# FORMATO EUROPEO PER IL CURRICULUM VITAE



## INFORMAZIONI PERSONALI Nome

### SHAPOUR HEIDERKHANI

Settembre 2018 – oggi UNIVERSITA' DI HALIFAX - CANADA

# ESPERIENZA LAVORATIVA: OCCUPAZIONE ATTUALE

 Date (da – a)
Nome e indirizzo del datore di lavoro
Tipo di impiego

> Febbraio 2015 - oggi Razi University -Iran

# Associate Professor of Applied Mathematics

Ph.D. in Economics, Management and Statistics, ottobre 2016 - Luglio 2021, Università degli Studi di Messina, Italy. Titolo tesi: Critical point approaches for second-order dynamic Sturm-Liouville boundary value problems with p-Laplacian.

**Visiting Associate Professor of Mathematics**, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada

PhD. in Mathematics, Gennaio 2006 - Agosto 2009, Università di Mazandaran, Iran. Titolo tesi: Existence of at least three solutions for a class of elliptic nonlinear problems in R^N.

Master School in Applied Mathematics, Settembre 2003 - Dicembre 2005, Università di Mazandaran, Iran. Ttiolo Tesi: On the existence of solutions for superlinear indefinite equations.

Bachelor in Sc. Mathematics, settembre 1998 - settembre 2003, Razi University, Iran

Date (da – a) Nome e indirizzo del datore di lavoro Tipo di impiego

## **I**STRUZIONE E FORMAZIONE

### **INSEGNAMENTI RICOPERTI:**

Ho un esperienza di più di 18 anni di insegnamento universitario nelle discipline della matematica applicata:

- Undergraduate Courses
  - Pre-Calculus
  - Differential and Integral Calculus I and II
  - Intermediate Calculus I and II
  - Calculus for Economics and Business
  - Life Sciences Calculus
  - Multivariable Calculus
  - Ordinary Differential Equations
  - Introductory Analysis
  - Intermediate Analysis I and II
  - Mathematics for Economists
  - Discrete Mathematics
  - Topology
  - Partial Differential Equations
  - Applied Differential Equations
  - Complex Variables
  - Number Theory
  - Numerical Computation
  - Engineering Mathematics I and II
  - Introductory Statistics for Science and Health Sciences
  - Mathematical Statistics
- Graduate Courses
  - Real Analysis
  - Partial Differential Equations I and II
  - Functional Analysis I,II
  - Applied Functional Analysis
  - Boundary Value Problems and Mathematical Modeling

Formale attribuzione di incarichi di insegnamento o di ricerca (fellowship) presso qualificati atenei e istituti di ricerca esteri o sovranazionali

Visiting Associate Professor of Mathematics, dal settembre 2018 – ad oggi, Department of Mathematics and Statistics, Dalhousie University, Halifax, NS, Canada

Associate Professor of Mathematics, February 2015-ad oggi; Razi University, Iran

**Research Scholar-Team Member of Mathematical Economics group**, November 2021-ad oggi, University of Messina, Italy

Head of the Department of Mathematics, gennaio 2012-luglio 2014; Razi University, Iran

Assistant Professor of Mathematics, settembre 2009- gennaio 2015; Razi University, Iran

Visiting Scholar, 30 giugno 2016 - 21 settembre 2016, University of Messina, Italy

Visiting Scholar, 25 giugno 2015 - 6 settembre 2015, University of Messina, Italy

**Visiting Scholar**, luglio 2014 - settembre 2014; University of Tennessee at Chattanooga, TN, USA

Visiting Scholar, 6 marzo - 7 april 2014; University of Reggio Calabria, Italy

Visiting Scholar, 12-30 luglio 2012, University of Messina, Italy

Non Resident Researcher, 2010-2013; School of Mathematics, Institute

for Research in Fundamental Sciences (**IPM**), Tehran, Iran **Visiting Scholar**, November 2007-August 2008; University of Perpignan, France (Ph.D sabbatical leave)

#### **Conferenze e Seminari**

1-Existence of three solutions for a Dirichlet problem involving the N-dimensional p-Laplacian, 36th Annual Iranian Mathematics Conference, September 10-13, 2005, University of Yazd, Yazd, Iran.

