Khachatur Aghavardovich Khachatryan

khachatur.khachatryan@ysu.am

Faculty of Mathematics and Mechanics
Chair of Theory of Functions and Differential Equations
Head of Chair (Professor)

Faculty of Mathematics and Mechanics
Chair of Theory of Functions and Differential Equations
Head of Chair (Professor)

Faculty of Mathematics and Mechanics
Center for Mathematical and Applied Research
Group Leader

Education

Institution	Yerevan State University
Faculty	Faculty of Mathematics
Date	1998 - 2004
Degree name	Masters

Scientific Rank/degree

Date	2018
Degree name	Professor

Institution	Yerevan State University
Date	2006
Degree name	Candidate
Scientific Supervisor	N.B.Yengibaryan
Research Topic	Factorization methods for solving some class of integral and integrodifferential equations on the semiaxis

Institution	Yerevan State University
Date	2011
Degree name	Doctor
Research Topic	Solvability issues of some nonlinear integral and integro-differential equations with non-compact operators in the critical case

Language skills

Հայերեն Русский English

Work experience

Institution	YSU
Period of time	2021 till now
Rank/degree	Head of Chair of Theory of Functions and Differential Equations

Institution	YSU
Period of time	2020 - 2021
Rank/degree	Head of Chair of Differential Equations

Institution	Russian-Armenian University
Period of time	2019 till now
Rank/degree	Professor

Institution	Institute of Mathematics of NAS RA
Period of time	2016 till now
Rank/degree	Leading Researcher

Institution	M. V. Lomonosov Moscow State University (Yerevan Branch)
Period of time	2015 - 2017
Rank/degree	Lecturer

Institution	Institute of Mathematics of NAS RA
Period of time	2011 - 2016
Rank/degree	Senior Researcher

Institution	Institute of Mathematics of NAS RA
Period of time	2006 - 2011
Rank/degree	Researcher

Institution	Institute of Mathematics of NAS RA
Period of time	2004 - 2006
Rank/degree	Junior Researcher

Participation in international conferences and seminars

25/08/2014 - 01/09/2014	Четвертая международная конференция “Математическая физика и ее приложения” Samara State Technical University Russian Federation (the)
28/09/2014 - 03/10/2014	Пятое Российско-Армянское Совещание по математической физике, комплексному анализу и смежным вопросам

Institute of Mathematics of NAS RA
Russian Federation (the)

11/09/2016 - 16/09/2016	VI Российско-Армянское совещание по математическому анализу, математической физике и аналитической механике Don State Technical University Russian Federation (the)
12/11/2018 - 16/11/2018	Internaional conference «Modern Mathematical Physics. Vladimirov-95» Steklov Mathematical Institute Russian Federation (the)
09/09/2018 - 15/09/2018	Международная конференция “VII Российско-Армянское Совещание по математической физике, комплексному анализу и смежным вопросам” Institute of Mathematics of NAS RA Armenia
26/11/2019 - 30/11/2019	Международная школа-семинар молодых ученых Моделирование и оптимизация сложных систем MOCS-2019 Lomonosov Moscow State University Russian Federation (the)
25/09/2019 - 28/09/2019	All-Russian scientific and practical conference with international participation "Equation of Convolution Type in Science and Technology" ECTST-2019 dedicated to the 90th Anniversary of the birth of Yuri Iosifovich Chersky V.I. Vernadsky Crimean Federal University Russian Federation (the)
16/09/2019 - 21/09/2019	International conference "8th Russian-Armenian Workshop on Mathematical Physics, Complex Analysis and Related Topics" Steklov Mathematical Institute Russian Federation (the)
23/11/2020 - 27/11/2020	Международная конференция по математической физике памяти академика В. С. Владимирова Steklov Mathematical Institute Russian Federation (the)
03/07/2020 - 08/07/2020	The International Conference on Differential Equations and Dynamical Systems Lomonosov Moscow State University Russian Federation (the)
27/09/2021 - 30/09/2021	International Conference "Selected Topics in Mathematical Physics" Dedicated to 75-th Anniversary of I. V. Volovich Steklov Mathematical Institute Russian Federation (the)

