, **A new approach to asymptotic formulas for eigenfunctions of discontinuous non-selfadjoint Sturm-Liouville operators**, *Journal of Pseudo-Differential Operators and Applications*, (2020), 1-16. DOI: 10.1007/s11868-020-00350-2
- S. Mosazadeh, A. Neamaty and M. Bagherzadeh, **On the numerical solution of an inverse spectral problem with a singular potential**, *International Journal of Mathematics in Operational Research*, 17 (2020), 186-198. DOI: 10.1504/IJMOR.2020.10023935
- S. Mosazadeh and H. Koyunbakan, **A stability result for an inverse problem with integro-differential operator on a finite interval**, *Journal of Integral Equations and Applications*, 32 (1) (2020), 77-87. DOI: 10.1216/jie.2020.32.77
- S. Mosazadeh, **Spectral properties and a Parseval’s equality in the singular case for q -Dirac problem**, *Advances in Difference Equations*, (2019) 2019:522. DOI: 10.1186/s13662-019-2464-y

- S. Mosazadeh and H. Koyunbakan, **On the stability of the solution of the inverse problem for Dirac operator**, *Applied Mathematics Letters* (2019) 106118, <https://doi.org/10.1016/j.aml.2019.106118>
- S. Mosazadeh, **Inverse Sturm-Liouville problems with two supplementary discontinuous conditions on two symmetric disjoint intervals**, *Computational Methods for Differential Equations*, 9 (2021), 244-257.
- S. Mosazadeh, **On the Lipschitz stability of inverse nodal problem with discontinuous boundary conditions on finite intervals**, *Iranian Journal of Mathematical Sciences and Informatics*, Accepted for publication.
- S. Mosazadeh, **Reconstruction of singular second-order differential equations from spectral characteristics**, *Acta Mathematica Applicatae Sinica, English Series*, 35 (2019), 645-654.
- S. Mosazadeh and A. Jodayree Akbarfam, **Inverse and expansion problems with boundary conditions rationally dependent on the eigenparameter**, *Bull. Iranian Math. Soc.*, (2019) 1-12.
- S. Mosazadeh, **The uniqueness theorem for the solutions of dual equations of Sturm-Liouville problems with singular points and turning points**, *Sahand Communications in Mathematical Analysis*, 13 (2019), 51-65.
- S. Mosazadeh, **Energy levels of a physical system and eigenvalues of an operator with a singular potential**, *Reports on Mathematical Physics*, 82 (2018), 137-148.
- S. Mosazadeh and R. Majidi, **The asymptotic formula for the eigenvalues of Sturm-Liouville problems with one turning point of negative order**, *Iranian Journal of Science and Technology, Transactions A: Science*, 42 (2018), 2217-2223.

- S. Mosazadeh and A. Jodayree Akbarfam, **On Hochstadt-Lieberman theorem for impulsive Sturm-Liouville problems with boundary conditions polynomially dependent on the spectral parameter**, *Turkish Journal of Mathematics*, **42** (2018), 3002-3009.
- S. Mosazadeh, **On the solution of an inverse Sturm-Liouville problem with a delay and eigenparameter dependent boundary conditions**, *Turkish Journal of Mathematics*, **42** (2018), 3090-3100.
- S. Mosazadeh, **A new approach to uniqueness for inverse Sturm-Liouville problems on finite intervals**, *Turkish Journal of Mathematics*, **41** (2017), 1224-1234.
- S. Mosazadeh, **The stability of the solution of an inverse spectral problem with a singularity**, *Bulletin of the Iranian Mathematical Society*, **41** (2015) 1061-1070.
- S. Mosazadeh, **The uniqueness theorem for inverse nodal problems with a chemical potential**, *Iranian Journal of Mathematical Chemistry*, **8** (2017) 403-411.
- S. Mosazadeh, **Infinite product representation of solution of indefinite Sturm-Liouville problem**, *Iranian Journal of Mathematical Chemistry*, **4** (2013) 27-40.
- S. Mosazadeh, **Eigenfunction expansions for second-order boundary value problems with separated boundary conditions**, *Mathematics Interdisciplinary Research*, **1** (2016) 325-334.
- A. Neamaty and S. Mosazadeh, **On the canonical solution of Sturm-Liouville problem with singularity and turning point of even order**, *Canadian Mathematical Bulletin*, **54** (2011) 506-518.

