

## ABRIDGED CURRICULUM VITAE

Name	:	BIPLAB CHATTOPADHYAY
Date of Birth	:	5 <sup>th</sup> OCTOBER, 1963
Place of Birth	:	GUSHKARA, BURDWAN DISTRICT (W.B.), INDIA
Father's Name	:	Late KAITISH CHANDRA CHATTOPADHYAY
Marital Status	:	MARRIED
Nationality	:	INDIAN
Present Designation	:	PRINCIPAL (W.B.S.E.S)
Office Address	:	Taki Government College, P.O. Taki, 24 Parganas(North), Taki – 743429, W.B, INDIA
Permanent Residential Address	:	25D/13 Anupama Housing Complex, V. I. P. Road, P.O. Airport, Kolkata 700052, West Bengal, INDIA.
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### ACADEMIC QUALIFICATIONS :

DEGREE /EXAM	YEAR	% OF MARKS	CLASS	BOARD/UNIVERSITY
Madhyamik	1979	73.3 %	I	W.B. Board of Secondary Education
H.S.(10+2)	1981	66.9 %	I	W.B. Council of H. S. Education
B.Sc. (Hons)	1985	50.6 %	II	University of Burdwan
M.Sc. (Physics)	1987*	66.8 %	I	University of Burdwan
Ph.D. (Physics)	1995			University of Hyderabad

\*Results Declared Jan.'89

### PUBLICATIONS:

JOURNAL DESCRIPTION	NUMBER	PROGRESSIVE TOTAL
<b>Papers in Refereed International Journals (Indexed)</b>	<b>19</b>	<b>19</b>
<b>Papers in Refereed Proceedings of International Conferences</b>	<b>04</b>	<b>23</b>
<b>Papers in Journals with ISSN/ISBN numbers</b>	<b>04</b>	<b>27</b>
<b>Independent Papers in e-print Archives</b>	<b>01</b>	<b>28</b>
<b>Full paper in Conference Proceedings</b>	<b>01</b>	<b>29</b>
<b>Papers presented in Conference (Oral/Poster)</b>	<b>09</b>	<b>38</b>

### ACADEMIC HONOURS :

1. National Scholarship in Secondary Level (1979).
2. University Gold Medal securing First Rank in M.Sc. (1987).
3. Qualified in the National Educational Test (NET) Examination (1988).
4. Invited Speaker in the International Symposium of Hayashibara Forum'98, held at Okayama, JAPAN (13-16 April, 1998).
5. Talk in the Invited Session, in the Condensed Matter Days-1998, held at T. M. Bhagalpur University, INDIA (27-29 August, 1998).
6. CSIR-Pool Officer Fellowship (December, 1998).
7. Invited Speaker at the 3<sup>rd</sup> International Conference on Analytic Mathematics and its Application, Xinyang Normal University, Henan, CHINA (8-12 August, 2011)
8. Chaired a Session of Invited Lectures at the 3<sup>rd</sup> Int. Conf. on Analytic Math and its Application, Xinyang Normal University, Henan, CHINA (8-12 August, 2011)

## **ABROAD VISITS :**

1. Visiting Scientist at I.C.T.P., Trieste, ITALY (15 April – 9 July, 1994).
2. Visiting Scientist at I.C.T.P., Trieste, ITALY (1 July – 15 August, 1995).
3. Visited JAPAN as Invited Speaker at the International Symposium of Hayashibara Forum'98, at Okayama, JAPAN during April, 1998.
4. Visited P. R. CHINA to deliver lectures in four International Conferences: (i) The 3<sup>rd</sup> International Conference on Combinatorial Optimization and Applications (COCOA'09), at Yellow Mountains, Huangshan CHINA, June 10–12, 2009; (ii) Joint Conference of the Society for Mathematical Biology and Chinese Society for Mathematical Biology, Zhejiang University, Hangzhou, CHINA, June 14–17, 2009; (iii) The 11<sup>th</sup> International Conference on Molecular Systems Biology (ICMSB'09), at Shanghai, CHINA, June 21-25, 2009; (iv) International Conference on “Applied Analysis and Scientific Computation” at Shanghai Normal University, Shanghai, CHINA, June 25-28, 2009.
5. Visited P. R. CHINA to deliver invited lecture at the 3<sup>rd</sup> International Conference on Analytic Mathematics and its Applications at Xinyang Normal University, Xinyang, Henan, CHINA, August 8–12, 2011.

