# Reza Mansouri

CV: English part

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# I. Professional Activities

### I.1 Publications

The Art of Gluing Manifolds, a review paper in preparation;

Nonlinear phenomena in general relativity, 2018, Eur. Phys. J. Plus 133 (2018), no.4, 147 (co-author Alireza Allahyari)

*Relativistic virial relation for cosmological structures*, 2016, Phys. Rev. D93 (2016), 023007 (co-authors: Reza Javadinezhad, Javad T. Firouzjaee);

*Gravitational collapse in the AdS background and the black hole formation*, 2016, Int.J.Mod. Phys, D25 (2016) 1650005, DOI: 10.1142/S021827181650005X (co-authors: Alireza Allahyari, Javad T. Firouzjaee);

Cosmological black holes: the perfect fluid collapse with pressure in a FRW background,

Class.Quant.Grav. 32 (2015) 21, 215001, DOI: <u>10.1088/0264-9381/32/21/215001</u> (co-authors Rahim Moradi, Javad T. Firouzjaee);

Relativistic rotation curve for cosmological structures, 2014, Int. J. Mod. Phys. D (2014), DOI: 10.1142/S0218271814500746, arXiv:1212.4796 (co-authors: Mohammadhosein Razbin, J. T. Firouzjaee);

Gravitational Lensing by a structure in a cosmological background, 2013, Phys. Rev. D88 (2013) 083011

DOI: 10.1103/PhysRevD.88.083011

arXiv:1308.4510 (co-authors: M. Parsi Mood, Javad T. Firouzjaee);

A concrete anti-de Sitter black hole with dynamical horizon having toroidal cross sections and its characteristics, 2012, EPL 100 39001, arXiv:1207.3673 (co-authors: P. Dadras, and J.T. Firouzjaee);

*Radiation from a dust dynamical LTB black hole*, 2012, EPL, 97, 29002, arXiv:1104.0530 (co-author: J.T. Firouzjaee);

*Do we know the mass of a black hole? Mass of some cosmological black hole models*, March 2012, GRG, Volume 44, <u>Issue 3</u>, pp 639-656, <u>arXiv:1010.3971</u> (co-author: J. T. Firouzjaee, M. Parsi Mood);

Asymptotically FRW black holes, 2010, GRG, 42, 2431, arXiv:0812.5108 (co-author: J.T. Firouzjaee);

*Lensing effects in inhomogeneous cosmological models*, 2009, Phys. Rev. D 79 (2009), 102002, <u>arXiv:0901.0340</u> (co-authors: Sima Ghassemi, S. Khoini-Moghaddam);

Modified averaging process in GR: Case study flat LTB, 2009, Int. Jour. Mod. Phys. D18(2009), 1177-1192, arXiv:0709.2558 (co-authors: E. Kourkchi, Sh Khosravi);

*Matching LTB and FRW spacetimes through a null hypersurface*, 2008, Grav. and Cosmol., 14: 295-300, gr-qc/0702132, arXiv:gr-qc/0702130 (co-author, S. Khakshournia);

An inhomogeneous model universe behaving homogeneously, 2008, GRG, 40:1047-1069, arXiv:astro-ph/0702282 (co-authors: E. Kourkchi, Sh.Khosravi, and Y. Akrami);

*Non-linear Structure Formation and "Apparent" Acceleration: an investigation*, 2007, JCAP 12:017, <u>arXiv:astro-ph/0606703</u> (co-author: Tirthbir Biswas and Alessio Notari);

*Thick planar domain walls: its thin wall limits and dynamics*, 2007, Int. Jour. Mod. Phys. D, 16, 629-640, (co-authors: S. Ghassemi and S. Khakshournia);

*Evolution of thick walls in curved space-times*, 2006, Class Quant Grav, 23, 5927-5939, astro-ph/0605094 (co-author: S.Khosravi and S.Khakshournia);

*Generalized Friedman equations for a finite thick brane*, 2006, JHEP 08, 019; astro-ph/0605094 (co-author: Sima Ghassemi and Samad Khakshournia);

On synchronization of clocks in general space-times, 2005, Iran. Jour. Phys. Res., 5, 63 (co-author: M. R. Khajehpour);

Spherical null shells within the distributional formalism, 2005, Iran. Jour. Phys. Res., 5, 59 (co-author: Samad Khakshournia);

Spherically symmetric thick branes in vacuum, 2004, IJMP A, 19, 4687, (co-authors: M. Borhani, S. Khakshournia);

Dynamics of general relativistic spherical symmetric dust thick shell, 2002, GRG 34, 1847 (co-author: S. Khakshournia);

Formation of cosmological mass condensation within a FRW universe, 2002, Phys. Rev. D 65, 027302 (co-author: S. Khakshournia).