19/09/2022 - 23/09/2022	International conference on mathematical analysis and differencial equations Yerevan State University Armenia
30/06/2022 - 05/07/2022	The International Conference on Differential Equations and Dynamical Systems 2022 Lomonosov Moscow State University Russian Federation (the)
09/01/2023 - 14/01/2023	International Conference Dedicated to the 100th Anniversary of the Birthday of V. S. Vladimirov (Vladimirov-100) Steklov Mathematical Institute Russian Federation (the)

Membership

Institution	Associate Member of NAS of Armenia
Period of time	2026 till now
Institution	Member of the Scientific Council of the Faculty of Mathematics and Mechanics of Yerevan State University
Period of time	2020 till now
Institution	Member of the editorial board of the Journal of Contemporary Mathematical Analysis
Period of time	2016 till now
Institution	Deputy Chairman of Yerevan State University 050 Professional Council
Period of time	2016 till now
Institution	Member of the Union of Mathematicians of Armenia
Period of time	2006 till now
Institution	Member of the Scientific Council of the Institute of Mathematics of the National Academy of Sciences of the Republic of Armenia
Period of time	2016 till now

State awards and honorary titles

2014 Winner of the "Efficient Researcher" competition (Natural Sciences) (Top 100)

2013 1st-class prize of the RA NAS "Best scientific work of 2013" competition,

2013 Winner of the first prize after Sergey Mergelyan for young scientists (Mathematics and Informatics)

2021 Winner of the "Efficient Researcher" competition (Natural Sciences) (Top 100)

2020 Winner of the "Efficient Researcher" competition (Natural Sciences) (Top 100)

2018 Winner of the "Efficient Researcher" competition (Natural Sciences) (Top 100)

2016 Winner of the "Efficient Researcher" competition (Natural Sciences) (Top 100)

2019 Prize of the President of the Republic of Armenia

Publications

Article

On the Constructive Solvability of a System of Hammerstein–Volterra Nonlinear Integral Equationson the Positive Semiaxis
Kh.A. Khachatryan, H.S. Petrosyan, T.R. Vardanyan

Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 2025 148-166

Article

On the global solvability of one class of nonlinear integral equations of Hammerstein–Volterra type on the nonnegative half-line [О ГЛОБАЛЬНОЙ РАЗРЕШИМОСТИ ОДНОГО КЛАССА НЕЛИНЕЙНЫХ ИНТЕГРАЛЬНЫХ УРАВНЕНИЙ ТИПА ГАММЕРШТЕЙНА — ВОЛЬТЕРРА НА НЕОТРИЦАТЕЛЬНО...
Khachatryan Khachatur Aghavardovich, Petrosyan Haykanush Samvelovna

Труды Института математики и механики УрО РАН 2025 181-194

Article

On the Solvability of a System of Multidimensional Integral Equations with Concave Nonlinearities
Khachatryan, Kh. A., Petrosyan H.S.

Differential Equations 2025 79-93

Article

On the Constructive Solvability of One Class of Nonlinear Integral Equations of the Hammerstein Type on the Whole Line
Kh. A. Khachatryan, A. Kh. Khachatryan, H. S. Petrosyan

Russian Mathematics 2025 77-93

Article

On the constructive solvability of a nonlinear Volterra integral equation on the entire real line [О конструктивной разрешимости одного нелинейного интегрального уравнения Вольтерра на всей числовой прямой]
Khachatryan Khachatur A., Muradyan Aram H.

