Curriculum-Vitae

Personal Information

Name: **Dr. Imran Ahmad Siddiqui**

Current Position: **Professor**
Department of Physics
University of Karachi

Prior Positions held: Chairman, Department of Physics
University of Karachi

Domicile: Karachi, Sindh
CNIC#: 42101-9473116-7

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Postal Address: C-85 University Staff Town
University of Karachi, Karachi
Pakistan.

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iasiddiqui@uok.edu.pk, imranahmadsiddiqui@yahoo.com

Specialization: Quantum and Atom Optics, Laser Physics, Quantum Field Theory, Gravitation and Cosmology, Renewable Energy Resources, Neuro-Physics & Brain-Computer Interfacing

Memberships:
1. Austrian Physical Society (OPG)
2. German Physical Society (DPG)
3. American Physical Society (APS)
4. Member, Faculty Board of Studies, University of Karachi
5. Member, Board of Studies, Jinnah University for Women, Karachi
6. Member, HEC National Curriculum Revision Committee (NCRC)

Academic Information

Post-Doc Experience (June 01, 2010 – June 30, 2012)

a) Post-Doc (~2 years, June 01 2010 – May 12, 2012)
Laser Spectroscopy of lanthanide series (Ta, Pr, La)
Atomic Beam Spectroscopy of Praseodymium Atoms
Institute of Experimental Physics, Graz University of Technology, Graz Austria

b) Post-Doc fellowship in Gdańsk University Poland, OeAD (Austrian Exchange Service) (~1 month, May 15, 2012 – June 20, 2012)

PhD, February 19, 2007 – May 28, 2010
Laser Spectroscopy and Quantum Optics
"Hyperfine Structure Studies of Praseodymium Atoms and Ion"
Institute of Experimental Physics, Graz University of Technology, Graz Austria

Employment History

Scientific Officer (SO-TPS8) 1996 - 1997
Kahutta Research Laboratory (KRL), Kahutta Pakistan

Lecturer in Physics (BPS-17) **1997 – 2001**
Department of Physics
Federal Urdu University of Arts, Science and Technology (FUUAST) 1997-2000
Karachi, Pakistan

Lecturer in Physics (BPS-17 & BPS-18) 2001 – 2006
Department of Physics, University of Karachi, Karachi Pakistan

Assistant Professor in Physics (BPS-19 & BPS-18) 2006 - 2019
Department of Physics, University of Karachi, Karachi Pakistan

Professor in Physics (BPS-21) June 2016 -
Department of Physics, University of Karachi, Karachi Pakistan

Post-Doc & Research Assistant June 01, 2010 - June 31, 2012
Institute of Experimental Physics (IEP)
Graz University of Technology, Graz Austria

Awards and Scholarships

1. **Karachi University Scholarship Fund (KUSF)**
   I won a Ph.D. scholarship award in 2006 for pursuing Ph.D. studies abroad. Under this scholarship I completed my Ph.D. from Graz University of Technology Graz Austria in the year 2010.
2. **Post-Doc fellowship and assistance ship, Graz University of Technology**
   After completing my Ph.D. I was immediately awarded a Post-Doc fellowship for a period of two years from the Institute of Experimental Physics (IEP) Graz University of Technology Graz Austria. I was one many candidates shortlisted from all over Europe to be selected for this fellowship. Period of award was from 2010 – 2012.
3. **Post-Doc fellowship in Gdańsk University Poland**
   OeAD (Austrian Exchange Service)

A month (May 2012) long fellowship award was granted by Scholarships & Grants Department ICM - Center for International Cooperation & Mobility 1010 Vienna Ebendorferstrasse 7 and OeAD. Fellowship was awarded to pursue magnetic hyperfine structure studies on atoms (Ba, Pr).