## **ACADEMIC POSITIONS :**

1. UGC Junior Research Fellow (1989 - 1991).
2. UGC Senior Research Fellow (1991 - 1994).
3. Postdoctoral Fellow at MRI, Allahabad, (February, 1995 - February, 1997).
4. Postdoctoral Fellow at SINP, Calcutta, (March, 1997 - February, 1999).
5. CSIR Pool Officer at SINP, Calcutta, (March, 1999 – June, 2000).

## **MEMBERSHIP IN PROFESSIONAL BODIES/SOCIETIES :**

1. Life Member : The Indian Physical Society.

## **PRESENT RESEARCH INTEREST :**

### (1) Broad Area : **Theoretical Bioscience/Biophysics**

Topic : Modeling, Analysis and Computational Studies on Protein synthesis

Topic : Modeling and Analysis of Bone formation and Studies on Fracture healing by EM Fields

Topic : Modeling and Analysis of Complex Biological Systems with Pathogenic infliction

### (2) Broad Area : **Condensed Matter Physics (Quantum Many-Body Theory and Statistical Mechanics)**

Topic: Model studies for High  $T_c$  Superconductors

Topic: Josephson Junction Arrays and Planar Spin Models

Topic: Hubbard like Models

## **Ph.D. THESIS :**

**Title** : ANISOTROPIC 3D XY MODEL AND VORTEX LOOPS: Layered 3D High  $T_c$  Superconductors and 2D Quantum Capacitive Josephson Junction Arrays.

**Supervisor** : Prof. Subodh R. Shenoy.

**Institute** : University of Hyderabad, Hyderabad-500046, INDIA.

**Submitted** : November, 1994.

**Degree Obtained** : May, 1995.

## RESEARCH PROJECT

### 1. UGC – Minor Research Project

Title : “MODEL STUDIES ON HIGH TEMPERATURE SUPERCONDUCTIVITY”

Ref. No : PSW–25/06-07, Dated 06 November, 2006

Status : Completed

## RESEARCH EXPERIENCE :

- a. UGC Junior Research Fellow (from 9.8.89 to 8.8.91) in the School of Physics, University of Hyderabad, Hyderabad, INDIA.
- b. UGC Senior Research Fellow (from 9.8.91 to 8.8.94) in the School of Physics, University of Hyderabad, Hyderabad, INDIA.
- c. Research Fellow (from August'94 to January'95) in the School of Physics, University of Hyderabad, Hyderabad, INDIA.
- d. Postdoctoral Fellow (from 23.2.95 to 28.2.97) at the Mehta Research Institute of Mathematics and Mathematical Physics, Allahabad, INDIA (**Presently Harish Chandra Research Institute**).
- e. Postdoctoral Fellow (from 12.3.97 to 1.3.99) at the Saha Institute of Nuclear Physics, Calcutta, INDIA.
- f. CSIR-Pool Officer (SRA-Scientists' Pool Scheme) (from 01.03.1999 to 14.06.2000) at Saha Institute of Nuclear Physics, Kolkata, INDIA

## TEACHING EXPERIENCE :

- a. Lecturer in Physics (from 16.6.2000 to 31.01.2002) at the Gangarampur College, Gangarampur, Dakshin Dinajpur District, West Bengal, INDIA.
- b. Lecturer in Physics (from 01.02.2002 to 15.06.2004) at the Barasat Govt. College, Barasat, 24 Pgs(N), Kolkata 700124, West Bengal, INDIA.
- c. Lecturer(Sr. Scale) in Physics (from 16.06.2004 to 15.06.2009) at the Barasat Govt. College, Barasat, 24 Pgs(N), Kolkata 700124, West Bengal, INDIA.
- d. Reader in Physics (from 16.06.2009 to 08.12.2010) at the Barasat Govt. College, Barasat, 24 Pgs(N), Kolkata 700124, West Bengal, INDIA.
- e. Reader in Physics (from 09.12.2010 to 15.06.2012) at the Acharya B. N. Seal College (Govt.), Cooch Behar 736101, West Bengal, INDIA
- f. Associate Professor of Physics (from 16.06.2012 to 01.03.2014) at the Acharya B. N. Seal College (Govt.), Cooch Behar 736101, West Bengal, INDIA
- g. Associate Professor of Physics (from 03.03.2014 to 07.07.2015) at the Jalpaiguri Govt. Engineering College, Jalpaiguri 735102, West Bengal, INDIA
- h. Associate Professor of Physics (from 08.07.2015 and Continuing) at the Govt. College of Engineering & Ceramic Technology, 73 A. C. Banerjee Lane, Kolkata 700010, West Bengal, INDIA