2-Multiplicity results for a Dirichlet Problem involving the p-Laplacian in Ndimensional case, 38th Annual Iranian Mathematics Conference, 3-6 September, 2007, University of Zanjan, Zanjan, Iran.

3-Existence of three solutions for a Dirichlet boundary value problem, Noncommutative Structures in Mathematics and Physics, July 22-26, 2008, Brussels, Belgium.

4- Existence of three solutions for a Kirchhoff-type doubly eigenvalue boundary value problem with Dirichlet condition, 18th Seminar on Mathematical Analysis, 2009, Tarbiat Moallem University, Tehran, Iran.

5-Multiple solutions for Neumann elliptic equations driven by a P-Laplacian operator, The 2nd international conference on nonlinear analysis and optimization 2009, University of Isfahan, Isfahan, Iran.

6-Existence of three solutions to a class of Neumann doubly eigenvalue elliptic systems driven by a (p1, ..., pn)-Laplacian, Nonlinear problems for p-Laplace and Laplace, 10-14 August 2009, Linköping, Sweden.

7-Three solutions for systems of n fourth order partial differential equations, International Conference on Differential & Difference Equations and Applications, Conference in honour of Professor Ravi P. Agarwal, 4-8 July 2011, Azores University, Ponta Delgada, Portugal.

8- Multiple solutions for a perturbed mixed boundary value problem, Calculus of Variations and PDEs., 9-12 July 2012, Institute of Mathematics of polish Academy of Sciences, University of Warsaw, Szczawnica, Poland.

9-Multiplicity results for systems of n fourth order partial differential equations, 24 July 2012, Colloquium talk, DIMET – Faculty of engineering, University of Reggio Calabria, Reggio Calabria, Italy.

10- Multiplicity results for Kirchhoff systems, 25 July 2012, Colloquium talk, Department of Science for Engineering and Architecture (Mathematics Section), Engineering Faculty, University of Messina, Messina, Italy.

11- Critical points approaches to multiplicity results for multi-point boundary value systems, 26 July 2012, Department of Mathematics, Colloquium talk, University of Catania, Catania, Italy.

12- Some existence results for a class of fourth-order Kirchhoff-type problems, Seminar on Differential Equations and Geometry, 1 April 2014, Dipartimento PAU, University of Reggio Calabria, Italy.

13-Periodic Solutions for a Class of Second-order Differential Systems with Impulses via Variational Methods, Seminar on Differential Equations and Dynamical Systems, PDE and Elliptic Problems, 15 May 2014 IPM, Tehran, Iran.

14-On a class of second-order impulsive Hamiltonian systems, 17 September 2014, Colloquium talk, University of Tennessee at Chattanooga, Chattanooga, TN, USA.

15-Existence results for impulsive boundary value problems via variational methods, 10 August 2016, Colloquium talk, University of Perugia, Italy.

16-Impulsive Sturm-Liouville differential equations with nonlinear derivative dependence, 7 September 2016, Colloquium talk, University of Messina, Messina, Italy.

17-Existence results for a class of impulsive perturbed differential equations with nonlinear derivative dependence, 15 September 2016, Colloquium talk, Department of Mathematics, University of Catania, Catania, Italy.

18-Multiplicity results for Kirchhoff-type second-order impulsive differential equations on the half-line, International Conference on Differential & Difference Equations and Applications, June 5 - 9, 2017, Amadora, Portugal.

19-Existence of multiple solutions for Kirchhoff-type p-Laplacian discrete problems via variational methods, International Conference on Differential & Difference Equations and Applications, June5 - 9, 2017, Amadora, Portugal.