Вестник Самарского государственного технического университета. Серия «Физико-математические науки»
2025 256-273

Article

Constructive Solvability of a Class of Nonlinear Integral Equations of Urysohn Type
Kh. A. Khachatryan, A. Kh. Khachatryan, H. S. Petrosyan

Lobachevskii Journal of Mathematics 2025 4023–4035

Article

Solvability of the Cauchy Problem to Nonlinear Wave Equations in 3D Spaces
Kh. A. Khachatryan, A. Kh. Khachatryan, H. S. Petrosyan

Lobachevskii Journal of Mathematics 2025 4036–4045

Article

On the Constructive Solvability of a Nonlinear Multidimensional Urysohn Equation in the Critical Case
Kh. A. Khachatryan, R. S. Hambardzumyan

Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 2025 541-550

Article

Solvability of Quasilinear and Nonlinear Integral Equations with a Sum-Difference Kernel on the Half-Line
Khachatur A. Khachatryan, Aghavard Kh. Khachatryan, Haykanush S. Petrosyan

Lobachevskii Journal of Mathematics 2025 6238-6250

https://link.springer.com/article/10.1134/S1995080225612688

Article

On qualitative properties of the solution of a boundary value problem for a system of nonlinear integral equations
Kh. A. Khachatryan, H. S. Petrosyan

Theoretical and Mathematical Physics 2024 145-162

Article

An iterative method for solving one class of non-linear integral equations with Nemytskii operator on the positive semi-axis
Kh. A. Khachatryan, H.S. Petrosyan

IZVESTIYA MATHEMATICS 2024 760-793

Article

Questions of existence, absence, and uniqueness of a solution to one class of nonlinear integral equations on the whole line with an operator of Hammerstein–Stieltjes type (Вопросы существования, отсутствия и единственности решения одного класса нелине...
Х. А. Хачатрян, А. Х. Хачатрян, А. С. Петросян

Trudy Instituta Matematiki i Mekhaniki UrO RAN 2024 249-269

Article

On the Solvability of One Infinite System of Integral Equations with Power Nonlinearity on the Semi-Axis
Kh. A. Khachatryan, H. S. Petrosyan

Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 2024 305–316

Article

On the Solvability of an Infinite System of Algebraic Equations with Monotone and Concave Nonlinearity
Kh. A. Khachatryan, H. S. Petrosyan

Siberian Mathematical Journal 2024 1450–1460

Article

On the Constructive Solvability of one Class of the Hammerstein–Volterra type Nonlinear Multidimensional Integral Equations
Kh. A. Khachatryan, A. Kh. Khachatryan, H. S. Petrosyan

Lobachevskii Journal of Mathematics 2024 3598–3612

Article

Numerical Solutions of some Nonlinear Integral Equations Arising in the Theory of -Adic Strings and Physical Kinetics
Kh. A. Khachatryan, A. Kh. Khachatryan, A. Zh. Narimanyan

P-Adic Numbers Ultrametric Analysis and Applications 2024 43–59

Article

Existence and Uniqueness Theorems for One Class of Hammerstein-type Nonlinear Integral Equations
Khachatur A. Khachatryan, Zahra Keyshams, Monire Mikaeili Nia

Lobachevskii Journal of Mathematics 2024 3580–3597

Article

Questions of existence and uniqueness of the solution of one class of an infinite system of nonlinear two-dimensional equations (Вопросы существования и единственности решения одного класса бесконечной системы нелинейных двумерных уравнений)
Х. А. Хачатрян, А. С. Петросян, С. М. Андриян

Izvestiya of Saratov University Mathematics Mechanics Informatics 2024 498–511

Article

Constructive Study of Solvability for a Class of Nonlinear Integral Equations with a Symmetric Kernel
Kh. A. Khachatryan, H. S. Petrosyan

Siberian Advances in Mathematics 2024 320–336

Article

On an Integral Equation with Concave Nonlinearity (Об одном интегральном уравнении с вогнутой нелинейностью)
Khachatur A. Khachatryan, Haykanush S. Petrosyan

The Bulletin of Irkutsk State University, Series Mathematics 2024 66–82

Article

Solvability of Two-Dimensional Integral Equations with Concave Nonlinearity in the Plane
Kh. A. Khachatryan, H. S. Petrosyan

Journal of Mathematical Sciences 2023 239-255

Article

Uniqueness of the Solution of a Class of Integral Equations with Sum-Difference Kernel and with Convex Nonlinearity on the Positive Half-Line
H. S. Petrosyan, Kh. A. Khachatryan