- S. Mosazadeh and A. Neamaty, **On the uniqueness of the solution of dual equation of a singular Sturm-Liouville problem**, *Proc. Indian Acad. Sci. (Math. Sci.)*, **121** (2011) 469-480.
- A. Neamaty and S. Mosazadeh, **On the canonical solution and dual equations of Sturm-Liouville problem with singularity and turning point**, *Iranian Journal of Science and Technology, Transactions A: Science*, **34** (2010) 71-88.
- A. Neamaty and S. Mosazadeh, **Asymptotic solutions and eigenvalues of second-order differential equations with poles and turning points**, *Applied Mathematical Sciences*, **3** (2009) 1017-1022.
- A. Neamaty, S. Mosazadeh and M. Bagherzadeh, **Uniqueness theorem for the solution of an inverse spectral problem**, *Caspian Journal of Mathematical Sciences*, **1** (2012) 80-87.
- A. Neamaty, A. Dabbaghian and S. Mosazadeh, **Differential equations with a singularity and turning point of second order**, *Int. J. Math. Anal.*, **2** (2008) 1335-1342.
- موسی‌زاده، سیدسیف‌اله، ریشه‌ها، مبانی و سیر تکاملی نظریه استورم-لیوویل، فرهنگ و اندیشه ریاضی، سال ۳۶، شماره ۶، صص ۶۷ تا ۸۷، ۱۳۹۶.
- موسی‌زاده، سیدسیف‌اله، تعمیم نظریه استورم-لیوویل برای عملگر بسل کسری، پژوهش‌های نوین در ریاضی، سال ۵، شماره ۱۸، صص ۶۵ تا ۷۰، ۱۳۹۸.
- موسی‌زاده، سیدسیف‌اله، پایداری لیب‌شیتس مسائل معکوس گره‌ای دارای شرایط مرزی ناپیوسته روی بازه‌های متناهی، مجله علوم ریاضی و انفورماتیک ایران، پذیرش شده برای چاپ.
- موسی‌زاده، سیدسیف‌اله، حساب دیفرانسیل و معادلات دیفرانسیل بولی، پژوهش‌های نوین در ریاضی، پذیرش برای چاپ.

2- Conference Papers

- S. Mosazadeh, **The stability of a half inverse problem**, 51th Annual Iranian Mathematics Conference, University of Kashan, Kashan, Iran, 2021.
- S. Mosazadeh and F. Kiyaei, **On the eigenvalues of a non-linear Sturm-Liouville boundary value problem**, 1th First International Conference on Boundary Value Problems and Applications, University of Tabriz, Tabriz, Iran, 2018.
- S. Mosazadeh, **On the uniqueness of the solution of the inverse problem for an Sturm-Liouville operator with discontinuity conditions on a symmetric interval**, 48th Annual Iranian Mathematics Conference, Bu-Ali Sina University, Hamedan, Iran, 2017.
- S. Mosazadeh, **Inverse problem for a singular differential operator with a spectral parameter in boundary conditions**, 48th Annual Iranian Mathematics Conference, Bu-Ali Sina University, Hamedan, Iran, 2017.
- S. Mosazadeh, Hikmet Kemalolu and Emrah Yilmaz, **THE STABILITY OF THE INVERSE PROBLEM WITH AN INTEGRO-DIFFERENTIAL OPERATOR**, 2ND INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES-(CMES2017), 20-22 MAY 2017, ISTANBUL, TURKEY.
- S. Mosazadeh and Hikmet Kemalolu, **AN INVERSE PROBLEM FOR DIRAC OPERATOR AND THE STABILITY THEOREM**, 2ND INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES-(CMES2017), 20-22 MAY 2017, ISTANBUL, TURKEY.

- S. Mosazadeh, **Inverse problems for systems of delay differential equations**, Conference on Dynamical Systems and Geometric Theories, Shahid Bahonar University of Kerman, Kerman, Iran, 2016.
- S. Mosazadeh, **A numerical algorithm for determining the coefficients of an indefinite Sturm-Liouville problem with one turning point**, Conference on Dynamical Systems and Geometric Theories, Shahid Bahonar University of Kerman, Kerman, Iran, 2016.
- S. Mosazadeh, **Eigenfunction expansion for a Sturm-Liouville boundary value problem on a finite interval**, 47th Annual Iranian Mathematics Conference, Kharazmi University, Karaj, Iran, 2016.
- S. Mosazadeh, **Canonical solutions of selfadjoint boundary value problems consisting of diffusion and heat equations**, 47th Annual Iranian Mathematics Conference, Kharazmi University, Karaj, Iran, 2016.
- S. Mosazadeh, **The singular Sturm-Liouville operator and stability theorem**, 12th Seminar on Differential Equations and Dynamical Systems, University of Tabriz, Tabriz, Iran, 2015.
- S. Mosazadeh, A. Neamaty and Y. Khalili, **The connection between the turning and singular points in the Sturm-Liouville problems**, 10th Seminar on Differential Equations and Dynamical Systems, University of Mazandaran, Babolsar, Iran, 2013.
- S. Mosazadeh, **Infinite product representation of solution of an inverse spectral problem**, The 6th Conference & Workshop on Mathematical Chemistry, Persian Gulf University, Bushehr, Iran, 2013.
- S. Mosazadeh and M. Bagherzadeh, **A Uniqueness theorem of the solution of an inverse spectral problem**, Proc. 19th seminar in Math. Anal. Appl., University of Mazandaran, Babolsar, Iran, 2011.