Research Experience

- Theoretical study of Quantum atomic and molecular systems. Quantum Field theory and Quantum Gravity.
- Analysis and modelling of complex physical systems ranging from an ensemble interacting atomic or sub-atomic particles to study of renewable energy resources. Extending to technical and theoretical limits where state-of-the-art statistical and computational methods are used.
- Building predictive models using functions/methods namely, Weibull distribution function, Gaussian Mixture model, Neural Networks, Monte-Carlo Simulation, Electron Potential Models on large dataset, such as, wind energy, brain data.
- Utilizing such model to address issues pertaining to industrial & economic growth of the country. Models predicting set up of energy extraction systems for renewable energy resources. Theoretical Fluid Dynamics using Delft3D Software.

Research Students

Ph. D. Students

1. Muhammad Shoaib, Associate Professor, Department of Physics FUUAST
   "Theoretical calculations and modeling for Wind speed data". Degree awarded, 2016.
2. Muhammad Jahangir, Associate Professor, Govt. National College
   "Physics of Spectral and Spatial Decomposition of Electrical Signals (Electroencephalogram) of Brain. Degree awarded, 2019.
3. Sitwat Qureshi, Assistant Professor, Department of Physics FUUAST
   "Electrodynamics of Electroencephalographic Signals for Olfactory Network". Degree awarded, 2020.
4. Fakhar Alam, Assistant Professor, Govt. National College
   To Map And Simulate The Potential Of Tidal Power Energy For The Coastal Area Of Pakistan At Korangi Creek. In progress.
5. Rizwan ur Rehman, Assistant Professor, Govt. National College
   "Phase Synchronization of Motor Brain Signals". In progress.
6. Amber Jamal, Lecture, Govt College
   Phd Research Title: Quantum theory at Planckian and Cosmological scales
7. Hassana Kokab, Department of Physics, University of Karachi, Karachi
   "Quantum mechanically controlled qubit memory efficiency and optical transistor". (in progress)
8. Muniba Fatima, Lecture, Govt College
   "Functional renormalization group approach to the current quark mass dependence of criticality within the Two-Flavor Quark-Meson Model". In progress.
9. Muhammad Jameel, Department of Physics, University of Karachi

"Study of 2D Gas Sensing materials by using Density Functional Theory (DFT). In progress.

10. Muhammad Danish Khan, Department of Physics, University of Karachi
"Adsorption Energetics on Graphene by Quantum Monte Carlo Method". In progress

International and Local Research Publications

1. Shamim Khan, **Imran Siddiqui** and Laurentius Windholz; "Experimental investigation of the hyperfine spectra of Pr I - lines: Discovery of new fine structure levels with low angular momentum", Eur. Phys. J. D 64 (2011).
2. T I Syed, **I Siddiqui,** K Shamim, Z Uddin, G H Guthohrlein, L Windholz; "New even and odd parity levels of neutral praseodymium"; Phys. Scr. 84 065303 (2011) (12 pp.)
3. Zaheer Uddin, **Imran Siddiqui,** Shamim Khan, B. Gamper, Esam H. Abdul Hafidh and L Windholz; "New levels of Pr Atom with Almost Similar Energies" Journal of Physical Science and Application 2, 88-94 (2012).
4. F Guzelcimen, **I Siddiqui,** G Basar, S Kroger and L Windholz; "New energy levels and hyperfine structure measurements of neutral lanthanum by laser induced fluorescence spectroscopy" J. Phys. B 45, 135005 (2012) (10 pp).
5. Zaheer Uddin, Driss El Bakkali, B Gamper, Shamim Khan, **Imran Siddiqui,** G.H. Guthohrlein and L.Windholz; "Laser spectroscopic investigations of Praseodymium I transitions: New energy levels" Advances in Optical Technologies, 639126 (2012), (34 pp.).
6. Zaheer Uddin, Roohi Zafar, Rubeka Sikander, **Imran Siddiqui,** Khan Shamim, and L. Windholz; "Investigation of Pr I lines by a Simulation of their hyperfine patterns: discovery of new levels". J. Phys. B 45, 205001 (2012) (7 pp.) .
7. **Imran Siddiqui,** Shamim Khan, B Gamper, J Dembczy´nski and L. Windholz; "Optogalvanic spectroscopy of the hyperfine structure of weak La I lines: Discovery of new even parity finestructure levels" J. Phys. B: At. Mol. Opt. Phys. **46** (2013) 065002 (12pp).
8. Gamper, B.; Khan, S., Siddiqui, I. A., Windholz, L.; Modeling of emission spectra of Pr I by summarizing hyperfine patterns of overlapping spectral lines. The European physical journal / Special topics 222 (2013) , S. 2171 - 2178
9. **Imran Siddiqui**, Shamim Khan, L.Windholz; "Experimental investigation of the hyperfine spectra of Pr I - lines: discovery of new fine structure levels with high angular momentum" Eur. Phys. J. D 68, 122 (2014) (10 p. + supplement 23 p.), doi:1140/epjd/e2014-50025-7.
10. Gamper, P. Glowacki, **I. Siddiqui,** J. Dembczynski, L. Windholz; "New even-parity fine structure levels of the Lanthanum Atom discovered by means of optogalvanic spectroscopy" J. Phys. B: At. Mol. Opt. Phys. 47 (2014) 165001 (13pp) doi:10.1088/0953-4075/47/16/165001.
11. **I. Siddiqui**, K. Shamim, and L. Windholz; "Experimental investigation of the hyperfine spectra of Pr I-lines: discovery of new fine structure energy levels of Pr I using LIF spectroscopy with medium angular momentum quantum number between 7/2 and 13/2"; Eur. Phys. J. D (2016) 70: 44; DOI: 10.1140/epjd/e2016-60485-2.

