

CURRICULUM VITAE

PERSONAL DETAILS

Name: ROHIT SINGH
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Address: Department of Physics, Patna Women's College
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Email Id: rohitau88@gmail.com
Date of Birth: 1st Jan 1988
Nationality: Indian



EDUCATION HISTORY

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| July 2009 – Dec 2015 | I. I. T. Delhi , New Delhi INDIA <i>Doctor of Philosophy (Physics)</i> Topic: “Structural, Electrical and Magnetic Properties of Ni-Mn-based Intermetallics”. |
| July 2007 – June 2009 | University of Allahabad , Allahabad INDIA <i>Masters of Science (Physics), 78.33 %</i> Specialization: Condensed Matter Physics |
| July 2004 – July 2007 | University of Allahabad , Allahabad INDIA <i>Bachelor of Science, 73.04 %</i> |
| July 2002 – June 2004 | A. J. I. C. P. V. Katra Gulab Singh , Pratapgarh (U.P.) INDIA <i>Intermediate, 78.2 %</i> |
| July 2000 – June 2002 | J. J. K. V. M. H. S. S. Mandhata , Pratapgarh (U.P.) INDIA <i>High School, 67.86 %</i> |

EXPERIENCE

- From 21st August 2017 **Assistant Professor**, Physics Department, Patna Women's College, Patna University, Bailey Road, Patna – 800001 Bihar, India
- August 2016 to Nov. 2016 **Guest Assistant Professor**, Physics Department, Institute of Home Economics (affiliated to University of Delhi) F-4, Hauz Khas Enclave Near Hauz Khas Metro Station, New Delhi, Delhi – 110016.
- August 2015 to Nov. 2015 **Guest Assistant Professor**, Physics Department, Bhaskaracharya College of Applied Sciences (affiliated to University of Delhi) Sector 2, Phase 1, Dwarka, New Delhi – 110075.
- August 2015 to Nov. 2015 **Guest Assistant Professor**, Physics Department, Institute of Home Economics (affiliated to University of Delhi) F-4, Hauz Khas Enclave Near Hauz Khas Metro Station, New Delhi, Delhi – 110016.
- January 2015 to June 2015 **Guest Assistant Professor**, Physics Department, Shivaji College (affiliated to University of Delhi) Raja Garden, Ring Road, New Delhi – 110027.
- July 2011 – December 2014 **Teaching Assistantship (TA)**, SQUID Magnetometer Laboratory, Physics Department, IIT Delhi, Hauz Khas, New Delhi – 110016.

RESEARCH WORK

PhD topic: “STRUCTURAL, ELECTRICAL AND MAGNETIC PROPERTIES OF Ni-Mn-BASED INTERMETALLICS” under supervision of **Prof. Ratnamala Chatterjee (IITD)**.

AREA OF INTEREST

- Condensed Matter Physics and Material Science.

MAJOR ACHIEVEMENTS

- MCM scholarship in Master of Science (Physics) in 2008
- Graduate Aptitude Test in Engineering (GATE) 2009 qualified (AIR-51)
- UGC-CSIR NET-JRF – June, 2009 qualified
- UGC-CSIR NET-JRF – Dec, 2009 qualified
- B. K. Agarwal Gold-Medal – 2009 (for scoring highest marks in M. Sc.)
- Received International Travel Grant for participation in “**2014 MRS Spring Meeting**” held at San Francisco, California (USA) from 21/04/2014 to 25/04/2014

under “International Travel Support Scheme” of Science and Engineering Research Board (SERB) of Department of Science Technology, New Delhi.

FELLOWSHIP RECEIVED

- Junior Research Fellowship from July, 2009 to June, 2011
- Senior Research Fellowship from July, 2011 to June, 2014

EXPERTISE IN MATERIALS SYNTHESIS TECHNIQUES

- Electrodeposition of binary and ternary alloys
- Radio-frequency Magnetron Sputtering for thin film deposition
- Arc melting set-up for making ingots of Heusler alloys
- Spin Coating for thin film deposition
- Thermal Evaporation thin film deposition
- Ultrasonic cleaner for cleaning the substrates

EXPERTISE IN MATERIALS CHARACTERIZATION TECHNIQUES

- XRD and structural refinement
- SQUID Magnetometer QD MPMS-XL-7
- Scanning electron microscopy (SEM) and Energy dispersive analysis by X-rays (EDAX)
- Differential scanning calorimetry (DSC)
- Four probe method for temperature dependent resistivity
- Atomic force microscopy (AFM)
- Electron probe micro analysis (EPMA)

WORKSHOP/TRAINING PROGRAM ATTENDED

- National workshop on “IUCr workshop on XRD systems and its application” organized by PANalytical and Dept. of Chemistry, University of Delhi on 25-26th September, 2014.
- National workshop on “Nano Probe Techniques” organized by Indian Institute of Technology Delhi on 14th July 2014.

PROJECT SUPERVISED

- Supervised the undergraduate project entitled “Electrodeposition of Ni-Co magnetic thin films” under the “**College with Potential for Excellence (CPE)**” status accorded by UGC.

Students involved: 1. Raj Laxmi (Roll No. 276), 2. Naincy Shrivastava (Roll No. 44) and 3. Nisha Bharti (Roll No. 62).

Session: 2018 – 2019

- Supervised the undergraduate project entitled “Synthesis and Characterization of electrodeposited thin films of Fe – Co alloys” under the “**Basic Scientific Research (BSR)**” status accorded by UGC.

Students involved: 1. Akanksha Sinha (Roll No. 5), 2. Surbhi (Roll No. 126) and 3. Anisha Rana (Roll No. 151).