20-Boundary value problems with impulsive effects, 41st Annual Meeting of the Italian Association for Mathematics Applied to Social and Economic Sciences, AMASES, September 14-16, 2017, University of Cagliari, Italy. 21-Multiple solutions for discrete fourth-order problems with multiple parameters, 12 September 2018, Colloquium talk, University of Messina, Messina, Italy. 22-Existence results for impulsive boundary value problems via variational methods and critical point theory, 26 November 2018, Colloquium talk, Dalhousie University, Halifax, NS, Canada. 23-A variational approach for discrete partial mean curvature systems, XLVI Annual meeting of the Italian Association for Mathematics Applied to Social and Economic Sciences, AMASES, September 22-24, 2022, University of Palermo, Italy. 24-Sobolev spaces, variational methods for partial mean curvature systems, #APPLMATH 2022, international workshop, September 28, 2022, University of Messina, Italy. 25- Multiplicity results for discrete fractional boundary value problems involving p-Laplacian operator, 4th International Conference and Summer School NUMTA 2023 "Numerical Computations: Theory and Algorithms", June 14-20, 2023, at Tui Magic Life Calabria, Italy. 26- Multiple solutions for the fractional p-Laplacian elliptic Dirichlet problems, 4th International Conference and Summer School NUMTA 2023 "Numerical Computations: Theory and Algorithms", June 14-20, 2023, at Tui Magic Life Calabria, **Direzione** o Italy. partecipazione a comitati editoriali di riviste, collane editoriali Member of Editorial Boards for  $\geq$ International Journal of Mathematical Analysis International Journal of Contemporary Mathematical Sciences Journal of Mathematics and Computer Science (JMCS) **Reviews Conducted for more than 100 international journals. Pubblicazioni Scientifiche** Identificatori Personali **Total number of publications: 202** Total number of citations: 1989 (Google Scholar, GS) Google Scholar h-index: 24 & i10-index: 65 145-Existence of one weak solution for a Steklov problem involving the weighted p(.)-Laplacian (with S. Moradi and G.A. Afrouzi), J. Nonlinear Funct. Anal., Vol. 2023 (2023), Article ID 8, pp. 1-15 144-Three solutions for discrete anisotropic Kirchhoff-type problems (with M. Bohner, G. Caristi and A. Ghobadi), Demonstratio Mathematica, to appear. 143-Variational approaches to a discrete elliptic problem with a weight (with M. Boroun), Numerical Functional Analysis and Optimization, to appear. 142-Multiple solutions for nonlocal fractional Kirchhoff type problems (with A. Ghobadi), Differential Equations & Applications – DEA, 14, 4 (2022), 597–608. 141-Quasivariational inequalities for dynamic competitive economic equilibrium problems in discrete time (with G. Caristi and D. Barilla), Decisions in Economics and Finance, to appear. 140-Variational approaches for an elastic beam equation with local nonlinearities (with A. Ghobadi), Annales Polonici Mathematici, DOI: 10.4064/ap220519-20-10, to appear.

139-Infinitely many weak solutions for a p-triharmonic problem with Navier boundary

conditions (with Z. Mehraban), Applicable Analysis, to appear.

138-Critical point approaches to nonlinear square root Laplacian equations (with M. Bohner, G. Caristi and A. Salari), **Miskolc Mathematical Notes**, to appear.

137-Existence of multiple solutions to a p-Kirchhoff problem (with J.R. Graef, L. Kong and A. Ghobadi), **Differential Equations & Applications – DEA** 14, Number 2 (2022) 227–237.

136-Critical point approaches for discrete anisotropic Kirchhoff type problems (with A. Ghobadi and G. Caristi), Advances in Pure and Applied Mathematics 13, n° 4, (2022) 58-65.

135-Variational approaches to systems of Sturm-Liouville boundary value problems (with G.A. Afrouzi and S. Moradi), Asian-European Journal of Mathematics (AEJM) Vol. 14, No. 03, (2021) 2150032.

134-Three weak solutions for a degenerate nonlocal singular sub-linear problem (with K.- I. Kou and A. Salari), **Differential Equations & Applications – DEA** 14, Number 1 (2022) 49–63.