12. Shamim Khan, **Imran Siddiqui**, Syed Tanweer Iqbal, Zaheer Uddin, G. H. Guthöhrlein, L. Windholz; "Experimental Investigation of the Hyperfine Structure of Neutral Praseodymium Spectral Lines and Discovery of New Energy Levels"; International Journal of Chemistry; Vol. 9, No. 1; 2017.
13. Aijaz, Asim & Uddin, Zaheer & **Siddiqui, I**. (2015). STRUCTURAL PROPERTIES OF NITROGEN DOPED ANATASE AND RUTILE TiO2 THIN FILMS. JOURNAL OF ADVANCES IN PHYSICS. 8. 2074-2078. 10.24297/jap.v8i2.1514.
14. Muhammad Shoaib, **Imran Siddiqui**, Shafiqur Rehman, Saif ur Rehman, Shamim Khan, Aref Lashin; "Comparison of Wind Energy Generation Using the Maximum Entropy Principle and the Weibull Distribution Function"; Energies 2016, 9, 842; doi:10.3390/en9100842.
15. MUHAMMAD SHOAIB, **IMRAN SIDDIQUI**, YOUSAF MUHAMMAD AMIR, SAIF UR REHMAN; "Evaluation of Wind Energy Potential in Baburband (Pakistan) using Weibull Distribution function"; Renewable and Sustainable Energy Reviews 70 (2017) 1343 - 1351. http://dx.doi.org/10.1016/j.rser.2016.12.037.
16. Shoaib, M., **Siddiqui, I**., Rehman, S., ur Rehman, S. and Khan, S. (2017), Speed distribution analysis based on maximum entropy principle and Weibull distribution function. Environmental Progress & Sustainable Energy. 36(5) 1480-1489. doi:10.1002/ep.12589.
17. Saif Ur Rehman, Shafiqur Rehman, Muhammad Shoaib, and **Imran Ahmad Siddiqui**; "Feasibility Study of a Grid-Tied Photovoltaic System for Household in Pakistan: Considering an Unreliable Electric Grid". Environmental Progress & Sustainable Energy 38(3), (2018). https://doi.org/10.1002/ep.13031.
18. Muhammad Shoaib, **Imran Siddiqui**, Shafiqur Rehman, Shamim Khan, Luai M. Alhems; "Assessment of wind energy potential using wind energy conversion system". Journal of Cleaner Production 21 January 2019 216 (2019) 346-360 https://doi.org/10.1016/j.jclepro.2019.01.128 Impact Factor: 5.651.
19. **Imran A. Siddiqui**, Iqbal A. Khan; "Design and Fabrication of a monochromator" Proc. of Sixth National Symposium on Frontiers in Physics", 27-29, (1997).
20. Ulfat Intikhab, Ahmad Firoz, **Siddiqui Imran**; "Determination of Angstrom coefficients for the prediction of monthly average daily global solar radiation of sunshine on horizontal surface at Karachi, Pakistan ", Karachi University Journal of Science Vol. 33(1-2) 7-12 (2005).
21. Gulraiz HAMID, Khalil A. MALLICK, Syed Zeeshan JAFERI, **Imran A. SIDDIQUI**, Ibraheem AZMAT (2013). Structural and Tectonic Control of Karachi (Pakistan) and the Possibilities of Seismic Hazards. Internatıonal Journal of Natural and Engineering Sciences 7 (2): 01-07, 2013. ISSN: 1307-1149, E-ISSN: 2146-0086, www.nobel.gen.tr.
22. Gulraiz HAMID, Khalil MALLICK, Mohammed BILAL, **Imran A. SIDDIQUI**, S. Zeeshan JAFERI, Khizer SAEED (2013). Evaluation of Geotechnical Properties of Clayey Soils in Different Areas of Karachi (Pakistan) City. Internatıonal Journal of Natural and Engineering Sciences 7 (1): 77-86, 2013. ISSN: 1307-1149, E-ISSN: 2146-0086, www.nobel.gen.tr.