MATHEMATICAL NOTES 2023 512–524

Article

Теоремы существования и единственности для одной системы интегральных уравнений с двумя нелинейностями
Х.А. Хачатрян, А.С. Петросян, М.О. Аветисян

Trudy Instituta Matematiki i Mekhaniki UrO RAN 2023 202-218

Article

On a Class of Nonlinear Integral Equations of the Hammerstein–Volterra Type on a Semiaxis
Kh. A. Khachatryan, H. S. Petrosyan

Russian Mathematics 2023 64-73

Article

On the Solvability of a System of Nonlinear Integral Equations with the Hammerstein–Stieltjes Operator on the Half-Line
Kh. A. Khachatryan, H. S. Petrosyan

Differential Equations 2023 383–391

Article

Existence and Uniqueness Theorems for One Infinite System of Nonlinear Algebraic Equations
Х. А. Хачатрян, А. С. Петросян

The Bulletin of Irkutsk State University Series Mathematics 2023 44-54

Article

ON QUALITATIVE PROPERTIES OF A SOLUTION OF ONE CLASS SINGULAR INTEGRAL EQUATIONS ON THE WHOLE LINE WITH ODD NONLINEARITY
Kh.A. Khachatryan, A.Kh. Khachatryan

Journal of Mathematical Sciences 2023 597-609

Article

On solvability of one class of integral equations on whole line with monotonic and convex nonlinearity
Kh.A. Khachatryan, H.S. Petrosyan, A.R. Hakobyan

Journal of Mathematical Sciences 2023 610-624

Article

On nonlinear convolution-type integral equations in the theory of p -adic strings
Kh.A. Khachatryan, A.Kh. Khachatryan, H.S. Petrosyan

Теоретическая и математическая физика (Theoretical and Mathematical Physics) 2023 1068–1081

Article

ON SOME SYSTEMS OF NONLINEAR INTEGRAL EQUATIONS ON THE WHOLE AXIS WITH MONOTONOUS HAMMERSTEIN-VOLTERRA TYPE OPERATORS
Kh.A. Khachatryan, H.S. Petrosyan, A.R. Hakobyan

Eurasian Mathematical Journal 2023 35-53

Article

On non-trivial solvability of one system of non-linear integral equations on the real axis
Kh.A. Khachatryan, H.S. Petrosyan

IZVESTIYA MATHEMATICS 2023 1062-1077

Article

On the solvability of a class of nonlinear two-dimensional integral equations Hammerstein–Nemytskii type on the plane
Kh. A. Khachatryan, H. S. Petrosyan

Вестник Самарского государственного технического университета Серия Физико-математические науки
2023 446-461

Article

THE SOLVABILITY OF AN INFINITE SYSTEM OF NONLINEAR ALGEBRAIC EQUATIONS WITH TOEPLITZ MATRIX

Kh.A. Khachatryan, V.G. Dilanyan

Proceedings of the YSU A Physical and Mathematical Sciences 2023 69-78

Article

On Solutions of a System of Nonlinear Integral Equations of Convolution Type on the Entire Real Line

Kh.A. Khachatryan, H.S. Petrosyan, A.A. Davydov

Differential Equations 2023 1504–1519

Article

СТАЦИОНАРНЫЕ СОСТОЯНИЯ В ДИНАМИКЕ ПОПУЛЯЦИЙ С МИГРАЦИЕЙ И РАСПРЕДЕЛЕННЫМ ПОТОМСТВОМ

Х.А. Хачатрян, А.А. Давыдов

Современная математика. Фундаментальные направления 2023 578–587

Article

ON NONTRIVIAL SOLVABILITY OF ONE CLASS OF NONLINEAR INTEGRAL EQUATIONS WITH CONSERVATIVE KERNEL ON THE POSITIVE SEMI-AXIS

Kh.A.Khachatryan, A.R.Hakobyan

Proceedings of the YSU A Physical and Mathematical Sciences 2022 7-18

Article

О разрешимости одного класса нелинейных интегральных уравнений Гаммерштейна на полуоси

Х. А. Хачатрян, А. С. Петросян

Izvestiya of Saratov University Mathematics Mechanics Informatics 2022 169-179

Article

On One Class of Multidimensional Integral Equations of Convolution Type with Convex Nonlinearity