General relativistic relation between density contrast and peculiar velocity, 2002, Int. J. Mod. Phys. D. 11, 321-33 (co-author: S. Rahvar);

Methods of gluing manifolds in general relativity, 2002, Journ.Math Phys. 43, 1519-1535 (co-author: K.Nozari);

Dynamics of null hyper- surfaces in general relativity, 2002, GRG 34, 243, (Co-author: K. Nozari);

Sign Function and Gluing of Space–Time Manifolds within Distributional Method, 2001, Gravitation & Cosmology 7, 261, (co-author: S. Khakshournia);

Casimir Stress on Parallel Plates in a de Sitter Space-Time, 2001, Class & Quant. Grav., 18, 2659 (co-author: M.R. Setare);

Casimir Effect for Spherical Shell in de Sitter Space, 2001, Class. & Quant. Grav., 18, 2331 (co-author: M. R. Setareh);

A New Distributional Approach to Signature Change, 2000, Gen. Rel. Grav. 32, 253-269 (co-author: K. Nozari);

A Model Universe with Variable Space Dimension: Its Dynamics and Wave-Function, 1999, Phys. Rev. D 60, 1035XX-1-22 (co-author: F. Nasseri);

Effective Time Variation of G in a Model Universe with Variable Space Dimension, 1999, Phys. Lett. A 259, 194-200 (co-authors: F. Nasseri, M. Khorrami);

Gravitational Coupling Constant in Arbitrary Dimension, 1998, Gravitation & Cosmology, 4, 1 (co-author: A. Nayeri);

A Cosmological Model with Variable Dimension: Expansion as Decrumpling, 1997, I.J.M.P.D., to be published (co-authors: M. Khorrami, M. Mohazzab. And M. R. Ejtehadi);

Equivalence of Darmois-Israel and Distributional Method for Thin-Shells in General Relativity, 1996, J. Math. Phys. 37,5627 (co-author: M. Khorrami);

A Decrumpling Model of the Universe, 1996, Helvetica Physica Acta, 69, 237 (co-authors: M. Khorrami, M. Mohazzab);

A Test Theory of the Local Structure of Space-Time: A Finslerian Approach, 1994, Class. & Quant. Grav. 11, 1 (co-authors: R. Golestanian, H.R.H Khajehpour)

Tunnelling in Anisotropic Cosmological Models, 1993, Class & Quant. Grav. 10, 1353 (co-author: M. Mohazzab);

Cylindrically Symmetric Thin Walls in General Relativity, 1993, J. Math. Phys. 35 (2), 951 (co-author: M. Khorrami);

Spherically Symmetric Thin Walls, 1991, Phys. Rev. D, 44, 557 (co-author: M. Khorrami);

Test t-Theory of Special Relativity on the Rotating Disk, 1989, Journ. Physics AA, 22, 1589 (co-authors: G. Abolghasem and H.R.H. Khajehpour);

How to Test the Special Theory of Relativity on the Rotating Earth, 1988, Phys. Lett. A, 132, 310 (co-authors: G. Abolghasem and M.R.H. Khjehpour);

Distribution Function of an Ideal Gas in the de Sitter Space-Time, 1988, Class. & Quant. Gravity, 5, 321 (co-author: A. Rakei);

An Alternative Relavtivistic-Law Equation of State, 1982, Acta Physica Polonica, B13, 201;

There is no Slow Uniform Contraction of a Fluid Sphere Obeying an Equation of State, 1980, Acta Physica Polonica, B11, 193;

Some Dynamical Aspects of a Test Theory of Special Relativity, 1979, Z. Naturforschung, 34a, 9233;

Broken Lorentz Invariance and Conventionality of Clock Synchronization, 1979, Phys. Lett. 71A, 177;

On The Non-Existence of Time-Dependent Fluid Spheres in General Relativity Obeying an Equation of State, 1977, Ann. Inst. Henri Poincare, XXVII, 175;

A Test Theory of Special Relativity I. Simultaneity and Clock Synchronization, 1977, GRG, 8, 497 (co-author: R. Sexl);