Session: 2018 – 2019

- Supervised the undergraduate project entitled “Synthesis and Characterization of electrodeposited thin films of Ni, Mn, Co metals and Ni-Co binary alloys” under the “**Star College scheme**” status accorded by Department of Biotechnology (DBT).

Students involved: 1. Kajal Singh (Roll No. 156) and 2. Anchal Kumari (Roll No. 249)

Session: 2018 – 2019

PUBLICATIONS IN INTERNATIONAL JOURNALS

1. “*Use of Arrott plots to identify Néel temperature (T_N) in metamagnetic $Ni_{48}Co_6Mn_{26}Al_{20}$ polycrystalline ribbons,*” **Rohit Singh**, Saurabh Kumar Srivastava, Arun K. Nigam, Vladimir V. Khovaylo, Lajos K. Varga, and Ratnamala Chatterjee, **Journal of Applied Physics** **114**, 243911 (2013). ISSN: 0021-8979

Impact Factor: 2.176, Five Year Impact Factor: 2.163

2. “*Phase transitions and magnetic properties of Ni(Co)–Mn–Al melt-spun ribbons,*” M. Lyange, V. Khovaylo, **R. Singh**, S. K. Srivastava, R. Chatterjee, L. K. Varga, **Journal of Alloys and Compounds** **586**, S218-S221 (2014). ISSN: 0925-8388

Impact Factor: 3.779, Five Year Impact Factor: 3.315

3. “*Large exchange-bias in $Ni_{55}Mn_{19}Al_{24}Si_2$ polycrystalline ribbons,*” **Rohit Singh**, Babita Ingale, Saurabh Kumar Srivastava, Lajos K. Varga, Vladimir V. Khovaylo, and

Ratnamala Chatterjee, **Physica B: Condensed Matter** **448**, 143–146 (2014).
ISSN: 0921-4526

Impact Factor: 1.453, Five Year Impact Factor: 1.374

4. “*Large exchange bias in polycrystalline ribbons of $Ni_{56}Mn_{21}Al_{22}Si_1$* ”, **Rohit Singh**, Babita Ingale, Lajos K. Varga, Vladimir V. Khovaylo, and Ratnamala Chatterjee, **Journal of Magnetism and Magnetic Materials** **394**, 143-147 (2015). ISSN: 0304-8853

Impact Factor: 3.046, Five Year Impact Factor: 2.717

5. “*Electric Resistivity and Hall Effect of Ni(Co)-Mn-Al Melt Spun Ribbons*”, Marina Seregina, Mariya Lyange, Vladimir V. Khovaylo, Sergey V. Taskaev, Hiroyuki Miki, Toshiyuki Takagi, Rohit Singh, Ratnamala Chatterjee and Lajos K. Varga, **Material Science Forum** **845**, 65-68 (2016). ISSN: 1662-9752
6. “*Spin glass and superparamagnetism in $Ni_{56}Mn_{21}Al_{20}Si_3$ Heusler alloys*”, **Rohit Singh**, Babita Ingale, Lajos K. Varga, Vladimir V. Khovaylo, S. Taskaev and Ratnamala Chatterjee, **Journal of Magnetism and Magnetic Materials**, Under Review (2019).

PAPERS PRESENTED AT CONFERENCE AND SEMINARS


1. **2013 MRS Spring Meeting & Exhibit held in San Francisco, California, USA from April 1st – 5th, 2013** “*Study of Metamagnetic Behaviour of $Ni_{45}Co_5Mn_{32}Al_{18}$ Melt Spun Ribbons by Arrott Plots*”, **Rohit Singh**, Saurabh Srivastava, L. Varga, A. K. Nigam, Ratnamala Chatterjee.
2. **International Conference on Magnetic Materials and Applications (MagMA-2013)** held in IIT Guwahati from December 05th – 07th, 2013 “*Large exchange-bias in $Ni_{55}Mn_{19}Al_{24}Si_2$ polycrystalline ribbons*”, **Rohit Singh**, Babita Ingale, Saurabh Kumar Srivastava, Lajos K. Varga, Vladimir V. Khovaylo, and Ratnamala Chatterjee.
3. **2014 MRS Spring Meeting and Exhibit** held in San Francisco, California, USA from April 21st – 25th, 2014 “*Large exchange bias in $Ni_{56}Mn_{21}Al_{22}Si_1$ polycrystalline ribbons*” **Rohit Singh**, Babita Ingale, Saurabh Kumar Srivastava, Lajos K. Varga, and Ratnamala Chatterjee.
4. **Moscow International Symposium on Magnetism (MISM)** held in Moscow State University, Moscow, Russia from 29th June – 3rd July 2014 “*Exchange bias effect in*

polycrystalline ribbons of Heusler alloy Ni-Mn-Al-Si", **Rohit Singh**, Babita Ingale, Vladimir V. Khovaylo, Lajos K. Varga, Ratnamala Chatterjee.

5. **International Conference on Magnetic Materials and Applications (MagMA-2015)** held in VIT Vellore from December 02nd – 04th, 2015 “Spin glass and superparamagnetism in $\text{Ni}_{56}\text{Mn}_{21}\text{Al}_{20}\text{Si}_3$ *polycrystalline ribbons*”, **Rohit Singh**, Babita Ingale, Lajos K. Varga, Vladimir V. Khovaylo, and Ratnamala Chatterjee.
6. **Contributions of Indian Scientists in the Different areas of Physics (2018)** held in Patna University on 15th April, 2018 “Exchange Bias effect in NiMnAlSi Heusler alloys”

Place: Patna

Date: 06 - 04 -2019



(Dr. Rohit Singh)