133-Existence results for Kirchhoff nonlocal fractional equations (with F.-F. Liao and A. Salari), **Kragujevac Journal of Mathematics** 49(1) (2025) 17–30.

132-Existence results for a 2nth-order differential equation with Sturm-Liouville operator (with S. Moradi), Numerical Functional Analysis and Optimization 42(11) (2021) 1239-1262.

131-Three solutions for impulsive fractional boundary value problems with p-Laplacian (with J.R. Graef, L. Kong and S. Moradi), **Bulletin of the Iranian Mathematical Society**, to appear.

130-Multiple solutions for a class of p(x)-Kirchhoff type equations (with A. Ghobadi and M. Avci), Applied Mathematics E-Notes 22 (2022) 160-168.

129-Multiple solutions for nonlocal elliptic problems driven by p(x)-Biharmonic operator (with F. Liao and S. Moradi), AIMS Mathematics 6 (2021) 4156-4172.

128-On an anisotropic dicrete boundary value problem of Kirchhoff type (with J.R. Graef, L. Kong and S. Moradi), **Journal of Difference Equations and Applications**, to appear.

127-Existence and multiplicity of homoclinic solutions for a difference equation (with F. Gharehgazlouei and M. Imbesi), **Electron. J. Differential Equations**, Vol. 2020 (2020), No. 115, pp. 1-12.

126-Multiple solutions for a Kirchhoff-type second-order impulsive differential equation on the half-line (with G. A. Afrouzi and S. Moradi), **Quaestiones Mathematicae** 45 (2022) 109-141.

125-Existence and uniqueness of solutions of nonlinear fractional order problems via a fixed point theorem (with Z. Ahmadi, R. Lashkaripour and H. Baghani), **International Journal of Nonlinear Sciences and Numerical Simulation (IJNSNS)** 22, no. 6, (2021) 797-807.

124-Variational approaches to equations of p(x)-Laplace type operators with variable exponents and nonlinear boundary conditions (with A. L. A. D. Araujo, G. A. Afrouzi and S. P. Roudbari), **Dynamics of Continuous, Discrete and Impulsive Systems Series** A: Mathematical 29 (2022) 297-320.

123-Existence results for a dynamic Sturm-Liouville boundary value problem on time scales (with S. Moradi and G. Caristi), **Optimization Letters** 15 (2021) 2497–2514.

122-Multiple solutions for a class of impulsive perturbed Sturm-Liouville differential equations with nonlinear derivative dependence, **Journal of Nonlinear Functional Analysis** 2021 (2021), Article ID 37.

121-Existence results for dynamic Sturm--Liouville boundary value problems via variational methods (with D. Barilla, M. Bohner and S. Moradi), Applied Mathematics

and Computation 409(15) (2021) 125614.

120-Critical points approaches to a nonlocal elliptic problem driven by p(x)-Biharmonic operator (with S. Moradi and M. Avci), Georgian Mathematical Journal 29, no. 1 (2022) 55-69..

119-A critical point approach for a second-order dynamic Sturm-Liouville boundary value problem with p-Laplacian (with M. Bohner G. Caristi and F. Ayazi), **Applied Mathematics and Computation** 49(15) (2021) 125521.

118- Existence results for impulsive fractional differential equations with p-Laplacian via variational methods (with J.R. J.R. Graef, L. Kong and S. Moradi), Mathematica Bohemica 147, No. 1 (2022) 95-112.

117-Existence and multiplicity of weak solutions for a Neumann elliptic problem with  $\vec{p}(x)$ -Laplacian (with M. Bohner, G. Caristi and F. Gharehgazlouei), Nonautonomous Dynamical Systems 7 (2020) 53-64.

116-Existence of solutions of infinite system of nonlinear sequential fractional differential equations (with Z. Ahmadi, R. Lashkaripour, H. Baghani, and G. Caristi), **Adv. Differ. Equ.** 2020, 226 (2020).

115-New existence criterion of infinitely many solutions for partial discrete Dirichlet problems (with F. Gharehgazlouei), **Tbilisi Mathematical Journal (TMJ)** (2020) 13, Issue 3, 43-51.

