

हरीश-चन्द्र अनुसंधान संस्थान

Harish-Chandra Research Institute

छतनाग मार्ग, झूँसी, इलाहाबाद - 211 019

Chhatnag Road, Jhunsi, Allahabad - 211019

वार्षिक प्रतिवेदन
Annual Report
(2007 – 08)

CONTENTS

1.	About the Institute	3
2.	Director's Report	5
3.	Governing Council	8
4.	Summary of Research Activities in Mathematics	10
5.	Summary of Research Activities in Physics	13
6.	Note on Persons with Disabilities	17
7.	Vigilance Activities	18
8.	Auditors Report	19
9.	Annual Accounts	23
10.	Replies to Auditors Report	37

ABOUT THE INSTITUTE

THE EARLY YEARS

The Harish-Chandra Research Institute is one of the premier research institutes in the country. It is an autonomous institute fully funded by the Department of Atomic Energy, Government of India. Till 10th October 2000 the institute was known as the Mehta Research Institute of Mathematics and Mathematical Physics (M.R.I.). On 11th October 2000 it was renamed as Harish-Chandra Research Institute (H.R.I.) after the mathematician, late Prof. Harish-Chandra.

The Institute started with the efforts of Dr. B.N. Prasad, a mathematician at the University of Allahabad, who obtained the initial support from the B.S. Mehta Trust, Kolkata. Dr. Prasad was succeeded in January 1966 by Dr. S.R. Sinha, also of Allahabad University. He was followed by Prof. P.L. Bhatnagar, who, joined as the first formal Director. On Prof. Bhatnagar's demise in October 1976, the responsibilities were again taken up by Dr. Sinha. In January 1983, Prof. S.S. Shrikhande of Bombay University joined as the next Director of the Institute. During his tenure the dialogues with the Department of Atomic Energy (DAE) entered into the decisive stage and a review committee was constituted by the DAE for examining the future of the Institute. In 1985 N.D. Tiwari, the then Chief Minister of Uttar Pradesh, agreed to provide sufficient land for the Institute and the DAE promised financial support for meeting both the recurring and non-recurring expenditure. In January 1990, finally, about 66 acres of land was acquired in Jhunsi, Allahabad and the Institute has since came up at this site.

Prof. Shrikhande was followed by Prof. H.S. Mani who took over as the Director in January 1992. With his joining and the shift to the new campus at Jhunsi in 1996, the activities of the Institute picked up quickly. This phase of rapid growth is still continuing.

THE NEW PHASE

After a distinguished tenure of about nine years Prof. Mani retired in August 2001 and the charge was taken over by Professor Ravi S. Kulkarni. After the tenure of Prof. Kulkarni, Prof. Amitava Raychaudhuri has taken over as Director with effect from 19.07.2005. The Institute continues to be devoted to fundamental research in diverse areas of Mathematics and Theoretical Physics. Research is carried out by about 35 faculty members, visiting faculty, post-doctoral fellows, and Ph. D. students numbering around 52. Since the year 1992 the Institute has attracted worldwide attention, as is evident from the recognition received by many of its members, both at the national and international levels. Amongst them, Prof. Ashoke Sen, Prof. A. Raychaudhuri, Prof. B. Mukhopadhyaya and Prof. Pinaki Majumdar are all winners of the prestigious S.S. Bhatnagar award. Prof. Ashoke Sen was also honoured through the Padmashree Award, election to the

Fellowship of Royal Society, and award of the INSA S.N. Bose Medal and the prestigious J.C. Bose Fellowship of the Dept. of Science and Technology. Prof. Rajesh Gopakumar won the Swarnajayanti Fellowship of the Dept. of Science and Technology and the coveted ICTP prize for 2006. Prof. Sukumar Das Adhikari was elected as a Fellow of the National Academy of Sciences India, in 2007.

RESEARCH IN MATHEMATICS

The Mathematics group at HRI carries out research in several areas. In algebra, we are engaged in the study of algebraic groups and related structures, the theory of groups and group rings, representation theory, and infinite-dimensional Lie algebra. The work at HRI in analysis is in the field of harmonic analysis of Lie groups. The activity in geometry includes discontinuous groups and Riemann surfaces, algebraic topology, variational problems on manifolds, Chow groups of rational surfaces, and moduli of vector bundles. The number theory group works on algebraic, analytic and combinatorial number theory, automorphic forms and cryptography.