Kh.A.Khachatryan, H.S.Petrosyan

Differential Equations 2022 680-690

Article

О разрешимости одной системы нелинейных интегральных уравнений с монотонным оператором типа Гаммерштейна

Х.А. Хачатрян, А.С. Петросян

Trudy Instituta Matematiki i Mekhaniki UrO RAN 2022 201-214

Article

Асимптотическое поведение решения для одного класса нелинейных интегральных уравнений типа Гаммерштейна на всей прямой

Х. А. Хачатрян, А. С. Петросян

Современная математика. Фундаментальные направления 2022 376–391

Article

On a class of convolution type nonlinear integral equations with an even kernel
Kh. A. Khachatryan, H. S. Petrosyan

International Journal of Modern Physics A 2022 1-19

Article

On Summable Solutions to Two-Dimensional Volterra Integral Equations with Monotone Nonlinearity on a Quarter of the Plane
Kh.A.Khachatryan, H.S.Petrosyan

Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 2022 303-310

Article

A System of Integral Equations on the Entire Axis with Convex and Monotone Nonlinearity
Kh.A.Khachatryan, A.Kh.Khachatryan

Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 2022 311-322

Article

Вопросы существования и единственности решения одного класса нелинейных интегральных уравнений на всей прямой
Х. А. Хачатрян, А. С. Петросян

Вестник Самарского государственного технического университета Серия Физико-математические науки
2022 446–479

Article

О КАЧЕСТВЕННЫХ СВОЙСТВАХ РЕШЕНИЯ ДЛЯ ОДНОЙ СИСТЕМЫ НЕЛИНЕЙНЫХ БЕСКОНЕЧНЫХ АЛГЕБРАИЧЕСКИХ УРАВНЕНИЙ
Х. А. Хачатрян, М. О. Аветисян

Владикавказский Математический журнал (Vladikavkaz Mathematical Journal) 2022 5-18

Article

On a Class of Nonlinear Integro-Differential Equations
Kh.A. Khachatryan, H.S. Petrosyan

Siberian Advances in Mathematics 2022 250-268

Article

О суммируемых решениях одного класса нелинейных интегральных уравнений на всей прямой
Х. А. Хачатрян, А. С. Петросян

Известия Российской академии наук. Серия математическая 2022 157–168

Article

On the solubility of a class of two-dimensional integral equations on a quarter plane with monotone nonlinearity
Kh.A.Khachatryan, H.S.Petrosyan, S.M.Andriyan

Buletinul Academiei de Ştiinţe a Republicii Moldova Matematica 2022 19-38

Article

On the Constructive Solvability of a Two-Dimensional Nonlinear Integral Equation Arising in the Theory of p -Adic Strings
Kh. A. Khachatryan, H. S. Petrosyan

P-Adic Numbers Ultrametric Analysis and Applications 2022 S74–S82

Article

Existence and uniqueness result for reaction-diffusion model of diffusive population dynamics
A. Kh. Khachatryan, Kh. A. Khachatryan, A. Zh. Narimanyan

Труды Московского математического общества (Transactions of the Moscow Mathematical Society) 2022 219-239

Article

Математическая модель распространения пандемии типа COVID-19
А. Г. Сергеев, А. Х. Хачатрян, Х. А. Хачатрян

Труды Московского математического общества (Transactions of the Moscow Mathematical Society) 2022 63-75

Conference

О системах нелинейных интегральных уравнений Гаммерштейновского типа на полупрямой

Хачатрян Х. А.

2022 196-196

http://agora.guru.ru/display.php?conf=diff-2022

Conference

О некоторых интегральных уравнениях на всей прямой с вогнутой нелинейностью

Хачатрян Х. А.

2022 12-13

http://agora.guru.ru/display.php?conf=MOCS-2022

Conference

Вопросы отсутствия или существования и единственности нетривиального решения для некоторых классов нелинейных интегральных уравнений типа свертки

Хачатрян Х. А.