114-Existence results for a boundary value problem involving a fourth-order elastic beam equation (with F. Gharehgazlouei), Journal of Nonlinear Functional Analysis, Vol. 2019 (2019), Article ID 28, pp. 1-15.

113-Multiplicity of generalized Yamabe equations on Riemannian manifolds and applications to

Emden-Fowler problems (with L.- F.- Fang, G.A. Afrouzi and S. Pourali Roudbari), **Pure and Applied Mathematics** 35 No. 3 (2019) 253-268.

112-Three weak solutions to a degenerate quasilinear elliptic system (with J.R. Graef, L. Kong and A. Salari), **Le Matematiche**, Vol. LXXIV (2019) – Issue I, pp. 191–210.

111-Existence of at least one homoclinic solution for a nonlinear second-order difference equation (with M. Bohner, G. Caristi and S. Moradi), **International Journal of Nonlinear Sciences and Numerical Simulation** 20 (2019) 433-439.

110-Generalized Yamabe equations on Riemannian manifolds and applications to Emden-Fowler problems (with S. Moradi, G. Caristi and D. Barilla), **Quaestiones Mathematicae** 43 (2020) 547-567.

109-Discrete fourth-order boundary value problems with four parameters (with G.A. Afrouzi, A. Salari and G. Caristi), **Applied Mathematics and Computation** 346 (2019) 167-182.

108-Critical point approaches to Gradient-type systems on the Sierpinski Gasket (with F.-F. Liao, S. Heidarkhani, G.A. Afrouzi and A. Salari), Journal of Applied Analysis and Computation 9, Number 1 (2019) 314-331.

107-Existence results for a class of second order differential equations with nonlinear derivative dependence (with J. Henderson and A. Solimaninia), Journal of Nonlinear Functional Analysis 2018 (2018), Article ID 24.

106-Three solutions for second-order boundary-value problems with variable exponents (with S. Moradi and S.A. Tersian), Electronic Journal of Qualitative Theory of Differential Equations 2018, No. 33, 1–19.

105-Existence results for second-order boundary-value problems with variable exponents (with S. Moradi and D. Barilla), Nonlinear Analysis Series B: Real World Applications 44 (2018) 40-53.

104-Multiple solutions for degenerate nonlocal problems (with G. Caristi, A. Salari and S.A. Tersian), **Applied Mathematics Letters** 84 (2018) 26-33.

103-A variational approach to perturbed impulsive fractional differential equations (A. Cabada, G.A. Afrouzi, S. Moradi and G. Caristi), Journal of Computational and Applied Mathematics 341 (2018) 42–60.

102-An existence result for impulsive multi-point boundary value systems using a local minimization principle (with G.A. Afrouzi, M. Bohner, G. Caristi and S. Moradi), **Journal of Optimization Theory and Applications** 177 (2018) 1-20.

101-Existence of solutions to a discrete fourth order boundary value problem (with J.R.

Graef, L. Kong and M. Wang), Journal of Difference Equations and Applications 24 (2018) 849-858.

100-p(x)-Laplacian-like problems with Neumann condition originated from a capillary phenomena (with A. Salari), **Journal of Nonlinear Functional Analysis** 2018 (2018), Article ID 11, pp. 1-23.

99-Variational approaches to p(x)-Laplacian-like problems with Neumann condition originated from a capillary phenomena (with G.A. Afrouzi and S. Moradi), **International Journal of Nonlinear Sciences and Numerical Simulation** 19 (2018) 189-204.

98-Multiplicity results for Kirchhoff-type three-point boundary value problems (with M. Ferrara, G. Caristi and A. Salari), **Acta Applicandae Mathematicae** 156 (2018) 133–157.

97-Multiple solutions for perturbed Kirchhoff-type non-homogeneous Neumann problems through Orlicz-Sobolev spaces (with M. Ferrara and G. Caristi), Electronic Journal of Differential Equations, Vol. 2018 (2018), No. 43, pp. 1–22.