PHYSICS

At HRI, research in Theoretical Physics is carried out in the fields of astrophysics, condensed matter, high-energy phenomenology and string theory. In astrophysics, the faculty is involved in the investigation of the cosmic microwave background radiation, the large-scale structure of the universe and the evolution of galaxies. The main areas of activity in condensed matter physics are strongly correlated electron systems, mesoscopic systems, quantum Hall effect and superconductivity. In string theory, perturbative and non-perturbative aspects of string theory and quantum field theory are being actively investigated. In high energy phenomenology, research is carried out in the following areas: neutrino physics, strong interactions, lattice gauge theory, super symmetry and various aspects of Physics beyond the standard model. This Institute is a member of INO Collaboration

The Institute has a residential campus in Jhunsi, with a very well endowed research library, state of the art computational facilities and fast Internet links to the outside world. There is an active Graduate Program and a large traffic of visiting scientists and students at the Institute.

DIRECTOR'S REPORT

At the Harish-Chandra Research Institute (HRI) the year 2007-08 was marked by a number of noteworthy events. Before I spell these out in detail let me mention that the emphasis at HRI has remained, as before, to achieve further excellence in the fields of Mathematics and Theoretical Physics. The innovative research activities as well as the pre-Ph.D. teaching programme at HRI have continued to be at the highest level. This has been possible through the sustained efforts of our scientists, post-doctoral fellows, students and visitors to continuously upgrade themselves to remain at the frontiers of international research. They were assisted in no small measure by the steadfast administrative support from the entire institute staff. All members of HRI have a deep sense of belonging with the Institute and are willing to walk the extra mile to ensure that it steadily progresses towards further national and international recognition.

HRI is a proud member of a group of autonomous Institutes generously funded by the Department of Atomic Energy (DAE), Government of India. The activities at HRI fit well with the Department's identified R&D targets through its Specialist Groups. In the XIth Five-year Plan, which began in 2007, HRI has been sanctioned a number of projects which will lead to all-round development. This includes a Regional Centre for Accelerator-Based Particle Physics geared to create a pool of manpower - both faculty and students from HRI as well as in universities and other institutes - all trained to fully exploit the much-awaited results from the Large Hardon Collider, to be turned on at CERN (Geneva) later this year. There is also an ambitious plan to build several new cluster computers. Here, HRI was the pioneer in the country and several cluster computers set up under the Xth Plan have become workhorses for the entire scientific computing activities related to the different research groups. Besides these, collaboration meetings in the areas in which the Institute is internationally acclaimed, workshops, training school programmes, outreach activities will be enhanced. There are ambitious plans to set up a new hostel to accommodate an increased student intake as well as expansion plans for the library and administrative areas.

HRI is a Constituent Institute (CI) of the Homi Bhabha National Institute (HBNI). Two students of HRI are in the final stages of submitting their Ph.D. theses to HBNI later in 2008. The CIs of HBNI-DAE units and aided-institutes all-form a close-knit family. HRI post-B.Sc. integrated Ph.D. students are going to spend the summer of 2008 at RRCAT, Indore and SINP, Kolkata for their laboratory training. Also, research training courses for the India-based Neutrino Observatory- of which many DAE units and Institutes are partners- will be undertaken at HRI.

The Institute has completed an External Peer Review to assess its progress and to identify directions for future development. The Review Panel consisted of Professors M.S. Narasimhan (TIFR, Bangalore, Chair), Jean-Marc Deshouillers (Bordeaux, France), John Ellis (CERN, Switzerland), Jainedra K. Jain (Penn

State, USA), Rajaram Nityananda (NCRA, Pune) and Joseph Oesterle (Paris, France). This Review took place in two sittings: one in February 2007 and again in November 2007. The Report has been submitted to the HRI Governing Council. It suggests directions for the Institute to focus on in the future and possible areas of expansion.

HRI has continued to maintain its popularity among intending Ph.D. students. Out of the top 10 students in this year's Physics JEST examination, seven had offered HRI as the first preference. There are also many applications from inside as well as outside the country for post-doctoral positions at the Institute.

In 2007-08, seven students joined the Ph.D. programme in Physics. Three of them were post-B.Sc./ B.Tech who enrolled for the integrated Ph.D. scheme. The post-B.Sc. students attend an additional year of course work and undertake laboratory training in some sister Institutes.

In Mathematics, this year two students have joined the Ph.D. programme through the HRI selection procedure. Besides, one student has joined with support from an NBHM fellowship.