A Test Theory of Special Relativity II. First Order Tests, 1977, GRG, 8, 515 (co-author: R. Sexl);

A Test Theory of Special Relativity III. Second Order Tests, 1977, GRG, 8, 809 (co-author: R. Sexl);

An Exact Solution to Salam's f-g Theory of Gravity, 1973, Acta Phys. Austr, 36,86;

Allgemein-Kovariante Zwei-Tensor Theorie der Gravitation, 1972, Acta Physica Austriaca, 37, 152;

On Exact Kerr-Schild Type Vacuum Solutions to Salam's Two-Tensor Theory of Gravity, 1972, Comm. Math. Phys. 26, 301;

Generally Covariant Massiv Gravitation, 1972, Nuovo Cimento 10B, 483 (co-author: P.C. Aichelburg);

Exact Wave-Type Solution to f-g Theory of Gravity, 1971, Phys. Rev. Lett. 27, 1533 (co-author: P.C. Aichelburg, H.K. Urbantke);

### I. 2 Citations / Famous Papers (i.e. more than 700 citations)

The three papers Test Theory of Special Relativity I, II, III have been cited more than 700 times;

C. Laemmerzahl elaborate extensively on the Mansouri-Sexl test theory in *Special Relativity: will it survive the next 101 years*, J. Ehlers and C. Laemmezahel (editors), Springer, Brerlin, 2006;

One chapter of Cl. Will's book (Theory and Experiment in Gravitational Physics, Revised Edition, Cambridge University Press, 1992) is devoted to the Mansouri-Sexl Test Theory of Relativity;

The review article "Phys. Report, 298 (3 & 4) 93-180, 1998" describes extensively the "Mansouri-Sexl Test Theory";

Nature's editorial, *How Special is Special Relativity*, J. Maddox, (Nature, 7 Feb. 1985, 313, p. 429) is devoted to this test theory; See also Test Theories of Special Relativity in Wikipedia (German and English).

# I. 3 Books / Book Chapters

*International Cooperation for Enhancing Nuclear Safety, Security, Safeguards and Non-proliferation,* Proceeding of the XIX Eduardo Amaldi Conference, Academia Nationale dei Lincei, Rome, Italy, March 30-31, 2015, Luciano Maiani, Said Abousahl, and Wolfango Plastino (editors). Springer 2015, Session chairman, p. 77.

"Special relativity" (in Persian), R. Mansouri, Sh. Khosravi, Sharif University Publishing, Tehran, 2010/1389;

"Workshop on The Future of Physical Sciences in Iran and the Region", F. Ardalan, G. Violini, R. Mansouri (Eds.), ISMO-UNESCO-IPM, Tehran, 2000;

"Large Scale Structure of the Universe", R. Brandenberger, R. Mansouri (Eds.), Kluwer Academic Publishers, 2000;

"Michelson, Lorentz, Poincare', Einstein", in Relativitaet, Gruppen, Teilchen, "by H. Urbantke and R.U. Sexl, Springer Verlag, 1975;

"Die Synchronization von Uhren," in the same reference as above;

"Relativistische Hydrodynamic", in the same reference as above.

"Schroedinger's Contribution to Relativity", in the Schroedinger Equation, Eds W. Thirring, P. Urban, Springer Verlag, 1977.

### I. 4 Invited Presentation

ICTP-Colloquium, Test Theory of Special Relativity: What it is and Why We Need it, 1988, ICTP, Trieste.

### I. 5 Book Review

Force and Geometry in Newton's Principia, by Francois De Gandt, 1996. Gen. Rel. Grav. 28, 1029.

### I. 6 Contributed Presentations / Published Proceedings / Technical Reports

### arXiv:1304.5062 [pdf, other]

Title: Exact general relativistic lensing versus thin lens approximation: the crucial role of the void Authors: M. Parsi Mood, Javad T. Firouzjaee, Reza Mansouri

### arXiv:1301.1480 [pdf, ps, other]

Title: The spherical perfect fluid collapse with pressure in the cosmological background

Authors: Rahim Moradi, Javad T. Firouzjaee, Reza Mansouri

Subjects: General Relativity and Quantum Cosmology (gr-qc); Galaxy Astrophysics (astro-ph.GA)

Structured FRW universe leads to acceleration: a non-perturbative approach, astro-ph/0512605;

"On the Thin Wall Limit of Thick Planer Domain Walls", 2005, Submitted to Gravitation and General relativity, gr-qc/0505073 (Co- author: Sima Ghassemi, Samand Khakshournia);