96-Existence of three weak solutions for a perturbed anisotropic discrete Dirichlet problem (with G.A. Afrouzi, M. Imbesi and S. Moradi), **Applicable Analysis** 98 (2019) 561-580.

95-Variational-hemivariational inequalities of Kirchhoff-type with small perturbations of nonhomogeneous Neumann boundary conditions (with J.R. Graef and L. Kong), **Mathematics in Engineering, Science & Aerospace (MESA)** 2017, Vol. 8 Issue 3, p345-357. 13p.

94-Kirchhoff-type boundary-value problems on the real line (with A. Salari and D. Barilla), Differential and Difference Equations with Applications ICDDEA, Amadora, Portugal, June 2017, Selected Contributions, 141-153.

93-Variational approaches to Kirchhoff-type second-order impulsive differential equations on the half-line (with G. Caristi and A. Salari), **Results in Mathematics** (2018) 73:44.

92-Three solutions for a class of nonhomogeneous nonlocal systems: an Orlicz--Sobolev space setting (with M. Bohner, G. Caristi and A. Salari), Dynamic Systems and Application 26 (2017) 259-282.

91-A critical point approach to boundary-value problems on the real line (with M. Bohner, G. Caristi and S. Moradi), Applied Mathematics Letters 76 (2018) 215-220.

90-An existence result for discrete anisotropic equations (with G.A. Afrouzi and S. Moradi), **Taiwanese Journal of Mathematics** 22, Number 3 (2018) 725-739.

89-Existence results for a Kirchhoff-type second-order differential equation on the halfline with impulses (with G.A. Afrouzi and S. Moradi), **Asymptotic Analysis** 105 (2017) 137–158.

88-Existence of multiple solutions for a perturbed discrete anisotropic equation (with G.A. Afrouzi, S. Moradi and G. Caristi), Journal of Difference Equations and Applications 23 (2017) 1491-1507.

87-Perturbed nonlocal fourth order equations of Kirchhoff-type with Navier boundary condition (with A. Salari, G. Caristi and D. Barilla), **Boundary Value Problems** (2017) 2017:86.

86-Variational approaches to p-Laplacian discrete problems of Kirchhoff-type (with G.A. Afrouzi, J. Henderson, S. Moradi and G. Caristi), Journal of Difference Equations and Applications 23 (2017) 917-938.

85-Infinitely many periodic solutions to a class of perturbed second-order impulsive Hamiltonian systems (with J.R. Graef and L. Kong), **Differential Equations & Applications – DEA**, Volume 9, Number 2 (2017), 195–212.

84-Multiple solutions for Kirchhoff type problems with variable exponent and nonhomogeneous Neumann conditions (with A.L.A. De Araujo, G.A. Afrouzi and S. Moradi), **Mathematische Nachrichten** 291 (2-3) (2018) 326-342.

83-Weak solutions and energy estimates for a degenerate nonlocal problem involving sub-linear nonlinearities (with J. Chu, K.-I. Kou and A. Salari), Journal of the Korean Mathematical Society **54 (2017)**, **No. 5, 1573-1594**.

82-Existence of one non-trivial anti-periodic solution for second-order impulsive differential inclusions (with A. Hadjian), Mathematical Methods in the Applied Science 40(14)

(2017) 5009-5017.

81-Infinitely many solutions for a class of perturbed damped vibration problems (with M. Ferrara and A. Salari), **Mathematical Reports** 13(69) 3, (2017) 347-360.

80-A variational approach for solving p(x)-biharmonic equations with Navier boundary conditions (with G.A. Afrouzi, S. Moradi and G. Caristi), Electronic Journal of Differential Equations, Vol. 2017 (2017), No. 25, pp. 1-15.

79-Multiplicity results for discrete anisotropic equations (with M. Galewski and A. Salari), **Discrete Continuous Dynamical Systems, series B** 23(1) (2018) 203-218.

78-Weak solutions and energy estimates for a class of singular p-Laplacian type equations (with J. Chu, A. Salari and G. Caristi), **J. Dynamic. Control Sys.** 24 (2018) 51-63.