23. Muhammad Shoaib, **Imran Siddiqui**, Firoz Ahmed, Saif ur Rehman, Muhammad Rashid Tanveer and Saif Uddin Jilani: "Weibull distribution function for Wind Energy estimation", Journal of Basic & Applied Sciences, 2015, 11, 106-114
24. Saif ur Rehman, Muhammad Shoaib, **Imran Siddiqui**, Firoz Ahmed, Muhammad Rashid Tanveer and Saif Uddin Jilani: "Effect of Wind shear coefficient for the vertical extrapolation of wind speed data and its impact on the viability of wind energy project", Journal of Basic & Applied Sciences, 2015, 11, 90-100.
25. Junaid K. Khan, Muhammad Shoaib, Zaheer Uddin, **Imran Ahmad Siddiqui**, Asim Aijaz, Afaq Ahmed Siddiqui, and Ehtesham Hussain; "Comparison of Wind Energy Potential for Coastal Locations: Pasni and Gwadar"; Journal of Basic & Applied Sciences, 2015, 11, 211-216.
26. Syed Mansoor Naqvi, Zaheer Uddin, Zafar Sajjad, **Imran Ahmad Siddiqui** and Amjad Hussan; "Radiation Dose Distribution Measurements of Kilo-Voltage Photons Using Optically Stimulated Luminescence Detectors (OSLs) in Radiological Procedures"; Journal of Basic & Applied Sciences, 2015, 11, 258-268.
27. Muhammad Jahangir, Syed Tanweer Iqbal, Rizwan-ur-Rehman, Nasir Ali Shah, Syed Mansoor Naqvi and **Imran Siddiqui**: "Spectral and Spatial Feature Extraction of Electroencephalographic (EEG) Data Using Independent Component Analysis (ICA)", Journal of Basic & Applied Sciences, 2017, 13, 104-113.
28. Muhammad Azhar, Ishfaque Ahmed, Syed Tanveer Iqbal, Muhammad Jahangir, Rizwan-ur-Rehman, Nasir Ali Shah and **Imran Siddiqui;** (2017). "Feature Extraction Using Independent Component Analysis Method from Non-Invasive Recordings of Electroencephalography (EEG) Brain Signals", Journal of Basic & Applied Sciences, 13, 259-267.
29. Saif ur Rehman, Muhammad Shoaib, **Imran Siddiqui**, S. Zeeshan Abbas; (2019). Performance evaluation of models established for the estimation of diffuse solar radiation: case study Lahore, Pakistan. International Journal of Economic and Environmental Geology. VOL 10 NO 1 (2019): JANUARY-MARCH. (HEC Recognized 'Y' Category Journal) (ISSN: 2223-957X).
30. Sitwat Qureshi, Syed Zeeshan Abbas, and **Imran Siddiqui.** Electrodynamics of olfactory induced signals: An Electroencephalographic Study. INT. J. BIOL. BIOTECH., 17 (2): 235-242, 2020.
31. Fakhar Alam, Saif ur Rehman, Shafiqur Rehman, Muhammad Jahangir, Muhammad Shoaib, **Imran Siddiqui**, Intikhab Ulfat; (2019). Empirical Model Development for the Estimation of Clearness Index using Meteorological Parameters. Turk. J. Elec. Eng. & Comp. Sci. (2019) 27: 4429 – 4441. doi:10.3906/elk-1903-27.
32. Kamran-ul-Haq Khan, Muhammad Imran Aslam, Muhammad Naeem, **Imran Ahmad Siddiqui**. "Analytical Estimate of Effective Charge and Ground State Energy of Beryllium Atom Utilizing Variational Method". Indian Journal of Physics, Volume 95, Issue 7, p.1317-1323, 2021.
33. Rizwan Ur Rehman, Jahangir Muhammad, Sitwat Qureshi, Tanweer Iqbal, **Imran Siddiqui** and Syed Zeeshan Abbas. PHASE SYNCHRONIZATION ANALYSIS