## ADMINISTRATIVE EXPERIENCE :

- a. Discharging duties as **Registrar** (*Officiating*) at the Jalpaiguri Government Engineering College, Jalpaiguri (since 20.08.2014 to 07.07.2015) in addition to Academic duties as Associate Professor of Physics.

## TALKS/SEMINARS DELIVERED :

1. "ANISOTROPIC 3D XY MODEL AND VORTEX LOOPS: Layered 3D High Tc Superconductors and 2D Quantum Capacitive Josephson Junction Arrays", (Thesis Talk) at University of Hyderabad, Hyderabad, INDIA (May, 1995).
2. "Order Parameter Symmetry in High Tc Superconductors", at Mehta Research Institute, Allahabad, INDIA (February, 1996).
3. "Quasi-2D Noncritical Signatures in Layered Superconductors from Vortex Loops in the Anisotropic 3D XY Model", at Tata Institute of Fundamental Research, Mumbai, INDIA (February, 1996).
4. "Quasi-2D Noncritical Signatures in Layered Superconductors from Vortex Loops in the Anisotropic

- 3D XY Model", at Indian Institute of Science, Bangalore, INDIA (February, 1996).
5. "Anisotropic 3D XY Model and Kosterlitz-Thouless Signatures in Layered Superconductors", at Banaras Hindu University, Varanasi, INDIA (March, 1996).
  6. "Anisotropic 3D XY Model and Kosterlitz-Thouless Signatures in Layered Superconductors", at Visva Bharati, Santiniketan, INDIA (December, 1996).
  7. "An Orbital Antiferromagnetic State in the Extended Hubbard Model", at Visva Bharati (Condensed Matter Days-1997), Santiniketan, INDIA (August, 1997).
  8. "Modified Interlayer Tunneling Model for Cuprate Superconductors", Invited talk at the International Symposium of Hayashibara Forum'98, at Okayama, JAPAN (April, 1998).
  9. "Mean Field  $T_c$  and Superconducting Gap within an Extended Interlayer Tunneling Model", Talk in the Invited Session, at T. M. Bhagalpur University (Condensed Matter Days-1998), Bhagalpur, INDIA (August, 1998).
  10. "Vortex Loops in Anisotropic 3D XY Model", at the Saha Institute of Nuclear Physics, Calcutta, INDIA (August, 1999).
  11. "Kosterlitz-Thouless signatures in Layered Superconductors", at Indian Statistical Institute, Calcutta, INDIA (December, 1999).
  12. "Superconductivity: An account from its advent through twentieth century" at 58<sup>th</sup> Orientation Programme, Academic Staff College, University of Calcutta, Kolkata, INDIA, December, 2003.
  13. "Vortex Loops in Planar Spin Models" at the Refresher Course in Physics, Academic Staff College, University of Calcutta, Kolkata, INDIA, November, 2006.
  14. "A Population model describing Invasion of Human Immunity by the Deficiency Virus" at the Refresher Course in Physics, Academic Staff College, University of Calcutta, Kolkata, INDIA, September, 2008.
  15. "Effects of Delayed Cell-Lysis in a Mathematical Model of Host Pathogen" at the 3<sup>rd</sup> International Conference on Combinatorial Optimization and Applications (COCOA'09), at Yellow Mountains, Huangshan, CHINA, June 10–12, 2009.
  16. "Effects of T-cell suppression in a Mathematical Model representing Psoriatic pathogenesis at the Joint Conference of the Society for Mathematical Biology and Chinese Society for Mathematical Biology, Zhejiang University, Hangzhou, CHINA, June 14–17, 2009.
  17. "A Mathematical Model of Psoriatic pathogenesis" at the 11<sup>th</sup> International Conference on Molecular Systems Biology (ICMSB'09), at Shanghai, CHINA, June 21-25, 2009.
  18. "Effects of drug therapy in a time delayed model of HIV infection" at the International Conference on 'Applied Analysis and Scientific Computation' at Shanghai Normal University, Shanghai, CHINA, June 25-28, 2009.
  19. "Mathematical Model Based Analysis of the Disease Psoriasis Emphasizing its Immunopathogenic Origin" at the 3<sup>rd</sup> International Conference on Analytic Mathematics and its Application, Xinyang Normal University, Xinyang, Henan, CHINA (8-12 August, 2011).
  20. "Mundane Charm of God Particles", at the A. B. N. Seal College, Cooch Behar, as the College-Seminar organized by Research and Seminar Committee, Cooch Behar, West Bengal, India (21 August, 2012).
  21. "Immunopathogenesis in Psoriasis from a Theoretical Model" UGC Sponsored National seminar on Recent Advances in Life Science Application, organized by the Postgraduate Department of Zoology, A. B. N. Seal College, Cooch Behar in collaboration with Department of Agricultural Entomology, UBKV, Pundibari, Cooch Behar, West Bengal, India (8-9 December, 2012).