Casimir Energy for Self-interacting Scalar Field in a Spherical Shell, 2002, hep-th/0201213 (Co-author: M. Setare);

Casmir Action for Self-Interacting Scalar Field in 3-Spherical Shell, 2002, hep-th/0201213 (Co-author: M. Setare);

Junction Equations for Two General Spherically Symmetric Spacetimes and the Distributional Method, 1999, hep-th/9911076 (Coauthor: S. Khakshournia);

Application of Colombeau's Generalized Functions to Cosmological Models with Signature Change (Co-author: K. Nozari). Proceeding of ISMC, Potsdam, March 30-April 4, 1998, M. Rainer and H.-J. Schmidt (Eds), World Scientific PC, Singapore;

Rotation of Plane of Polarization of an Electromagnetic Wave Progagating over Cosmological Distances in "Finite Rotating Universe" Scenario, gr-qc/9710028. (Coauthor: K. Nozari). Paper presented at the seminar "Kosmische Rotation". Berlin 1998;

Rotation of Plane of Polarization of an Electromagnetic wave Progagating over Cosmological Distances in "Finite Rotating Universe" Scenario, Abstracts of Contributed Papers, 1997, Pune, India;

Distributional Approach to Signature Change, Abstracts of Contributed Papers, GRI5, Pune, India;

Wave Function of a Decupling Model of the Universe, Abstracts of Contributed Papers, GRI5, 1997, Pune, India;

A new Class of Inhomogeneous Cosmological Solutions of Einsteins Equations, Preprint, Potsdam University, Math. Inst., 1996;

Equivalent Lagrangians and Quantization, Preprint, Potsdam University preprint 96/4, Math Inst., May 1996 (co-author: Sh. Khosravi):

A New Class Of Inhomogenuous Solutions, Abstracts of Contributed papers, Intern. Symposium on Cosmology, Madras, India, 1994;

Cylindrically Symmetric Thin Walls, Abstracts of Contributed Papers, Intern. Conf. On Grav. & Cosmology, Ahmedabad, India, 1991;

Gravitational field of Static Domain Walls, Sharif University of Technology Report, 1990;

Equivalence of Transport- and Radar Synchrony in General relativity. Abstracts of Contributed Papers, GR12, 1989; Test Theory of Special Relativity: What It Is and Why We Need It, 1988, ICTP Internal Report, IC/88/55;

Distribution Function of a Collisionless Gas in the Most Symmetric Space - Times. Abstracts of Contributed Papers, Intern. Conf. On Grav. & Cosmology, Goa, India, 14-19 Dec. 1987;

Introduction to Cosmology, Paper Presented at Spring School on Cosmology, Amir-Kabir University of Technology, Tehran, Iran, 1986;

Distribution Function of a Dilute Gas In de Sitter Space-Time, Abstracts of Contributed Papers GR11, 1986;

Finite Fluid Spheres are too Rigid to be Purturbed. Abstracts of Contributed Papers, GR9, Vol. 2, 1980;

Alternative Two-Tensor Theory of Gravitation. Abstracts of Contributed Papers, Topical Meeting on Gravitation and Field Theory, 13-16 July, 1971, ICTP.

#### I.7 Honors /Awards

"Dr. Amin's Lifelong Achievement Award" given by SUTA (Sharif University of Technology Association), 2014.

Associate Member, Academy of Persian Language and Literature, 2011/1390;

spicilia mansourii Sohrabi, sp. nov. (Fig. 00) Mycobank MB 518502; IRAN: Golestan National Park, Mirzabaylou towards Almeh valley; 37°21'N, 56°12'E, 1300 m; May 2008, Sohrabi & Ghobadnejhad 15077 (holotype IRAN; isotypes H, TARI, hb. Sohrabi MS015088).

**Etymology:** The species is named in honor of Reza Mansouri, Iranian physicist who made significant contributions to the development of science in Iran.

PHOTOTAXA, 2010. See also:

http://hundrednewlichens.lifedesks.org/pages/531

Member, TWAS council, 2007-2010;

Fellow, the Academy of Sciences for the Developing World (TWAS), 2000;

Alexander v. Humbolt Fellow, Oct. 1995 - Oct. 1996;

Recipient of the prize for scientific periodicals from the Ministry of Culture and Guidance for publication of the Iranian Journal of Physics, 1994;

Recipient of "honorable mention" for the paper "Cylindrically Thin Walls in General Relativity" from Gravity Research Foundation, 1993;

Member, Academy of Sciences of I.R.I., 1992;

Alexander v. Humbolt Fellow 1978-79;

Abdus-Salam Prize for Iranian Scientists, 1989:

Associate Member of ICTP, 1987-1993.