To alleviate problems due to frequent outage of the UPPCL power, HRI has to maintain an alternate power supply arrangement through three generator sets. The maintenance and running costs of these machines are steadily increasing. HRI has decided to improve the power situation through a dedicated 33kV connection from UPPCL. This way the load-shedding will be almost completely avoided. Work in this direction has made significant progress and we are optimistic that an uninterrupted power supply will be arranged for the Institute soon.

The scientific research at the Institute is published in leading International journals and attracts wide attention. Many are well-cited by others working in the same areas. The scientists are invited to present their work at many conferences and meetings. HRI also hosts a fair number of collaboration meetings throughout the year. The Institute's Ph.D.s are offered post-doctoral appointments at the top-class institutions around the world. A number of the early HRI Ph.D.s have been picked up in permanent positions by leading institutes.

Manoj Kumar Yadav is the newest faculty member to join the Institute. He works in the area of Algebra and will further strengthen the HRI Mathematics group.

The members of the Institute have continued to win laurels. Let me list some of those:

- Professor Pinaki Majumdar was selected for the Shanti Swarup Bhatnagar Award in the Physical Sciences in 2007.

- Professor Sukumar Das Adhikari was elected as Fellow of National Academy of Sciences, India.

The year ahead looks promising for the Harish-Chandra Research Institute.

A. Raychaudhuri
Director

GOVERNING COUNCIL

1. Prof. M.S. Raghunathan
(Chairman) School of Mathematics
Tata Institute of Fundamental Research
Homi Bhabha Road
Mumbai-400005.
2. Prof. R. Balasubramanian Director
Institute of Mathematical Sciences
CIT Campus, Taramani
Chennai-600113.
3. Dr. J.N. De Saha Institute of Nuclear Physics
1/AF, Bidhannagar
Kolkata- 700064.
4. Prof. Narendra Kumar Raman Research Institute
C.V. Raman Avenue, Sadashivnagar
Bangalore 560080
5. Prof. H.S. Mani Visiting Professor
Institute of Mathematical Sciences
CIT Campus, Taramani
Chennai-600113.
6. Mr. S.L. Mehta 4, Clive Row
Kolkata- 700001.
7. Mr. Avnish Mehta 4 Penn Road
Kolkata- 700001.
8. Mr. Rama Kant Mishra IAS (Retd.)
23/1E, P.C. Banerjee Marg
Allenganj
Allahabad 211002
9. Dr. Miyan Jan Director of Higher Education
Uttar Pradesh
Allahabad-211001
10. Shri V.R.Sadasivan Joint Secretary (F)
Govt. of India,
Deptt. of Atomic Energy,
Chhatrapati Shivaji Maharaj Marg,
Mumbai – 400 001

11. Dr. C.V. Ananda Bose
Joint Secretary (R&D)
Govt. of India,
Deptt. of Atomic Energy,
Chhatrapati Shivaji Maharaj Marg,
Mumbai – 400 001

12. Prof. Amitava Raychaudhuri
Director
Harish-Chandra Research Institute
Allahabad-211019

SUMMARY OF RESEARCH ACTIVITIES IN MATHEMATICS

Research in Algebra and Surrounding Areas

The Problem of finding the highest weight representations of pre-exp-polynomial Lie algebras has been completed. It was shown that non-graded and graded irreducible highest weight modules with the same highest weight have finite dimensional weight spaces if and only if the highest weight is an exp-polynomial highest weight. It was also found out that non-graded and graded highest weight Verma modules with the same highest weight are simultaneously irreducible or not. Necessary and sufficient conditions for a Verma module to be irreducible have been determined.

Work was done on automorphisms of finite p -groups of class 2. Let G be a finite p -group of nilpotency class 2. An automorphism f of G is called central if it induces identity on the central factor group $G/Z(G)$, where $Z(G)$ denotes the center of G . We gave necessary and sufficient conditions on G , such that each central automorphism of G , fixes $Z(G)$ elementwise. We also gave necessary and sufficient conditions on G such that all of its central automorphisms fixing $Z(G)$ elementwise are inner.

Research in Mathematical Physics

Work has been done on Geometric quantization. Work has been completed on geometric quantization of the moduli spaces of the Hitchin system and the vertex equations and also of a modified Seiberg-Witten moduli space in 2 dimensions. Work is in progress on a conformal field theory problem with an additional symmetry.

Research in Harmonic Analysis

Work is in progress on some analyticity questions for the solutions of Schrodinger equation on the Heisenberg group. This is a joint work with Prof. Thangavelu and Sanjai Parui, where we also consider Schrodinger equations for certain operators, generalizing the Heisenberg sublaplacian.