OF SENSORIMOTOR CORTEX ELECTROENCEPHALOGRAMS FOR CHANNELS C3 AND C4. INT. J. BIOL. BIOTECH., 17 (3): 531-541, 2020.

34. Muhammad Shoaib, Saif-ur-Rehman, **Imran Siddiqui**, Shafiqur Rehman, Shamim Khan, Zia Ibrahim. Comparison of Weibull and Gaussian Mixture Models for Wind Speed Data Analysis. Int. J. Econ. Environ. Geol. Vol. 11 (1) 10-16, 2020.
35. M. Faisal, I. Siddiqui, L. Windholz. New energy levels of La I found by laser spectroscopy. Journal of Quantitative Spectroscopy & Radiative Transfer 260 (**2021**) 107452. https://doi.org/10.1016/j.jqsrt.2020.107452.
36. **I. Siddiqui,** K. Shamim, Syed Tanweer Iqbal, L. Windholz, Discovery of new even-parity fine structure levels of Pr I with angular momenta 1/2, 3/2, and 5/2, Journal of Quantitative Spectroscopy and Radiative Transfer, Volume 267, 2021, 107619, https://doi.org/10.1016/j.jqsrt.2021.107619.
37. Saifur Rehman, Muhammad Shoaib, **Imran Siddiqui**, Shamim Khan and Syed Zeeshan Abbas. Spatial Wind Speed Forecasting Using Artificial Neural Networks. Int. J. Econ. Environ. Geol. **(2021)** Vol. 11 (4)00-00.
38. **I. Siddiqui,** K. Shamim, Syed Tanweer Iqbal, L. Windholz, New odd-parity fine structure levels of Pr I with J = 1/2, 3/2 and 5/2, Journal of Quantitative Spectroscopy and Radiative Transfer, Volume 272, 2021, 107832, https://doi.org/10.1016/j.jqsrt.2021.107832.
39. Khawaja Masood Ahmed, Muhammad Arshad Khan, **Imran Siddiqui**, Siraj Khan, M. Shoaib, Ibrahim Zia. Wind Speed Prediction from Site Meteorological Data Using Artificial Neural Network. 2022 Global Conference on Wireless and Optical Technologies (GCWOT), IEEE, 2022 Conference Paper.
40. Muhammad Ayyaz Ameen, Afnan Tahir, Madeeha Talha, Haqqa Khursheed, **Imran A. Siddiqui**, Syed Tanweer Iqbal, Bushra Gul, Modelling of foF2 using artificial neural network over Equatorial Ionization Anomaly (EIA) region stations, Advances in Space Research, 2022, ISSN 0273-1177, https://doi.org/10.1016/j.asr.2022.09.039.
41. Amber Jamal, Shumaila Ali, Imran Siddiqui, Siwat Qureshi, Muhammad Jahangir. A brief review of Hartree-Fock Self-Consistent Field Approximation and Application of its Variants on Atoms with Z= 1-20 and Few Heavy Atoms. Journal of Xi'an Shiyou University, Natural Science Edition, **18**(10), 915-921 (2022).
42. Kokab, H., Siddiqui, I. A., A. Awan, Z. *et al*. Mechanically controlled quantum memory efficiency and optical transistor. *Quantum Inf Process* **22**, 88 (2023). https://doi.org/10.1007/s11128-022-03818-w.
43. A. Jamal, M. Fatima, T. Iqbal, I. Siddiqui and S. Z. Abbas. Improved ground state energies of electronegative atoms using Hartree–Fock self-consistent field approximation. Indian J Phys (2023). https://doi.org/10.1007/s12648-023-02724-w.
44. I. Siddiqui, L. Windholz. Experimental evidence for the existence of two neighboring Pr I energy levels for which J is not a good quantum number. Journal of Quantitative Spectroscopy & Radiative Transfer 305 (2023) 108596.