77-A variational approach to difference equations (with G.A. Afrouzi, G. Caristi, J. Henderson and S. Moradi), Journal of Difference Equations and Applications 22 (2016) 1761-1776.

76-Nontrivial solutions for impulsive Sturm-Liouville differential equations with nonlinear derivative dependence (with G. Caristi, M. Ferrara and Y. Tian), **Differential and Integral Equations** 30(11-12) (2017) 989-1010.

75-Existence of three solutions for impulsive multi-point boundary value problems (with M. Bohner, A. Salari and G. Caristi), **Opuscula Mathematica** 37, no. 3 (2017), 353-379.

74-Perturbed Kirchhoff-type p-Laplacian discrete problems (with G. Caristi and A. Salari), **Collectanea Mathematica** 68 (2017) 401-418.

73-Multiplicity of elliptic equations involving the p-Laplacian with discontinuous nonlinearities (with F. Gharehgazlouei), Complex Variables and Elliptic Equations 62, NO. 3, (2017) 413-429.

72-Existence of solutions to an impulsive Dirichlet boundary value problem (with J.R. Graef and L. Kong), Fixed Point Theory 19 (2018), No. 1, 225-234.

71-Nontrivial solutions of a Dirichlet boundary value problem with impulsive effects (with J.R. Graef and L. Kong), Dynamic Systems and Applications 25 (2016) 335-350. 70-Infinitely many solutions for impulsive nonlinear fractional boundary value problems (with A. Salari and G. Caristi), Advances in Difference Equations (2016) 2016:196.

69-Existence results for impulsive damped vibration systems (with G.A. Afrouzi, M. Ferrara, G. Caristi and Shahin Moradi), **Bulletin of the Malaysian Mathematical** Sciences Society 41(3) (2018) 1409–1428.

68-Infinitely many solutions for perturbed impulsive fractional differential systems (with Y. Zhao, G. Caristi, G.A. Afrouzi and S. Moradi), **Applicable Analysis** 96, NO.8 (2017) 1401–1424.

67-Existence of one weak solution for p(x)-biharmonic equations with Navier boundary conditions (with G.A. Afrouzi, S. Moradi, G. Caristi and B. Ge), Z. Angew. Math. Phys. (2016) 67:73.

66-Multiplicity results for p(x)-biharmonic equations with Navier boundary conditions (with M. Ferrara, A. Salari and G. Caristi), **Complex Variables and Elliptic Equations** 61 (2016) 1494-1516.

65-Nontrivial solutions for impulsive fractional differential systems through variational methods (with A. Salari) **Mathematical Methods in the Applied Sciences** 43 (2020) 6529-6541.

64-Multiple solutions for a class of perturbed second-order differential equations with impulses (with M. Ferrara, A. Salari and G. Caristi), **Boundary Value Problems** (2016) 2016:74.

63-Perturbed Kirchhoff-type Neumann problems in Orlicz-Sobolev spaces (with G. Caristi and M. Ferrara), **Computers & Mathematics with Applications (CAMWA)** 71 (2016) 2008-2019.

62-Variational approaches to impulsive elastic beam equations of Kirchhoff-type (with G.A. Afrouzi, M. Ferrara and S. Moradi), **Complex Variables and Elliptic Equations** 61 (2016) 931-968.

61-Existence of three solutions for impulsive perturbed elastic beam fourth-order

equations of Kirchhoff-type (with A. Salari), **Studia Sci. Math. Hungarica** 54 (1) (2017) 119-140.

60-Nontrivial periodic solutions to second-order impulsive Hamiltonian systems (with J.R. Graef and L. Kong), Electronic Journal of Differential Equations, Vol. 2015 (2015), No. 204, pp. 1-17.

59-Infinitely many solutions for a perturbed p-Laplacian boundary value problem with impulsive effects (with G. D'Aguì and A. Sciammetta), Journal of Nonlinear and Convex Analysis 18 (12) (2017) 2263-2274.