### I. 8 Editorial Activities

Chief-(and Founding-) Editor, Science Communication Quaterly (Persian quarterly), 2012-;

Chief-Editor: *Rahyaft* (Science Policy Quaterly), NRISP, Tehran, 2005-2007;

Chief-Editor: Bulletin of Research and Technology (in Persian), Ministry of Science, Research and Technology, 2001-2006;

Founding- and Chief-editor: Daneshgar (in Persian): an Iranian Popular Journal for Science and Technology, 2001 -2006;

Director: Motoon Institute, 1998-2000

Founding editor: Iranian Journal of Physics Research (IJPR). Founded: 1995-;

Referee of: Mathematical Review;

Referee for: Classical and Quantum Gravity, Journal of Physics A, Physics Letters A, Foundation of Physics;

Member: Editorial advisory Board, *Rahyaft* (Science Policy Quaterly), NRISP, Tehran, since 1992;

Founder and Member of the Editorial Board: Nojum (in Persian): An Iranian Journal of Astronomy since 1991;

Founder: Iranian Journal of Physics (in Persian), 1983-2010;

Editor-in-chief: Iranian Journal of Physics (in Persian), 1983-2010;

Member: Editorial Advisory Board, Iranian Journal of Mathematics (Nashr-e Riazi).

## I.9 PhD-Theses Supervised

Alireza Allahyari, 2018: Non-linear Effects in General Relativity;

M. Parsi-Mood, 2013: Gravitational Lensing in a Cosmological Background;

J. T. Firoozjaee, 2012: Cosmological Black Holes;

- E. Kourkchi, 2011 (co-advisor);
- S. Ghassemi, 2005: Topics in Brane Cosmology;
- S. Khakshournia, 2002: The Most General Distributoinal Formulation of Gluing Space-time Manifolds and its Applications;
- S.Rahvar, 2002: Microlensing and relativistic relation between peculiar velocity and density contrast;
- M. Setare, 2001: Casimir Effect and Cosmology;
- K. Nouzari, 1999: Application of Coloumbeau Algebra in Gluing Manifolds within GR;
- F. Nasseri, 1999: Model Universes with Variable Space Dimensions and their Cosmological Consequences;
- M. Khorrami, 1993: Formulation of Discrete Space-Time Physics;
- M. Mohazzab, 1993: Topics on Modern Cosmology.

# I.10 Organizational/ Synergistic Contributions

Member, Council of IPM School of Particle Physics and Accelerators, 2011-;

Organizer, INO workshop on Instrumentation and Foci- Aug. 30- Sep. 1, 2008;

Organizer, INO workshop on Science Case- March 12-14, 2008;

Organizer, INO workshop on Site Selection- Aug. 18-21, 2007;

Organizer, IPM School and Workshop on Gravitational Weak Lensing and Photo-z Techniques- April 22-28, 2009 (ISWLP09);

Organizer, IPM School and Workshop on Optical Data Reduction- Oct. 11-20, 2008 (ODRW08);

Organizer, IPM School and Workshop on Weak Lensing and Photo-z Techniques- July 2-8, 2008 (ISWLP08);

Organizer, IPM School and Workshop on Gravitational Lensing Techniques- March 8-11, 2008 (ISGLT08);

Organizer, IPM School and Workshop on Gravitational Lensing Techniques- Jan.9-11, 2008 (ISGLT07) - Part II;

Organizer, IPM School and Workshop on Gravitational Lensing Techniques- Nov. 24-29, 2007 (ISGLT07) - Part I;

Organizer, IPM Cosmology School and Workshop- June 2-9, 2007 (ICSW07);

President, Iranian Association for Popularization of Science, 2008;

Iranian National Observatory (INO) project director, 2007-;

Chairman, School of Astronomy and Astrophysics, IPM, 2007-;

Member, GRG Committee 2007-2013;

Member, TWAS council, 2007-2009;

Member, IPM Council, 2007-;

Member, Council of IPM School of Physics, 2007-;

Member, Reviewers Committee, Center for Special Studies and Programs (CSSP), Egypt, 2005-;