Conferences and Workshops

1. **Master Trainer**
   A two month workshop organized by Higher Education Commission in Quaid-e-Azam University, Islamabad for enhancing teaching skills in University teachers Islamabad Pakistan June 1 – July 31, **2005**. **(Workshop).**

2. **Hyperfein-Störung im Termschema des Praseodym-Atoms**
   Siddiqui I., Gamper B., Guthöhrlein G., Windholz L. Jahrestagung der Österreichischen Physikalischen Gesellschaft 57 (**2007**) S 26 – 26 Donau Universität Krems, September 24 – 28, **2007**. **(Invited Talk).**

3. **Anomale Intensität der Hyperfeinkomponenten von Praseodym-I Linien**
   Siddiqui I., Gamper B., Guthöhrlein G., Windholz L. Frühjahrstagung des Arbeitskreises Atome, Moleküle, Quantenoptik und Plasmen (AMOP) der DPG **2008**, Verhandl. DPG (VI) 43 (2008), S 245 – 245 Darmstadt Germany, March 10 – 14, 2008. **(Invited Talk)**.

4. **Untersuchung der Hyperfeinstruktur von Praseodym mittels laserinduzierter Fluoreszenzspektroskopie**
   Gamper Bettina, Siddiqui I., Guthöhrlein G., Windholz L. Frühjahrstagung des Arbeitskreises Atome, Moleküle, Quantenoptik und Plasmen (AMOP) der DPG 2008, Verhandl. DPG (VI) 43 (**2008**), S 245 – 245 Darmstadt Germany, March 10 – 14, **2008**. **(Poster Presentation).**

5. **Perturbed intensity distribution of hyperfine components of Praseodymium I lines.**
   Siddiqui I., Gamper B., Guthöhrlein G., Windholz L. 40th EGAS Conference **2008**, Europhysics Conference Abstracts 32E S 225 – 225, Graz Austria, July 2 – 5, **2008**. **(Poster Presentation).**

6. **Investigation of the hyperfine structure of Pr I lines in the region 5630 A to 5830 A.**
   Khan S., Iqbal S., Siddiqui I., Windholz L. 40th EGAS Conference **2008**, Europhysics Conference Abstracts 32E S 226 – 226, Graz Austria, July 2 – 5, **2008**. **(Poster Presentation).**

7. **Discovery of new energy levels in Praseodymium**
   Siddiqui I., Khan S., Tanweer Iqbal S., Guthöhrlein G., Windholz L. 41st EGAS Conference **2009**, Europhysics conference abstracts 33c S 219 – 219 Gdasnk Poland, July 8 – 11, **2009**. **(Invited Talk).**