## **CONFERENCE/SYMPOSIUM/SCHOOL/WORKSHOP PARTICIPATED :**

1. VIII National Workshop (with International Participation) on "Atomic and Molecular Physics" at the University of Hyderabad, INDIA, December, 1990.
2. Solid State Physics Symposium (D.A.E, INDIA), at Banaras Hindu University, Varanasi, December, 1991.
3. Solid State Physics Symposium (D.A.E, INDIA), at S. V. University, Tirupati, December, 1992.
4. INDO-US Workshop on "Ordering Disorder", at University of Hyderabad, INDIA, December, 1992 - January, 1993 (partly attended).
5. Discussion Meeting on "Coherent States : New Developments and Perspectives", at University of Hyderabad, INDIA, October, 1993.
6. Solid State Physics Symposium (D.A.E, INDIA), at Bhabha Atomic Research Centre, Bombay, December, 1993.
7. Research Workshop on Condensed Matter Physics 1994, at International Centre for Theoretical Physics, Trieste, ITALY, June - August, 1994.
8. Winter School on "Some Recent Developments in Quantum Many-Body Physics", at Indian Institute of Science, Bangalore, INDIA, December, 1994.
9. Research Workshop on Condensed Matter Physics 1995, at International Centre for Theoretical Physics, Trieste, ITALY, June - August, 1995.
10. Miniworkshop on "Quantum Incoherence and Quantum Coherence in Strongly Correlated systems", at International Centre for Theoretical Physics, Trieste, ITALY, July, 1995.
11. Miniworkshop on "Josephson Junction Arrays", at International Centre for Theoretical Physics, Trieste, ITALY, August, 1995.
12. Golden Jubilee Theoretical Physics Symposium "SUJAYATA", at Tata Institute of Fundamental Research, Mumbai, INDIA, September, 1996.
13. "Condensed Matter Days-1997" Symposium, Visva-Bharati, Santiniketan, INDIA, August, 1997.
14. "Progress and Challenges in Complexity: Physics to Biology" International Symposium of Hayashibara Forum'98, at Okayama, JAPAN, April, 1998.
15. "Condensed Matter Days-1998" Symposium, T. M. Bhagalpur University, Bhagalpur, INDIA, August, 1998.
16. "Birth Centenary Celebration of Professor K. S. Krishnan: A Symposium on Condensed Matter Physics" at the Indian Association for the Cultivation of Science, Jadavpur, Calcutta, INDIA, December, 1999.
17. "Conference on Strongly Correlated Electron Systems", at the Saha Institute of Nuclear Physics, Calcutta, INDIA, October, 2000.
18. UGC Sponsored Seminar on "Globalization : Economic, Political, Social Aspects" at Barasat Govt. College, Barasat, Kolkata, INDIA, 11 – 12 December, 2002
19. UGC Sponsored Seminar on "Global Scenario of Cyber World and Communication" New Alipore College, Kolkata, INDIA, 21 December, 2002
20. UGC Sponsored "Orientation Program" at Academic Staff College, University of Calcutta, Kolkata, INDIA, 27 Nov – 24 Dec, 2003
21. UGC Sponsored "Refresher Course in PHYSICS" at Academic Staff College, University of Calcutta, Kolkata, INDIA, 06 Nov – 25 Nov, 2006