Work is in progress on improving an old unpublished work regarding the L^p mapping property of spherical maximal operator on n dimensional Euclidean space, and also analysing some related weighted norm estimate for the spherical maximal operator.

Research in Algebraic Geometry and in Arithmetic

Generalizations of the Serre-Swan correspondence between projective modules and vector bundles were studied. Investigation of relations between higher order extensions and differential operators was begun.

It was shown that the ramification filtration (in the upper numbering) on the maximal kummerian extensions of a local field is orthogonal to the natural filtration by units of various levels. This extends the previous characterisation of primary numbers. As a consequence of this orthogonality relation and reciprocity isomorphism, one can determine the norm groups of the various layers in the maximal kummerian extension.

Research in Number Theory

At HRI people pursue research in various areas of Number Theory detailed below:

Research in Analytic Number Theory

An identity involving the Vandermode determinant which allows one to recover a number of spacing results in the literature was obtained. In particular, a result of Cilleruelo on gaps between integer points on affine conics and a result of Lenstra on spacing between divisors of an integer are some of the results that immediately follow from this identity. Together with Dr. Gyan Prakash, an optimal version of the large sieve inequality with polynomial amplitudes was obtained, answering a question of Iwaniec and Kowalski. Finally, optimal gaps between $n + 1$ points on a diagonal quadric in n dimensions were obtained, there by generalising a result of Cilleruelo and Cilleruelo-Granville.

Research in Combinatorial Number Theory

In a joint work with Granville, a problem related to visible lattice points in the plane has been solved; this problem is one of the problems in the list compiled by (L. & W.) Moser and it also appears in 'Unsolved Problems in Number Theory' by Richard K. Guy and in 'Research Problems in Discrete Geometry' by Peter Brass, William Moser and Janos Pach among other places. Weighted generalizations of some combinatorial group invariants have been considered in a joint work with Chantal David and J. J. Urroz.

Further study of distribution of residues modulo p was done. Also, the number of prime factors of consecutive product of m integers was studied and its related folklore conjecture was verified using another un-proven Schinzel's hypothesis. The collected works of a well-known Number Theorist Dr. S. S. Pillai was almost completed during this year.

Research in Automorphic Forms

Using the characterization of new forms of half-integral weight with respect to the W - operators, a new subspace of modular forms of half-integral weight has been constructed. This subspace has a property that under certain Shimura maps, it is mapped to modular forms of integral weight whose level is one-fourth of the level of the half-integral weight forms. Using this result, a new formula for the number of representations of an integer as a sum of odd number of squares has been obtained.

By studying the twisted averages of L -functions of modular forms half-integral weight, it is shown that a positive proportion of twists modulo l of the L -functions of modular forms of half-integral weight do not vanish.

Research in Algebraic Number Theory

Work is in progress on the divisibility of class numbers of number fields and non-vanishing of L -functions associated to Hilbert modular forms.

Throughout the year the members of the Mathematics group have visited many Institutes/ Universities within India and abroad to attend conferences for giving invited talks and for collaborative research.

SUMMARY OF RESEARCH ACTIVITIES IN PHYSICS

Astrophysics

The astrophysics group at HRI carries out research in the areas of high energy astrophysics, inflation and the early universe, cosmology and large scale structure and different aspects of black hole physics. In high energy astrophysics, during the last year, the spectral features of low angular momentum relativistic black hole accretion have been investigated. General relativistic axisymmetric accretion has been studied as an autonomous first order, coupled dynamical system. In the area of large scale structure, the fractal dimension of the distribution of galaxies has been constructed and their relation to the two point correlation function of galaxies has been examined. The epoch of reionization is currently being investigated. In the field of inflationary cosmology, various models that lead to specific features in the perturbation spectrum are being compared with the most recent observations of the anisotropies in cosmic microwave background. In black hole physics, various applications of analogue gravity effects in astrophysics has been demonstrated and the effects of Planck scale physics on the stress-energy tensor around rotating lower dimensional black holes have been analyzed.

Condensed Matter Physics

The condensed matter work over the last one year has been in the areas of electronic structure theory, correlated electron systems, biological physics, mesoscopic physics and spintronics.

The major area of application of electron structure theory has been magnetic properties of atomic clusters. It has been predicted that early (sc, Ti, V) 3d transition metal (TM) doped small alkali clusters will have large magnetic moments, larger than the moments on isolated TM atoms. In another project, unusual magnetic properties of some sp electronic systems have been explored. In particular, it has been predicted through density functional theory and quantum Monte Carlo calculations, that certain alkali metal oxides have magnetic ground states. Si-based nanostructures, in particular, P-substituted $\text{Si}_6\text{OH}_6\text{O}$ fullerenes are promising candidates for hydrogen storage material.