8. **Rare low angular momenta energy levels in neutral Praseodymium**
   Khan S., Tanweer Iqbal S., Siddiqui I, Windholz L. 41st EGAS Conference **2009**, Europhysics conference abstracts 33c S 218 – 218 Gdasnk Poland, July 8 – 11, **2009**. **(Poster Presentation).**

9. **Investigation of the hyperfine structure of Pr I lines in the region 5650 A to 6200 A**
   Tanweer Iqbal S., Khan S., Siddiqui I, Zaheer U., Windholz L. 41st EGAS Conference **2009**, Europhysics conference abstracts 33c S 220 – 220 Gdasnk Poland, July 8 – 11, **2009**. **(Poster Presentation).**

10. **Discovery of new energy levels in Praseodymium with large angular momentum**
    Siddiqui I., Khan S., Iqbal S. T., Windholz L. Jahrestagung der Österreichischen Physikalischen Gesellschaft **2009**, Gemeinsame Jahrestagung in Innsbruck, Bulletin SPG / SSP Vol. 26 S 73 – 73 Innsbruck Austria, September 2 – 4, **2009. (Invited Talk).**

11. **New Odd Parity levels in Neutral Praseodymium**
    Khan S., Iqbal S. T., Siddiqui I., Windholz L. Jahrestagung der Österreichischen Physikalischen Gesellschaft **2009**, Gemeinsame Jahrestagung in Innsbruck, Bulletin SPG / SSP Vol. 26 S 66 – 66 Innsbruck Austria, September 2 – 4, **2009**. **(Poster Presentation).**

12. **Neue Energieniveaus des Pr-Atoms**
    Khan S., Iqbal S. T., Siddiqui I., Gamper B., Ellmeier M., Guthöhrlein G., Windholz L. Jahrestagung der Deutschen Physikalischen Gesellschaft 2009, Verhandl. DPG (VI) 44 (**2009**) S 44 – 44 Hamburg Germany, March 2 – 6, **2009**. **(Poster Presentation).**

13. **Fortschritte bei der Auffindung bislang unbekannter Energieniveaus des Pr-Atoms**
    Khan S., Iqbal S. T., Siddiqui I., Gamper B., Guthöhrlein G., Windholz L. Frühjahrstagung der Deutschen Physikalischen Gesellschaft 2010, Verhandl. DPG (VI) 45 (**2010**), S 74 – 74 Hannover Germany, March 8 – 12, **2010**. **(Poster Presentation).**

14. **Hyperfine structure of Niobium I using laser-induced fluorescence spectroscopy**
    Er A., Güzelcimen F., Öztürk I. K., Basar G., Kröger S., Siddiqui I. Windholz L. EPS Conference on Atomic and Molecular Physics 10 (**2010**), P 106 – 106 Salamanca Spain, July 4 – 9, **2010**. **(Poster Presentation).**

15. **The hyperfine structure analysis of Lanthanum I lines in the spectral range of 595 - 635 nm**
    Güzelcimen F., Er A., Basar G., Kröger S., Raith M., Siddiqui I., Windholz L. EPS Conference on Atomic and Molecular Physics 10 (**2010**), P 107 – 107 Salamanca Spain, July 4 – 9, **2010**. **(Poster Presentation).**

16. **Anomalous Intensity Distribution of Hyperfine Components of Praseodymium-I Lines**

Siddiqui I.**,** G. Guthohrlein and L. Windholz 60th Annual Meeting, Austrian Physical Society, 6–10 September **2010** Salzburg, Austria. Faculty of Natural Sciences University of Salzburg Hellbrunnerstrasse 34, 5020 Salzburg, Austria. **(Poster Presentation).**

17. **Hyperfine structure measurements and discovery of new energy levels in neutral praseodymium**.
    Siddiqui Imran, Shamim Khan, Tanweer Iqbal Syed, Bettina Gamper, and Laurentius Windholz 75. Annual Meeting of the DPG and DPG Spring Meeting of the section AMOP (SAMOP) and the Condensed Matter Section (SKM) (**2011**), A 26.57, 13-18 March **2011**, Dresden Germany. **(Invited Talk).**