Member, Higher Council for Science, Research and Technology, Tehran, 2005-2008;

Member, Astronomy and Spare Science Committee, TWAS, 2005-;

Member, Internatnational Advisory Committee, World Conference on Physics and Sustainable Development, Durban, Oct 31-Nov 2, 2005;

Member, SESAME International Council 2004-;

Chairman, Iranian National Observatory (INO) Steering Committee, 2004-;

Member, International Coordinating Committee of the Marcel Grossmann Meetings on General Relativity;

Director, ISMO, 2003 -2005;

Chairman, SESAME Training Committee, 2002 – 2006;

Member, SESAME Council, 2003 -;

Vice- President, Council for Research & Technology, Ministry of Science, Research and Technology, 2002 – 2005;

Chairman, commission for basic sciences, Khawrazmi youth prize, 2001-2004;

Member, board of referees, Khawrazmi international prize, 2001-2004;

Chairman, commission for basic sciences, Khawrazmi international prize, 2001-2004;

Under- Secretary of State for research, Ministry of Science, Research and Technology, 2001-2005;

Director, National Research Institute for Science Policy (NRISP), 2001-2004;

Chairman, Coordinating Committee for Iran's contribution to CMS detector of LHC at CERN, 2000-2006;

Co-Chairman, Training Committee, SESAME (Synchrotron Light for Experimental Science and Applications in the Middle East), 2000 – 2002;

Member, International Interim Council of SESAME, 1999 – 2003;

Director, International Scientific Meetings Office, Iran, Ministry of Culture and Higher Education, 1999 – 2002;

Member, Council for International Scientific Cooperation, Ministry of Culture and Higher Education, 1999-2004;

Member (Life-), International Society of General Relativity and Gravitation;

Member, Austrian Physical Society;

Member, the Physics Society of Iran;

Member, International Astronomical Union;

Member, the Astronomical Society of Iran (Founding member);

Associate Fellow, ICTP 1988-1993;

Co-Chairman, Abdus-Salam Prize for Iranian Scientists;

President, the Physics Society of Iran 1984-1989, 1992-1996, 2000 – 2005;

Organizer, Annual Iranian Physics Conference 1984-1989, 1992-1996, 2000-2005;

Chairman, Department of Physics, Sharif University of Technology 1983-1985, 1991-1993;

Member, Iranian Research Council 1988 – 2003;

Member, Board of Trusties of the Academy of Sciences of the Isl. Rep. of Iran, 1992-1995;

Chairman, Commission for Basic Sciences of the Iranian Research Council 1989 – 2003;

Chairman, Commission for Earthquake of the Iranian Research Council 1991-1994;

Member, Higher Council of the Center for Science and High Technology, Kerman (Iran), 1992-1994;

Director, Bureau for International Workshops, Ministry of Culture and Higher Education, 1993-1994.

# II. Other Activities

# **II.1 Science Management and Consulting**

Consultant to the deputies for research at the Ministry for Science, Research and Technology of Iran (MSRT) from 2008-2109;

R&D Consultant to the Arian Saeed Industrial Holding, Tehran, Iran;

Founder director of the Saeedi Institute for Advanced Studies (SIAS), Kashan, 2016-;

Consultant to the president of the University of Kashan. 2014-;

Deputy for research, Ministry of Sciences, Research and Technology of Iran (MSRT), 2001-2005;

Scientific Consultant, Kish Free Zone Organization, 2000-2002;

Many one-day talks and consultations at different universities within Iran, almost once a month in the last 15 years.

### II. 2 Organizational and Editorial Contributions

Member, Board of Trusties of the National Museum of Science and Technology of Iran, 2019-;

Member, Board of Trusties of the University of Kashan, 2018-;

Member, Board of Trustees of Research Center for Microelectronics, 2005-2007;

Member, Board of Trustees of Institute for Theoretical Physics and Mathematics (IPM), 2005-2007;

Member, Board of Trustees of Persian Gulf Biotechnology Research Center-, 2002-2006;

Member, Council for the Advancement of Science in Iran - 1400 (Iran-2021), 2001-2003;

Member, Scientific Council of Persian Great Encyclopedia, 1999-2002;

Member, Higher Council of Iranian National Library, 1999-2006;

Member, Council for Science and Technology Planning, Third 5-Year Economic Development Plan of Iran, 1998-1999;

Member, Council for Terminology, Academy of Persian Language and Literature, Tehran, 1997-;

Founding Director, Center for Translation and Publication of (Classical) Books-MOTUN-, 1996-1998;

Member, Council of IUP, 1984-2004;

Head, Physics Group at IUP 1980-1993. (IUP is a governmental organization responsible for publishing high quality and best edited university text books);

Member, Physics term-selecting committee at IUP, 1980-1993;

Deputy Director, IUP, responsible for editorial section, 1985-1992;

Regional Editor, Info term (International Information Center of Terminology), Vienna, Austria;

Member, Board of Trusties of the Public Libraries of Iran, 1991-1995.