22. UGC Sponsored Training Course “Scope of Research in Science and Engineering” at Jadavpur University, Kolkata, INDIA, 16 January, 2007.
23. UGC Sponsored Seminar “Issues of Autonomy in Government Colleges” organized by Sanskrit College, Kolkata and West Bengal Govt. College Teachers’ Association, at Kolkata, INDIA, 27 January, 2007.
24. "International Conference on Recent Developments in Theoretical Physics (THEOPHYS - 07)", at the Indian Statistical Institute, Kolkata, INDIA, 4-7 December, 2007.
25. Govt. of W.B. Sponsored Social Awareness Programme “An Endeavour towards developing Social Awareness” at Barasat Govt. College, Kolkata, INDIA, 17 – 20 March, 2008; Worked as EXECUTIVE SECRETARY of the ORGANIZING COMMITTEE
26. UGC Sponsored “Refresher Course in PHYSICS at Academic Staff College, University of Calcutta, Kolkata, INDIA, 01 Sept – 20 Sept, 2008.
27. "International Conference on Cold Atoms, 2008", at the Indian Institute of Science Education and Research, Kolkata 700106, INDIA, 12<sup>th</sup> to 16<sup>th</sup> December, 2008.
28. One Day Colloquium on *Mathematical Biology and Ecology*, at the Centre for Mathematical Biology and Ecology, Dept. of Mathematics, Jadavpur University, Kolkata, INDIA, held on 20 February, 2009.
29. The 3<sup>rd</sup> International Conference on Combinatorial Optimization and Applications (COCOA’09), at Yellow Mountains, Huangshan CHINA, June 10–12, 2009
30. Joint Conference of the Society for Mathematical Biology and Chinese Society for Mathematical Biology, Zhejiang University, Hangzhou, CHINA, June 14–17, 2009.
31. Joint Workshop on “Mathematics for the Life Sciences: Challenges and Chances” at CAS-MPG Partner Institute of Computational Biology, Shanghai, China, June 19, 2009.
32. The 11<sup>th</sup> International Conference on Molecular Systems Biology (ICMSB’09), at Shanghai, CHINA, June 21-25, 2009.
33. International Conference on “Applied Analysis and Scientific Computation” at Shanghai Normal University, Shanghai, CHINA, June 25-28, 2009.
34. UGC Sponsored National Seminar “Inclusive Education: Challenges Ahead in Gigher Education” Organised by Govt. College of Art and Craft, Kolkata and West Bengal Govt. College Teachers’ Association, 23 January, 2010.
35. UGC Sponsored State Level Seminar “Technologies of Revolution: Society, Economy and Polity”, Organized by Barasat Government College and Paschimbanga Itihaas Samsad, Kolkata, INDIA, 4 & 5 March, 2010.
36. The 3<sup>rd</sup> International Conference on Analytic Mathematics and its Applications at Xinyang Normal University, Xinyang, Henan, CHINA, August 8–12, 2011.
37. UGC Sponsored National seminar on Recent Advances in Life Science Application, organized by the Postgraduate Department of Zoology, A. B. N. Seal College, Cooch Behar in collaboration with Department of Agricultural Entomology, UBKV, Pudibari, Cooch Behar, held at Cooch Behar, India from 8-9 December, 2012.