18. **New energy levels of Praseodymium with large angula momentum**
    Shamim Khan, Imran Siddiqui, Bettina Gamper, Tanweer Iqbal Syed, Günter H. Guthöhrlein, and Laurentius Windholz Annual Meeting of the DPG and DPG Spring Meeting of the section AMOP (SAMOP) and the Condensed Matter Section (SKM) (**2011**), A 26.56, 13-18 March **2011**, Dresden Germany. **(Poster Presentation).**

19. **New even parity energy levels of Pr I found by excitation of transitions in the region 560 - 695 nm.** Tanweer Iqbal Syed, Shamim Khan, Siddiqui Imran, Uddin Zaheer, and Laurentius Windholz 75. Annual Meeting of the DPG and DPG Spring Meeting of the section AMOP (SAMOP) and the Condensed Matter Section (SKM) (**2011**), A 26.59, 13-18 March **2011**, Dresden Germany. **(Poster Presentation).**

20. **"Hyperfine structure investigations of singly ionized praseodymium and discovery of new Pr II levels"**,
    Imran Siddiqui, S. Khan, and L. Windholz; 43rd Conference of the European Group for Atomic, Volume 35C, 124(**2011**), Abstract FPE-015. **(Invited Talk).**

21. **"New odd-parity energy levels in neutral praseodymium",** S. Tanweer I., I. Siddiqui, U. Zaheer, and L. Windholz; 43rd Conference of the European Group for Atomic, Volume 35C, 125(**2011**), Abstract FPE-016. **(Poster Presentation).**

22. **"New levels of the Pr atom with almost similar energies"**, U. Zaheer, I. Siddiqui, S. Khan, E. Hafeez, B. Gamper, and L. Windholz; 43rd Conference of the European Group for Atomic, Volume 35C, 127(**2011**), Abstract FPE-018. **(Poster Presentation).**

23. **"Hyperfine structure measurements and determination of new energy levels of atomic lanthanum by laser induced fluorescence spectroscopy"**,
    F. Güzelcimen, Gö, Basar, I. Siddiqui, L. Windholz, and S. Kröger; 43rd Conference of the European Group for Atomic, Volume 35C, 116(**2011**), Abstract FPE-007. **(Poster Presentation).**

24. **"Laser induced fluorescence spectroscopy of atomic niobium in the wavelength range of 560 nm to 620 nm"**,
    Er, I. K. Öztürk, F. Güzelcimen, Gö. Basar, I. Siddiqui, L. Windholz, and S. Kröger;

43rd Conference of the European Group for Atomic, Volume 35C, 168(**2011**), Abstract HRS-010. **(Poster Presentation).**

25. **Hyperfine structure investigations of Pr-I lines in the region 4200-4450 Å**
IMRAN SIDDIQUI, SHAMIM KHAN, SYED TANWEER IQBAL, and LAURENTIUS WINDHOZ; Annual Meeting of the DPG and DPG Spring Meeting of the section AMOP (SAMOP) and the Condensed Matter Section (SKM) (**2012**), Stuttgart, 12 - 16 March 2012 Germany. **(Invited Talk).**

26. **"Discovery of new Praseodymium I energy levels with help of green laser light"**
SHAMIM KHAN, IMRAN SIDDIQUI, SYED TANWEER IQBAL, and LAURENTIUS WINDHOLZ; Annual Meeting of the DPG and DPG Spring Meeting of the section AMOP (SAMOP) and the Condensed Matter Section (SKM) (**2012**), Stuttgart, 12 - 16 March 2012 Germany. **(Poster Presentation).**

27. First Joint ICTP-Trieste/ICTP-SAIFR, **School on Particle Physics**. International Center for Theoretical Physics (ICTP) South American Institute For Fundamental Research. Sao Paulo – Brazil, June 18 – June 29, **2018**. **(Workshop).**

28. Javeria Khan, **Imran Ahmad Siddiqui** and Piero Nicolini (**2019**). Decoherence of Quantum Register. DPG Spring Meeting München, 17 - 22 March 2019. **(Poster Presentation).**