Correlated electron studies have focused on the following:

- (i) Exploring the effects of strong scatterers in the manganites,
- (ii) Field induced melting of charge order and associated hysteresis in these materials and
- (iii) a comprehensive project for understanding the structural order magnetism in double perovskites. There is also an ongoing project for implementing a cluster dynamical mean field theory (C-DMFT) calculation for correlated systems.

Research in biological physics has explored various problems related to noise and fluctuations in cellular processes. We focus on two broad areas at present:

- (a) cytoskeletal kinetics and
- (b) signal transduction.

In (a), we have studied in the past year

- (i) The role of depolymerizing motor proteins in the formation of metaphase spindle and
- (ii) The kinetics of search and capture of chromosomes by microtubules in mitosis.

In (b), we have investigated how statistical and thermal fluctuations affect the response of different sensory systems like chemotaxis in bacteria and olfaction in mammals.

The work in mesoscopics has been mainly on low dimensional quantum systems, studying the effect of inter-electron interactions on AC and DC transport through different kinds of junctions. The recent focus has been on transport through super-conducting barriers in Luttinger liquids.

The spintronics work involved the development of a conceptual framework using spin density matrix scattering theory to study and understand spin currents and their effects on transport. There has also been work on developing a non-equilibrium Green function method applicable to multi-terminal systems to study spin transport at meso/nano scale, with effects of leads and inelastic scattering taken into account. The results show that spin currents can be generated and measured in a two terminal non-magnetic system, and that different magnetoresistance phenomena like- TMR, AMR, etc., are a consequence of spin currents. This provides a novel way to understand magnetoresistance.

High Energy Physics

Neutrinos, tiny particles which hardly interact, have an impact in many areas of physics. The important unresolved question - Is Neutrino Physics is the nature of the mass hierarchy and the pattern of mixing, which are the key inputs when constructing unified theories beyond the Standard Model. The neutrino group is intensively involved in understanding how neutrino properties can be known using long baseline experiments, determination of mass hierarchy using the atmospheric neutrino signal in the upcoming neutrino detectors, including Indian Neutrino Observatory (INO). Other ongoing work includes the effect of geometric phases in neutrino oscillations and ultra-high energy neutrinos. A careful analysis on measuring neutrino parameters in solar, atmospheric, reactor and accelerator-based long baseline experiments, and constructing neutrino mass models by imposing discrete flavor symmetries and texture zeros in the Yukawa couplings

has been carried out by the group members. The other important results from the group include work on extracting physics from observing ultra-high energy astrophysical neutrinos and very high energy atmospheric neutrinos in neutrino telescopes, neutrinos from a galactic supernova event, and the diffuse supernova neutrino background created by all past supernovae.

The entire focus of collider physics group has been in the theoretical aspects of the physics of the Large Hardon Collider (LHC), the biggest ever international experiment in the history of fundamental science which will start running soon. It is expected to shed light on the fundamental theoretical issues like origin of mass and to explore, at the cosmic front, the composition of a mysterious invisible component of the Universe, the so-called dark matter. Members of this group have intensively worked on the theoretical predictions of possible signatures at the LHC of such a fundamental order in Nature and then, how to establish these footprints as robust indications in its favor. The group members have studied on implications of theories where space has more than 3 dimensions, on the creation of the baryon asymmetry of the universe and also on unified theories of particle interactions. Intensive studies have been carried out on the possibility of finding physics beyond the standard electroweak model at the Large Hardon Collider. While the bulk of the investigations address the possibility of a supersymmetric nature, group members have also worked on the implications of a non-standard Higgs sector. Since hadronic activities at LHC is going to play an important role, the group members have studied intensively on the role of perturbative quantum chromodynamics predictions for new physics signals as well as for the important standard model background processes.

String Theory

The research of the group in the past year has focused on 3 main aspects of string theory.

The work in the area of black holes in string theory included the statistical description of the system in terms of various microstates in string theory. Work in this direction involves studying the wall crossing formula for the dyon degeneracy in $N=4$ superstring theory in four dimensions, studying corrections to the black hole entropy due to higher derivative terms in the action and understanding these corrections from the microscopic description. Thermodynamic properties of black holes in the Minkowski and anti de Sitter (AdS) space and their relation to matrix models were explored.