## CONSOLIDATED LIST OF PUBLICATIONS

### PAPERS IN REFEREED INTERNATIONAL JOURNALS

No.	Title	Author(s)	Journal, Pages (Year) [ISSN/ISBN] [Impact Factor]
1.	Vortex Loop Crinkling in the Three Dimensional XY Model: Numerical Evidence in Support of an Ansatz	<b>Biplab Chattopadhyay</b> , Mangal C. Mahato and Subodh R. Shenoy	Phys. Rev. <b>B 47</b> , 15159-15167 (1993) [ <b>1098-0121</b> ] [ <b>3.74</b> ]
2.	Kosterlitz-Thouless Signatures from 3D Vortex Loops in Layered Superconductors	<b>Biplab Chattopadhyay</b> and Subodh R. Shenoy	Phys. Rev. <b>Lett. 72</b> , 400-403 (1994) [ <b>0031-9007</b> ] [ <b>7.51</b> ]
3.	Kosterlitz-Thouless Vortex-Scaling Equations with Nonzero Current Drives	S. Sujani, <b>Biplab Chattopadhyay</b> and Subodh R. Shenoy	Phys. Rev. <b>B 50</b> , 16668-16678 (1994) [ <b>1098-0121</b> ] [ <b>3.74</b> ]
4.	Anisotropic Three Dimensional XY Model and Vortex Loop Scaling	Subodh R. Shenoy and <b>Biplab Chattopadhyay</b>	Phys. Rev. <b>B 51</b> , 9129-9147 (1995) [ <b>1098-0121</b> ] [ <b>3.74</b> ]
5.	Fluctuation Effects and Order Parameter Symmetry in the Cuprate Superconductors	<b>B. Chattopadhyay</b> , D. M. Gaitonde and A. Taraphder	Europhys. <b>Lett. 34</b> , 705-710 (1996) [ <b>0295-5075</b> ] [ <b>2.27</b> ]
6.	d-Wave Order Parameter in Bi2212 from a Phenomenological Model of High T <sub>c</sub> Cuprates	<b>Biplab Chattopadhyay</b>	Phys. <b>Lett. A 226</b> , 231-236 (1997) [ <b>0375-9601</b> ] [ <b>1.63</b> ]
7.	Phase Diagram of the Half-Filled Extended Hubbard Model in Two Dimensions	<b>Biplab Chattopadhyay</b> and D. M. Gaitonde	Phys. Rev. <b>B 55</b> , 15364-15367 (1997); <i>ibid</i> <b>58</b> , E1689 (1998) [ <b>1098-0121</b> ] [ <b>3.74</b> ]
8.	Differential Conductance for Tunnel Junctions: Effects of d-wave Gap	<b>Biplab Chattopadhyay</b> , Joydev Lahiri and A. N. Das	Mod. Phys. <b>Lett. B 11</b> , 1285-1294 (1997) [ <b>0217-9849</b> ] [ <b>0.69</b> ]
9.	Superconducting Gap within a Modified Interlayer Tunneling Model	<b>Biplab Chattopadhyay</b> and A. N. Das	Phys. <b>Lett. A 246</b> , 201-207 (1998) [ <b>0375-9601</b> ] [ <b>1.63</b> ]
10.	An Orbital Antiferromagnetic State in the Extended Hubbard Model	<b>Biplab Chattopadhyay</b>	Indian J. Phys. <b>72A</b> , 359-364 (1998) [ <b>0973-1458</b> ] [ <b>1.79</b> ]
11.	An Extended Pair Tunneling Model: Studies on Bilayer Splitting and Some Superconducting State Properties	A. N. Das and <b>Biplab Chattopadhyay</b>	Physica <b>C 308</b> , 226-234 (1998) [ <b>0921-4534</b> ] [ <b>1.11</b> ]
12.	Effects of c-axis Hopping in the Interlayer Tunneling Model of High-T <sub>c</sub> Layered Cuprates	<b>Biplab Chattopadhyay</b> and A. N. Das	Int. J. Mod. Phys. <b>B 13</b> , 1619-1632 (1999) [ <b>0217-9792</b> ] [ <b>0.94</b> ]
13.	Impurity Substitution in Bismuth and Thallium Cuprates: Suppression of T <sub>c</sub> and Estimation of Pseudogap	<b>Biplab Chattopadhyay</b> , B. Bandyopadhyay, Asok Poddar, P. Mandal, A. N. Das and B. Ghosh,	Physica <b>C 331</b> , 38-44 (2000) [ <b>0921-4534</b> ] [ <b>1.11</b> ]
14.	Interlayer Mechanism in High-T <sub>c</sub> Phenomenology	<b>Biplab Chattopadhyay</b> and A. N. Das	Indian J. Phys. <b>74A</b> , 353-356 (2000) [ <b>0973-1458</b> ] [ <b>1.79</b> ]
15.	Structural Distortions and Extension of Superconducting Region in T <sub>c</sub> -p Phase Diagram of HgBa <sub>2</sub> CuO <sub>4+d</sub>	B. Bandyopadhyay, <b>B. Chattopadhyay</b> , A. N. Das and B. Ghosh	Physica <b>C 349</b> , 119-124 (2001) [ <b>0921-4534</b> ] [ <b>1.11</b> ]