2022 50-51

http://www.mathnet.ru/php/conference.phtml?confid=2097&option_lang=rus

---

Conference

О разрешимости одной системы нелинейных бесконечных алгебраических уравнений в пространстве ограниченных последовательностей
Хачатрян Х.А., Аветисян М.О.

2022 51-51

http://www.mathnet.ru/php/conference.phtml?confid=2097&option_lang=rus

---

Conference

О построении и исследовании решений класса сингулярных интегральных уравнений с монотонными нелинейными компонентами на всей оси
Хачатрян Х. А., Андриян С. М.

2022 51-53

http://www.mathnet.ru/php/conference.phtml?confid=2097&option_lang=rus

Conference

О разрешимости одного класса интегральных уравнений на положительной полупрямой с выпуклой нелинейностью
Хачатрян Х. А., Акопян А. Р.

2022 10-11

http://www.mathnet.ru/php/conference.phtml?confid=2097&option_lang=rus

Article

Solvability of a Certain System of Singular Integral Equations with Convex Nonlinearity on the Positive Half-Line
Kh.A.Khachatryan, H.S.Petrosyan

Russian Mathematics 2021 27–46

Article

Асимптотическое поведение решения для одного класса нелинейных интегро-дифференциальных уравнений в задаче распределения дохода
Х. А. Хачатрян, А. С. Петросян, А. Х. Хачатрян

Trudy Instituta Matematiki i Mekhaniki UrO RAN 2021 188–206

Article

On the Solvability of a Class of Nonlinear Urysohn Integral Equations on the Positive Half-line
Kh.A.Khachatryan, H.S.Petrosyan

The Bulletin of Irkutsk State University Series Mathematics 2021 57-68

Article

Integral Equations on the Whole Line with Monotone Nonlinearity and Difference Kernel
Kh.A.Khachatryan, H.S.Petrosyan

Journal of Mathematical Sciences 2021 790-804

Article

On Solvability of a Class of Multidimensional Integral Equations in the Mathematical Theory of Geographic Distribution of an Epidemic
Kh.A.Khachatryan, H.S.Petrosyan

Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 2021 143-157

Article

On Bounded Solutions of a Class of Nonlinear Integral Equations in the Plane and the Urysohn Equation in a Quadrant of the Plane
Kh.A.Khachatryan, H.S.Petrosyan

Украйнский математичний журнал (Ukrainian Mathematical Journal) 2021 811-829

Article

SOLVABILITY OF TWO-DIMENSIONAL INTEGRAL EQUATIONS WITH MONOTONE NONLINEARITY
Kh.A.Khachatryan, A.Kh.Khachatryan, H.S.Petrosyan

Journal of Mathematical Sciences 2021 720-731

Article

On Positive Bounded Solutions of One Class of Nonlinear Integral Equations with the

Hammerstein–Nemytskii Operator
Kh.A.Khachatryan, A.Kh.Khachatryan, H.S.Petrosyan

Differential Equations 2021 768–779

Article

Alternating bounded solutions of a class of nonlinear two-dimensional convolution-type integral equations
Kh.A.Khachatryan, A.S.Petrosyan

Transactions of the Moscow Mathematical Society 2021 259-271

Article

О качественных свойствах решения одной нелинейной граничной задачи в динамической теории p-адических струн
Х. А. Хачатрян, А. С. Петросян

Vestnik of Saint Petersburg University Applied Mathematics Computer Science Control Processes 2020

423–436

Article

О знакопеременных и ограниченных решениях одного класса интегральных уравнений на всей оси с монотонной нелинейностью
Х. А. Хачатрян, А. С. Петросян

Вестник Самарского государственного технического университета Серия Физико-математические науки
2020 644–662

Article

Единственность решения одной системы интегральных уравнений на полуоси с выпуклой нелинейностью
Х. А. Хачатрян, А. С. Петросян, Ц. Э. Терджян

Математические труды 2020 187–203

Article

Solvability of a Nonlinear Problem in Open-Closed p-Adic String Theory
Kh.A.Khachtryan, H.S.Petrosyan

Differential Equations 2020 1371–1378