In addition, solutions describing the time evolution of (unstable) D-branes and their possible cosmological implications were also studied. These models were also studied from the supergravity perspective. During the last year progress has been made towards understanding how perturbative quantum field theory amplitudes can be reorganized as string theory correlators. This is an important step towards establishing the conjectured

correspondence between string theories in AdS and conformal field theories living on the boundary of the AdS space. Other aspects of research in this direction include string bit formulation of N=4 super Yang-Mills theories, σ -model formulation of string propagation in the presence of background Ramond-Ramond fields.

NOTE ON PERSONS WITH DISABILITIES

The Institute, devoted to theoretical research in the field of Physics and Mathematics, is financially supported by the Department of Atomic Energy, Government of India. Its activities are overseen by the Governing Council and its day-to-day activities are administered by the Director of the Institute. The Institute has a very limited number of sanctioned positions, which are evenly distributed between the Academic & Administrative posts. The Institute does not have any specific scheme catering to persons with disabilities and therefore there is no specific budget allocated in this regard. The recruitment of Academic members is done based on merit whereas recruitment in other sections of the institute is done through open advertisement. However, the Institute is sensitive to the subject of recruitment of persons with disabilities and would support such persons as and when the occasion arises.

VIGILANCE ACTIVITIES AT THE CAMPUS

There is nothing to report from vigilance point of view for the period upto March 31, 2008.

ASHOK USHA JAIN & CO.
Chartered Accountant

171, Old Katra, Allahabad-211002 Phone #2548276 Mobile # 9415324124

Auditor's Report

1. We have audited the attached Balance Sheet of Harish-Chandra Research Institute, Allahabad as at 31st March 2008 and also the Income and Expenditure Account for the year ended on that date annexed thereto. These financial statements are the responsibility of the management of the Institute. Our responsibility is to express an opinion on these financial statements.

2. We conducted our audit in accordance with auditing standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining on a test basis, evidence supporting the accounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

3. Subject to our comments in a separate statement read with significant accounting policies appearing in Schedule-14 annexed hereto, we report that:

a. We have obtained all the information and explanation, which to the best of our knowledge and belief were necessary for the purpose of our audit.

b. In our opinion, proper books of accounts as required by law have been kept by the Institute, so far as it appears from our examination of the books.

c. The Balance Sheet and Income and Expenditure Account dealt with by this report are in agreement with the books of accounts.

d. In our opinion and to the best of our information and according to the explanations given to us, the said accounts give a true and fair view in conformity with the accounting principles generally accepted in India:

- i) In case of Balance Sheet, of the state of affairs of the Institute as at 31st March 2008.
- ii) In the case of Income and Expenditure Account, of the excess of expenditure over income of the Institute for the year ended on that date.

For Ashok Usha Jain & Co.
Chartered Accountant

Place: Allahabad
Date: 17-07-2008.

(Ashok Usha Jain)
Proprietor

ASHOK USHA JAIN & CO.
Chartered Accountant

171, Old Katra, Allahabad-211002 Phone #2548276 Mobile # 9415324124

Annexure to the Auditors' Report
(Referred to in paragraph 3 of our Report of even date)

1. That the amount recoverable against completed projects shown as claims recoverable are outstanding as per details given below seems to be bad debts. Institute should take necessary steps to recover or write off the following amounts:

1. CARDMATH DST	Since 2004	Rs. 14848.00
2. DST (C S Dalawat)	Since 2005	Rs. 12986.00
3. DST Fellowship- Peter Brusov	Since 2004	Rs. 117300.00
4. CSIR Grant-Ashok Sethia	Since 2006	Rs. 15787.00
5. WHEPP VII	Since 2005	Rs. 83000.00

2. That the Library & Publications includes the receipts of current journals on the basis of a statement of periodicals and advances as on 31.03.08 without detailing out the journal and publications received during the year. Institute is advised to take necessary steps to keep detail records of receipts of journals and verification thereof and proper accounting thereafter. Moreover non-receipt of journals for Rs. 127807 for the year 2006 should either be recovered or written off.
3. That the fixed assets register maintained by institute have the particulars including quantitative details and location of fixed assets for the current financial year only. The gross figures of previous years are shown without complete disclosure of quantitative details and locations of each assets item. Institute has not carried out physical inventory verification of asset items during the period under audit to reconcile and find discrepancy, if any.

4. That the institute needs improvement in internal control procedures commensurate with the Institute and nature of its activities with regard to purchase of various items, annual maintenance contracts and expenses, recording receipts of goods and materials including current journals, attendance verification, vouching & scrolling and control over submission of bills against advances including domestic and foreign travel advances.
5. That there are few cases of less deduction/ no deduction of tax at source on parties' payment and also casual delays in depositing and filing of TDS returns.

