

## CV of Rajeev Ahuja

Date of Birth : 15<sup>th</sup> July, 1965

1. University Degree : Year 1986, M.Sc./Physics, Univ of Roorkee (IIT Roorkee).

2. Doctoral degree : Year : 1991, Discipline/subject area : Physics/Solid State Physics, Univ of Roorkee (IIT Roorkee).

3. Postdoctoral work : Year : 1992-1995 Position : Postdoc at Uppsala University

4. Qualification as Associate Professor : 1997

5. Current Position : Director, Indian Institute of Technology, Ropar, India from April, 2021

6. Previous positions and periods of appointment :

I) Professor at Department of Physics & Astronomy, Uppsala University, Sweden from Nov., 2007.

II) Adjunct Professor at Florida International University, Miami, USA , 2006.

III) Associate at Physics Department, Harvard University, USA October. 2004-2005.

IV) 2003- 2009, Special Senior Researcher (Råd-forskare), Swedish Research Council.

V) 2002- 2007 , Associate Professor (Universitetslektor, Univ of Uppsala)

VI) 1996- 2001, Assistant Professor (Forskarassistent, Univ of Uppsala), Swedish Research Council.

7. Doctorates awarded as main supervisor : 29

Yi Wang (2004) , Sa Li (2004), Jorge Mario Osorio Guillen (2004), Jailton Souza de Almeida (2006), Lunmei Huang (2007), Love Koci (2008), Carlos Moyses Graca Araujo (2008), Sergiu Arapan (2008), Duck Young Kim (2009), Peter Larsson (2009), Wei Luo (2010), Andreas Blomqvist (2010), Pornjuk Srepusharawoot (2010), Cecilia Århammer (2011), Fredrik Silvearv (2011), Jariyane Prasongkit (2011), Jawad Nisar (2012), M. Ramzan (2013), Z.Qian (2013), T.Hussain (2013), H.Löfås (2013), T. Kaewmaraya (2015), R.B.Araujo (2017), A.Benerjee (2019), V.Shukla (2019), T. Watcharatharapong (2019), J. Wärnå (2019), S.R.Naqvi (2020), Emil Edin (2021).

Post Doctoral Under main supervision : 30 worked (some are shown) and 3 working

B.Holm (1999-2000), K.Dewhurst (2000-02), M.Mattesini (2002-03), T.Andersen (2002-04), A.Larsson (2003-04), S.Kwon (2003-05), Z.Nabi (2004-05), A.Rosa (2004-06), C.Fang (2004-05), Z.Sun (2005-07), K.Kadas (2007-08), R.Scheicher (2007-10), H.Shi (2007-08), X.Peng (2007-09), C.Araujo (2008-11), A.Grigoriev (2004-12), B.Pathak (2009-12), T. Maark (2010-12), Li Wen (2012-13), A.Sarkar (2011-13), J. Li (2012-14), P.Panigrihi (2012-14), T.Hussain (2014), S.Charaborty (2013-16), M.Islam (2014-2016), T. Nguyen (2015-2016), N.Jena (2015-2018), M.Li (2016-2017), A.Majumdar (2018-2020), X.Yang (2018-2020), D.Singh (2018-), S.Verma (2020-), M.Köhler (2021-)

Current Senior Researchers: A.Grigoriev (2013-), W.Luo (2013-).

Other Information :

- Fellow of Royal Society of Chemistry (FRSC), London, April 2021.
- Elected Fellow of American Physical Society (APS) USA, September 2019.
- Elected member of Kungliga Vetenskaps-Societeten, Sweden, May, 2011.
- Awarded the Wallmarkska prize for 2011 by the Royal Swedish Academy of Sciences, Stockholm, "for his important and internationally recognized studies of the electronic structure of condensed systems"
- Beller Lectureship for the APS March Meeting, 13-17 March 2017, in New Orleans, USA.
- Award of Global Initiative of Academic Network (GIAN) of MHRD, India at Pune Univ., India (26-30 Dec. 2016) & at IIT Indore, India (Jan. 2018).
- Awarded Scheme for Promotion of Academic and Research Collaboration (SPARC), MHRD, India at IIT Indore, 2019.
- Eder Lilly and Sven Thureus prize for An excellent Research on the Electronic structure of Condensed Matter in year 2005.
- Special Senior Researcher (Råd-forskare) position from Swedish Research Council in year 2003.
- Benzelius Medal for basic understanding of materials under high pressure in year 2001.
- Elected as a member in the Board of European High Pressure Research Group for years 2000-2004, 2005-2008, 2010-2013 & 2016-2019.
- Executive Committee member in the Board of International Association for the Advancement of High Pressure Science and Technology for years 2009-2015.
- Nominated from Uppsala University for "Göran Gustafsson prize" in Physics in 2009, 2010 & 2011.
- Junior Researcher (Forskarassistent) position from Swedish Research Council in year 1997.