### **II.3 Science Popularization**

Chairman, Saeedi Foundation for Elite Entrepreneurs (SaFEE);

Founding- and chief-editor of Science Communication Quarterly (in Persian). 2012- 2018;

Founding- and chief-editor: *Daneshgar* (in Persian): an Iranian Popular Journal for Science and Technology, 2001-2005;

Chairman, Scientific Committee of Tehran Museum of Science, 2001-2002;

Member, Board of Trustees of Tehran Museum of Science. 2001 – 2002;

Physics without Physics (in Persian): Physics for liberal arts, P.S.I. Publishing, 2001;

Founding Member, Society for Dissemination and Popularization of Science in Iran, 2000;

Chairman, National Council for Millennium Eclipse, 1999;

Popular book on cosmology called "Falak-Ra-Saghf", Tarh-e No Publishing, Tehran, 1999;

Initiator and member of the prize committee for "Kish Prize for Popularization of Science", 1997-2002;

Science Center in Iran: a detailed study, 1994-5. The project involved 25 experts in all area of science, technology, and education and was administered by the PSI for the Tehran Municipality;

Museum of Islamic Science: a detailed study for Tehran Municipality, 1994-5;

Almost Regular interviews with radio and television of any recent scientific event;

Numerous Public Lectures in different media, high schools, and colleges in the last 35 years;

A Series of 10 radio broadcasts within 2 weeks in 1993 on "the Role of Terminology and Scientific Language in the Economic Development";

A Series of 25 radio broadcasts within one month of Ramadan in 1991 on Cosmology;

President, Council for Research and Technology Planning, Fourth 5- Year Economic Development Plan of Iran, 2003.

# II.4 Projects carried out

An investigation on the accuracy of concepts introduced in Iranian non-text scientific books, written for pre-school and first years of primary school children, 2001-2002. Project carried out for the Ministry of Education;

Compilation of standards for National, Regional, and International conferences in Iran, 2001-2002. Project carried out for the Ministry of Sciences, Research and Technology;

*University as a Center of Excellence or Island of Quality*, 2000-2001. Project carried out for the Ministry of Science, Research, and Technology, Tehran;

Museum of Islamic Science: a detailed study for Tehran Municipality, 1994-5;

Science Centers in Iran: a detailed study, 1994-5. The project involved 25 experts in all area of science, technology, and education and was administered by the PSI for the Tehran Municipality;

Terminology Work in Iran and the World, Academy of Persian Language and Literature, 1993-4.

### **II.5** Translations (into Persian)

Relativity: Special, General, and Cosmological, by W.Rindler, Springer Verlag, 1983, second edition. Published by IUP, 1997; Weisse Zwerge-Schwarze Loecher (White Dwarfs and Black Holes), by R. Sexl, ISUP 1981. Second edition, 1991; A Shorter course in Theoretical Physics, Vol. 1, Mechanics & Electromagnetism, by Landau & Lifshitz, IUP 1985; Assumption and Myth in Physical Theory, by Herman Bondi, Sharif University Press, 1979.

### **II.6 Publications/ Contributions**

Physics Now, in A World of Science in the Developing World, Nature Supplement on the occasion of TWAS 25th anniversary 2008, p.38;

Broken Promises or Promises in Vacuum, Archives of Iranian Medicine 2008; 11 (5): 559-560;

How an Obsolete Concept of Science Impedes the Development of Islamic Countries: The example of Iran, APS Forum on International Physics, December, 2007;

Science in Islam: Which Way Forward, News from ICTP, Autumn2006, No. 118;

A conversation with Dr. Reza Mansouri, Council of Foreign Relations, Washington, DC, September 14, 2006; Science and Technology in the Moslem World Policy towards the USA, 2005, NRISP, Summer05/84, 8.S.M.S, Tehran;

International Scientific Collaboration of Iran: the Emerging Structure, 2004, NRISP, 22.S.M.In, (Co- author: Shapour Etemad and Yahya Emami);

*Iran's S&T Policies and Indicators*, 2004, NRISP, 21.S.M.I, published in *Iran & UK Collaboration in Higher Education and Research: Achievements and Challenges*, British Council, Iran, 2005;

Clashes of Civilizations and Inter-Linguistic Misunderstandings: a Comparative Analysis of some Terms, 2003, NRISP; 18.M.M.C.