For Ashok Usha Jain & Co.
Chartered accountants

Place: Allahabad
Date: 17-07-2008

(Ashok Usha Jain)
Proprietor

**HARISH-CHANDRA RESEARCH INSTITUTE
ALLAHABAD 211 019**

BALANCE SHEET AS AT 31ST MARCH 2008

As on March 2007	31st March 2007	CAPITAL FUND & LIABILITIES	Sch.	Amount in Rs.	As on March 2008	31st March 2008
					Amount - Rs.	
	174177463.89	CORPUS / CAPITAL FUND	1			152002935.85
	1020920.00	PLAN GRANT - Carried over	2	64451999.00		
	15393879.00	Add: ADVANCE PAYMENT-WORK-IN-PROGRESS		16136726.00		80588725.00
	4489476.04	NON-PLAN GRANT Carried over	3			2969927.43
	60151185.60	CURRENT LIABILITIES AND PROVISIONS	4			63107038.60
	255232924.53	TOTAL ==>				298668626.88
		ASSETS				
		FIXED ASSETS	5			
	436766278.14	GROSS BLOCK		436766278.14		
		ADD: Capitalization of assets- Revenue Grant		3168771.00		
		ADD: Capitalization of assets- Plan Grant		6265784.00		
		LESS: Adjustment of Prev. Years		-116482.00		
		LESS: CUMULATIVE				
	-249101247.60	DEPRECIATION		-277452075.64		
	187665030.54			168632275.50		
	15393879.00	ADD: Work-in-progress (Power)		16136726.00		184769001.50
	1816460.00	INVESTMENTS	6			1918796.00
	50357554.99	CURRENT ASSETS, LOANS AND ADVANCES ETC.	7			111980829.38
	255232924.53	TOTAL ==>				298668626.88
		SIGNIFICANT ACCOUNTING POLICIES & NOTES ON ACCOUNTS	14			

As per our separate report of even date attached

For Ashok Usha Jain & Co.
CHARTERED ACCOUNTANTS

**For HARISH-CHANDRA
RESEARCH INSTITUTE**

Ashok Kumar Jain
Proprietor

RAAJ GULATI
ACCOUNTS OFFICER

P.B.CHAKROBORTY
REGISTRAR

A. RAYCHAUDHURI
DIRECTOR

Place: Allahabad
Date: 17.07.2008

**HARISH-CHANDRA RESEARCH INSTITUTE
ALLAHABAD 211 019**

**INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON 31ST MARCH 2008**

Amount in Rs. Year 2006-07	<i>INCOME</i>	Sch.	Amount in Rs.	Amount in Rs. Year 2007-08
92100000.00	GRANTS / SUBSIDIES	8		100000000.00
0.00	INCOME ON INVESTMENTS	9		0.00
1083870.00	INTEREST EARNED	10		891178.00
1215692.40	OTHER INCOME	11		1764259.92
94399562.40	TOTAL (A) ==>			102655437.92
	<i>EXPENDITURE</i>			
32430623.23	ESTABLISHMENT EXPENSES	12	35826006.00	
58338412.32	OTHER ADMINISTRATIVE EXPENSES	13	68348980.53	104174986.53
14600155.82	DEPRECIATION - Current Year (Net total at the year end - corresponding to Schedule 5			28444378.04
468000.81	LOSS ON SALE OF ASSETS			7932.00
14685728.00	PENSION, GRATUITY, ENCASHMENT OF EL- Current Year			1674977.00
120522920.18	TOTAL (B) ==>			134302273.57
-26123357.78	BALANCE BEING EXCESS OF EXPENDITURE OVER INCOME (B-A) Transferred to General Fund			-31646835.65
	SIGNIFICANT ACCOUNTING POLICIES & NOTES ON ACCOUNTS	14		