16.	Effects of Co-Substitution on Superconductivity and Transport in $Tl_2Ba_2Ca_{1-x}Y_x(Cu_{1-y}Co_y)_2O_{8+d}$	Asok Poddar, Bidisa Bandyopadhyay, <b>Biplab Chattopadhyay</b>	Physica C <b>390</b> , 120-126 (2003) <b>[0921-4534] [1.11]</b>
17	Mathematical Modelling on the dynamics of CD4+T cell infection by HIV that includes a time-delay	P. K. Roy and <b>Biplab Chattopadhyay</b>	International Journal of Evolution Equation <b>4</b> , 227-239 (2008) <b>[1549-2907] [NA]</b>
18	HIV model with intracellular delay - a mathematical study	P. K. Roy, Nandadulal Bairagi, Joydev Chattopadhyay and <b>Biplab Chattopadhyay</b>	Proc. Of 5 <sup>th</sup> IEEE Int. Conf. on Automation Science and Engg., 373-378 (2009) <b>[978-1-4244-4578-3] [NA]</b>
19	Understanding the Dynamics of Epidemiological Systems with reference to a Host-Pathogen Model	<b>Biplab Chattopadhyay</b>	Acad. J. Aureole <b>1</b> , 66-76 (2009) <b>[0976-9625] [NA]</b>
20	Host Pathogen Interactions with Recovery Rate: A Mathematical Study	Priti Kumar Roy and <b>Biplab Chattopadhyay</b>	Proc. of the World Congress on Engineering 2010, Vol I, 521-526 (2010) <b>[2078-0958] [NA]</b>
21	HIV Infection in T-lymphocytes and Drug Induced CTL Response of a Time Delayed Model	Priti Kumar Roy, Amar Nath Chatterjee and <b>Biplab Chattopadhyay</b>	Proc. of the World Congress on Engineering 2010, Vol I, 533-538 (2010) <b>[2078-0958] [NA]</b>
22	Mathematical Modeling on Immunopathogenesis in Chronic Plaque of Psoriasis: A Theoretical Study	Priti Kumar Roy, Jhumpa Bhadra and <b>Biplab Chattopadhyay</b>	Proc. of the World Congress on Engineering 2010, Vol I, 550-555 (2010) <b>[2078-0958] [NA]</b>
23	Modeling the Dynamics of Psoriatic pathogenesis	<b>Biplab Chattopadhyay</b>	Acad. J. Aureole <b>2</b> , 15-23 (2010) <b>[0976-9625] [NA]</b>
24	Studies on the suppression of Immune Cells in a Model of Psoriasis Pathogenesis	Nirmalendu Hui and <b>Biplab Chattopadhyay</b>	Acad. J. Aureole <b>3</b> , 1-12 (2011) <b>[0976-9625] [NA]</b>
25	Along the Pathway through Phenomenal Evolution of Super Electrical Conductivity	<b>Biplab Chattopadhyay</b>	B. N. Seal Journal of Science, Vol. IV, pages 6-24 (2011) <b>[0975-5624] [NA]</b>
26	Immunopathogenesis in Psoriasis through a Density-type Mathematical Model	<b>Biplab Chattopadhyay</b> and Nirmalendu Hui	WSEAS Transactions on Mathematics <b>11</b> , 456-466 (2012) <b>[2224-2880] [NA]</b>
27	Realizing Bone-Mass Generation through a Density type Theoretical Archetype	Nirmalendu Hui and <b>Biplab Chattopadhyay</b>	Appeared in the E-print Archive No. arXiv: 1307.5833, General biology and biomathematics (2013) <b>[NA] [NA]</b>
28	Studies on Bone-mass Formation within a Theoretical Model	Nirmalendu Hui and <b>Biplab Chattopadhyay</b>	IOSR Journal of Pharmacy and Biological Sciences <b>9</b> , 07-20 (2014) <b>[2319-7676] [1.138]</b>



**PAPERS IN SYMPOSIA/WORKSHOPS/CONFERENCES**

<b>No.</b>	<b>Title</b>	<b>Author(s)</b>	<b>Proceedings, Pages (Year)</b>
1.	Folding of Vortex Loops in 3D XY Model,	<b>Biplab Chattopadhyay</b> and Subodh R. Shenoy	Proc. of SSP Symposium (DAE, INDIA) 34 C, 369 (1991).
2.	Hysteresis in a Field-Swept Landau Potential with Coloured Noise	<b>Biplab Chattopadhyay</b> , Mangal C. Mahato and Subodh R. Shenoy	Proc. of SSP Symposium (DAE, INDIA) 35 C, 411 (1992).
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