- S. Mosazadeh and A. Neamaty, **Stability of inverse eigenvalue problem with singularities**, Proc. 19th seminar. Math. Anal. Applications, University of Mazandaran, Babolsar, Iran, 2011.
- S. Mosazadeh and M. Safapour, **Solving inverse problems for Sturm-Liouville operators with one turning point**, Proc. 42th Annual. Iranian. Math. Conference, Vali-e-Asr University, Rafsanjan, Kerman, Iran, 2011.
- S. Mosazadeh and M. Bagherzadeh, **An inverse spectral problem with poles and turning points**, Proc. 42th Annual. Iranian. Math. Conference, Vali-e-Asr University, Rafsanjan, Kerman, Iran, 2011.
- S. Mosazadeh and A. Neamaty, **Infinite Product Representation of solutions of Sturm-Liouville Operator with Singularities**, Proc. 5th Seminar on Linear Algebra, University of Mazandaran, Babolsar, Iran, 2009.
- S. Mosazadeh, **On the canonical solution of Sturm-Liouville problem with Turning point of order $4m$** , Proc. 18th seminar in Math. Anal. Appl., Tarbiat Moallem University, Karaj, Iran, 2009.
- S. Mosazadeh, **Differential Equations with Singularity and Turning Point of Second Order**, Proc. 17th seminar in Math. Anal. Appl., Arak University, Arak, Iran, 2008.
- S. Mosazadeh and A. Neamaty, **The Asymptotic Behavior of the solution and Eigenvalues of Differential Equations with Poles and Turning Points**, Proc. 8th seminar in Diff. Equ. Dyn. Syst. Appl., Isfahan University of Technology, Isfahan, Iran, 2008.
- S. Mosazadeh and A. Neamaty, **The eigenvalues of differential equations with singularities and turning points**, Proc. 38th Annual. Iranian. Math. Conference, Zanzan University, Zanzan, Iran, 2007.

INVITED REVIEWER FOR JOURNALS

- Inverse Problems
- Journal of Inequalities and Applications
- Numerical Methods for Partial Differential Equations
- Numerical Functional Analysis and Optimization
- Turkish Journal of Mathematics
- Hacettepe Journal of Mathematics and Statistics
- Applied Mathematics E-Notes
- Computational Methods for Differential Equations
- Advanced Research in Pure Mathematics
- Caspian Journal of Mathematical sciences
- Journal of New Researches in Mathematics
- Communications Faculty of Sciences University of Ankara Series A1 Mathematics and Statistics
- Mathematical Reviews (published by the American Mathematical Society)
- TWMS J. App. and Eng. Math.
- zbMATH
- Member of Editorial Board of "Iranian Journal of Mathematical Chemistry"
- Member of Editorial Board of the journal "Mathematics Interdisciplinary Research"

INVITED REVIEWER FOR CONFERENCES

- 10th Seminar on Differential Equations and Dynamical Systems, University of Mazandaran, Babolsar, Iran, 2013
- THE THIRD INTERNATIONAL CONFERENCE ON COMPUTATIONAL MATHEMATICS AND ENGINEERING SCIENCES (CMES-2018), MAY 04 - 06, 2018, CYPRUS
- 51th Annual Iranian Mathematics Conference, University of Kashan, Kashan, Iran, 2021.

GRADUATE AND UNDERGRADUATE COURSES

- Differential and Integral Calculus 1,2,3
- Ordinary Differential Equations
- Mathematical Analysis 1,2
- The Foundations of Mathematics
- Real Analysis
- Theory of Ordinary Differential Equations
- Integral Equations
- Asymptotic Analysis
- Sturm-Liouville Theory

Ph.D COURSES

- Integral Equations
- Asymptotic Analysis
- Sturm-Liouville Theory