- **Senior Research Fellowship award** from CSIR, India for year 1990-1992.
- **Second Position in the University** in B.Sc. examination in year 1984.
- **University Merit Scholarship** from year 1982-1984.
- **National Merit Scholarship** from year 1980-1982.

**Number of Ph.D Awarded as co-supervisor : 4 (four)**

- Four of my Ph.D. students, **Sa Li (04), C.M.Araujo (08), M.Ramzan (2013), A.Benerjee (2019)** have won **Bjurzons prize**, the highest award for a best Ph.D. thesis in natural sciences & technology at Uppsala University.

**Number of M.Phil (Licentiat) awarded :14** as main supervisor and **2 (two)** as assistant supervisor.

**Number of Master thesis awarded : 6(six).**

**Number of Ph.D students currently working under my Supervision: 2** as main supervisor

**Examiner for Ph.D. thesis Outside Sweden : 40 times**

**Member of Ph.D. thesis evaluation Committee in Sweden : Nine times**

**Main Examiner of Ph.D. thesis evaluation Committee in Sweden : Five times**

**Publications : Total 977** publications in international journals. ( **6 in Nature, 1 Science, 25 PNAS, 35 in PRL, 4 Nano-Letters, 4 in Ang.Chem, 3 in Adva. Funct. Mat. 9 Nanoenergy, 1 Science Advances & 1 in Energy & Envior. Sci.**). **Top 25 highly cited papers are cited more than 100 times.** Citations (Google Scholar) : **more than 34100, i10-index (Google Scholar) : 585, H-index (Google Scholar) : 86**

*Some Highlights of some of our papers.*

- Our spintronics paper (**Nature Materials 2,673 (2003)**) in year 2005 has been listed on the top 3 cited-papers-list in the all fields of material science for last two years (Source Web of Science and Nature Materials). It is highest (Top 10) cited paper in *Nature Materials* since it started. No. of **1910** (Google Scholar) (as of till **April, 2021**)
- Our Cm paper (**Science 309, 110 (2005)**) has received Best Peer Reviewed Scientific Paper from European Commission.
- Our Cm paper (**Science 309, 110 (2005)**) has chosen as **Highlight paper in Materials Science by ESRF, France** for year, 2005
- Our paper (*Phys. Rev. Lett.* **98**, 055505 (2007)) is selected as **RESEARCH HIGHLIGHTS in NATURE**. Title of the highlight was *How memories melt away, Nature 445*, 687 (2007).
- Our paper in *Nano-Letters (2007)* is selected as **RESEARCH HIGHLIGHTS in NATURE Nanotechnology**. Title of the highlight was **Nanotubes: Growth control Nature Nanotechnology** (2008). doi:10.1038/nnano.2008.21
- (Fig.3) of our paper entitled '**Beating the Miscibility Barrier between Iron Group Elements and Magnesium by High-Pressure Alloying**' (*Phys. Rev. Lett.* **95**, 245502 (2005)) has been appeared on the cover page of *Phys. Rev. Lett* **95**  
The Title of the cover page was "**Electrically and laser-heated diamond anvil cell is used to demonstrate that high pressure promotes solubility of magnesium in iron.**"
- Our paper on Relativity and the lead-acid battery (*Phys. Rev.Lett.***106**, 018301(2011)) is selected as **RESEARCH HIGHLIGHTS in NATURE** (*Nature 469*, 269 (2011) & **The Economist, 398, No. 8716 pp. 75-76 (2011).**
- Recently one of the figure of our paper on  $\text{Ti}_3\text{SiC}_2$  (**Appl. Phys. Lett. 76, 2226 (2000)**) has been appeared on the cover page of the book entitled "**2002 Graduate Programs in Physics, Astronomy, and related Fields**" compiled by the **American Institute of Physics.**

**Patent : one** in the field of **spintronics**

**Invited talks : more than 100** (all are outside Sweden and in International Conferences).

**Reviewer in International Funding Agencies :** Reviewer & panel member for Theory, Modeling and Simulations for grants at Department of Energy (DOE), USA. Reviewer of grants for National Research Council (NRC) Canada, National Science Foundation (NSF) USA, Estonia Science Foundation (ESF) Estonia, Swedish Research Council (VR-SIDA), Sweden, European Science Foundation (ESF), France, The Fund for Scientific Research – FNRS, Belgium, National Research, Development and Innovation Office, Hungary, National Science Centre, Poland.

**Editorial : Associate Editor of Nano Energy (IF=16.6) & Editor Nature Scientific Reports, Editorial Board of Journal of Materials Chemistry A (IF=11.3) & Materials Advances from RSC (UK).**

**Referee for International Journals :** Nature Materials, Nature Communications, Physical Rev. B, Physical Review Letters, Applied Physics Letters, Nature, Nature Energy, Nano energy etc.