58-Multiple solutions for systems of Sturm- Liouville boundary value problems (with J.R. Graef and L. Kong), Mediterr. J. Math. 13 (2016) 1625–1640.

57-Existence of infinitely many symmetric solutions to perturbed elliptic equations with discontinuous nonlinearities in R<sup>N</sup> (with F. Gharehgazlouei and A. Solimaninia), **Electronic Journal of Differential Equations**, Vol. 2015 (2015), No. 123, pp. 1-17.

56-Infinitely many solutions for Steklov problems associated to non-homogeneous differential operators through Orlicz-Sobolev spaces (with G.A. Afrouzi and S. Shokooh), **Complex Variables and Elliptic Equations** 60, No.1 (2015) 1505-1521.

55-Infinitely many solutions for a class of quasilinear two-point boundary value systems (with G. D'Aguì and A. Sciammetta), Electronic Journal of Qualitative Theory of Differential Equations (EJQTDE) 2015, No. 8, 1–15.

54-Three nontrivial solutions for Kirchhoff-type variational-hemivariational inequalities (with J. Chu, F. Gharehgazlouei and A. Solimaninia), **Results in Mathematics** 68 (2015) 71-91.

53-Multiple solutions for partial discrete Dirichlet problems depending on a real parameter (with M. Imbesi), Journal of Difference Equations and Applications 21, No. 2 (2015) 96–110.

52-Critical points approaches to elliptic problems driven by a p(x) –Laplacian (with B. Ge) Ukrainian Mathematical Journal, **2014**, **m. 66**, No 12.

51-Infinitely many periodic solutions for a class of perturbed second-order differential equations with impulses (with M. Ferrara and A. Salari), Acta Applicandae Mathematicae 139 (2015) 81-94.

50-Nontrivial solutions for one-dimensional fourth-order Kirchhoff-type equations (with M. Ferrara and S. Khademloo), Mediterranean Journal of Mathematics 13 (2016) 217-236.

49-Multiple solutions for Dirichlet impulsive equations (with M. Ferrara and P.F. Pizzimenti), Advances in Nonlinear Analysis 3, S1 (2014) s89-s98.

48-Multiplicity results for elliptic problems with variable exponent and nonhomogeneous Neumann conditions (with G.A. Afrouzi and A. Hadjian), Mathematical Methods in the Applied Sciences 38 (2015) 2589-2599.

47-Steklov problems involving the p(x)-Laplacian (with G.A. Afrouzi and A. Hadjian), **Electronic Journal of Differential Equations,** Vol. 2014 (2014), No. 134, pp. 1-11.

46-Nontrivial solutions for systems of Sturm-Liouville boundary value problems (with J.R. Graef and L. Kong ), **Differential Equations & Applications - DEA** 6(2) (2014) 255-265.

45-Multiple solutions for a perturbed fourth-order Kirchhoff type elliptic problem (with S. Khademloo and A. Solimaninia), **Portugaliae Mathematica** 71, Fasc 1 (2014) 39-61.

44-Infinitely many solutions for systems of Sturm-Liouville boundary value problems (with J.R. Graef and L. Kong), **Results in Mathematics** 66 (2014) 327-341.

43-Multiplicity results for perturbed fourth-order Kirchhoff type elliptic problems (with M. Ferrara and S. Khademloo), Applied Mathematics and Computation 234 (2014) 316–325.

42-Multiple solutions for a Dirichlet quasilinear system containing a parameter (with J. Henderson), **Georgian Mathematical Journal** 21(2) (2014) 187–197.

41-Infinitely many solutions for perturbed difference equations (with M. Khaleghi Moghadam and J. Henderson), Journal of Difference Equations and Applications 20(7) (2014) 1055-1068.

40-Existence of nontrivial solutions to systems of multi-point boundary value problems (with J. R. Graef and L. Kong), **Discrete and Continuous Dynamical Systems**, Supplement 2013, pp. 273-281.

39-Multiple solutions for a quasilinear second order differential equation depending on a parameter, Acta Mathematicae Applicatae Sinica, English Series 32 (2016) 199-208.

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