Physics in Iran, 2000, TWAS Newsletter, Oct. - Dec., Vol. 12, No. 4;

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*Terminological Planning: An Iranian Experiment*, 1996, International Congress on Terminology and Knowledge Engineering, Vienna, 26-29 Aug;

Terminology Work in Iran and in the World, 1995, Research Project Carried out for the Academy of Persian Language and Literature, (Project leader);

Standardization of Physics Terms in Persian, 1987, Contributed Papers, International Congress on Terminology and Knowledge Engineering, Trier (FRG), Sept. 29- Oct. 3;

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Gebets-und Fastenzeiten fuer Oesterreich, 1968, Islamische Iranische Studentengemeischaft in Wien, Vienna, Austria.

#### II.7 Books

# Architure of Science in Iran (in Persian), 2018, Publication of Cultural and Social Research Institute, Tehran.

*Iran in Future, viewpoints of three scholars*: Ashayeri, Ghaninejad, and R. Mansouri, Tehran, Dibayeh Publishing, first printing 2007 /1386, second printing 2010/1389, third printing 2015;

Iran raa Cheh Konam (in Persian: What should I do with Iran), 2006, Kavir Publishing, Tehran;

*Physics without Physics*, (in Persian): Physics for Liberal arts, 2001, PSI Publishing;

*Iran 1427 (2050): National Determination for Scientific and Cultural Development* (in Persian), 1994, Tarh-e-No Publishing, Tehran, second printing 2000, second edition and seventh printing 2006;

*Falak Raa Saghf* (in Persian), a popular book on cosmology, 1999, Tarh-e-No Publishing, Tehran; *Scientific Development of Iran* (in Persian), 1994, UNESCO Publication, Tehran;

English-Persian Dictionary of Science and Technology, 1994, chief-editor, IUP, Tehran;

English-Persian Dictionary of Physics, chief-editor, IUP, Tehran 1987, second edition 1998.

### II.8 Invited talks/ lectures

COMSTEK, Islamabad, Training Course on Science, Technology & Innovation Policy, 6-24 April, 2009;

NAS, Washington, Sustainable Development in the Moslem World Needs Excellence in Science and Technology: Iran as a case study, September 13, 2006, invited by AAAS, Center for Science, Technology and Security Policy;

MIT, Boston, Science in Iran: Status Quo and its Future, Sept. Sept. 11, 2006; invited by ISG;

Stanford University, Center for Iranian Studies, the Concept of Science in the Moslem World, Sept. 15, 2006, invited by ISG;

University of Toronto, *the Role of Excellence in the Future of Science in Iran*, May 23, 2006, invited by Knowledge Diffusion Network.

# III. Bio data

1. Date of birth: 8 January 1948 Place of birth: Tehran/Iran

**Nationality:** Iranian

#### 2. Education:

Primary School: Schariat School, Tehran, 1954-1959. High School: Rahnamaa High School, Tehran, 1959-1965.

University: University of Vienna, Ph. D. In Physics and Astronomy, 1965-1972.

### 3. Scientific Employment and Academic Responsibility:

INO project director, IPM, 2007-

IPM School of Astronomy, Chairman, 2007-2011

McGill University, Department of Physics, July 2005-August 2006, on sabbatical leave.

University of Potsdam, Germany; Oct. 1995- Oct. 1996, Alexander von Humboldt Fellow.

Sharif University of Technology, Iran, Chairman, Department of physics 1983-1985, 1991-1993.

Sharif University of Technology, Iran, Professor of Physics 1989-.

Vienna University, Institute for Theoretical Physics, September 1986-October 1987, on sabbatical leave.

Sharif University of Technology, Iran, Associate Professor 1979-1989.

University of Cologne, Germany, 1978-79, Alexander von Humboldt Fellow.

Vienna University, Austria, Assistant Professor 1972-1977.

Sharif University of Technology, Faculty, 1979- Present