As per our separate report of even date attached

For Ashok Usha Jain & Co.
CHARTERED ACCOUNTANTS

**For HARISH-CHANDRA
RESEARCH INSTITUTE**

Ashok Kumar Jain
Proprietor

RAAJ GULATI
ACCOUNTS OFFICER

P.B.CHAKROBORTY
REGISTRAR

A. RAYCHAUDHURI
DIRECTOR

Place: Allahabad
Date: 17.07.08

HARISH-CHANDRA RESEARCH INSTITUTE
ALLAHABAD 211 019

Amount - Rs.	SCHEDULE - 1 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008	Amount - Rs.
As on 31st March 2007	CORPUS / CAPITAL FUND	As on 31st March 2008
117839177.52	Balance as at the beginning of the year	174177463.89
2544610.00	Add: Assets purchased out of Non-Plan Grant	3168771.00
83704981.00	Add: Assets purchased out of Plan Grant	6265784.00
		9434555.00
-157420.00	Less: Adjustments of previous years	-1481796.00
-26123357.78	Less: Excess of Expenditure over Income transferred from Income and Expenditure Account	-31646835.65
-3630526.85	Less: Unspent Recurring Grant transferred from/to Non-Plan Grant (Recurring) a/c	1519548.61
174177463.89	BALANCE AS AT THE YEAR END	152002935.85

Amount - Rs.	SCHEDULE - 2 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008	Amount - Rs.
As on 31st March 2007	PLAN GRANT (Non-Recurring)	As on 31st March 2008
	OPENING BALANCE (XIth Plan)	0.00
	ADD: Received during the year from DAE	83998000.00
	<i>Total Plan Grant Amount</i>	83998000.00
	LESS: Revenue Utilisation	-19546001.00
	LESS: Capitalization of Assets	
	LESS: Advances & work-in-progress	0.00
	(Detail Chart enclosed at enclosure 1)	-19546001.00
1020920.00	BALANCE Carried over	64451999.00

Amount - Rs.	SCHEDULE - 3 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008	Amount - Rs.
As on 31st March 2007	NON- PLAN GRANT (Recurring)	As on 31st March 2008
858949.19	OPENING BALANCE	4489476.04
92100000.00	ADD: Received during the year from DAE	100000000.00
2299562.40	ADD: Other Receipts	2655437.92
		102655437.92
-90769035.55	LESS: Utilisation during the year	-104174986.53
	Balance transferred to/from General Fund	-1519548.61
4489476.04	CLOSING BALANCE	2969927.43

Amount - Rs.	SCHEDULE - 4 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008		Amount - Rs.
As on 31st March 2007	CURRENT LIABILITIES AND PROVISIONS		As on 31st March 2008
	A- Current Liabilities		
2840099.90	1. EMD/ Security Deposits Payable		3196210.90
	2. Sundry Creditors		7359813.20
6286747.00	a. Parties - Amount Payable	4841826.00	
438350.80	b. Staff - Amount Payable	513149.80	
549043.00	c. Staff- Terminal Dues transfers	957969.00	
1050148.40	d. Other Recoveries Refundable	1046868.40	
	3. Statutory Liabilities		9000.00
110100.00	a. Income Tax (deducted from staff) Payable	9000.00	
52468.00	b. Income Tax (deducted from parties) Payable	0.00	
3070.00	c. Trade Tax (deducted from parties) Payable	0.00	
	4. Amounts refundable against completed sponsored Projects/schemes		1446495.50
55400.50	Serc Schools	55400.50	
280504.00	NBHM -Annual Foundation School	280504.00	
38019.00	NBHM - Projects	89671.00	
	Surplus Plan Grant upto Xth plan	1020920.00	
	5. Receipts against ongoing sponsored projects/schemes		3012485.00
146004.00	CSIR Grants	146004.00	
0.00	DST Projects	463284.00	
343575.00	Ramanujan Maths Society Projects	13179.00	
43218.00	Workshop on Teichmuller Theory	0.00	
367705.00	Infosys Foundation	234277.00	
0.00	UK-India Research Educational Fund	1672521.00	
0.00	Science Education Prog. -INSA	109672.00	
0.00	TPSC Fund	38643.00	
3315.00	String Theory-NAS Ald.	3315.00	
260000.00	CPSTIO Project	120634.00	
573861.00	J.C.Bose Fellowship (Ashoke Sen)	210956.00	
300000.00	Low Dimension Nanoscopic Systems	0.00	
13741628.60	Total A		15024004.60
	B- PROVISIONS		
31705676.00	1. Pension, Gratuity, encashment of E.L. (Prior Period)	46391404.00	
14685728.00	Pension, Gratuity, encashment of E.L. (Current Period)	1674977.00	48066381.00
18153.00	2. Audit Fee payable		16653.00
46409557.00	Total B		48083034.00
60151185.60	Total A + B		63107038.60

Harish-Chandra Research Institute Allahabad
Schedule 5 -forming part of Balance Sheet as at 31st
March 2007

Sl.No.	Description	Gross Block				Depreciated on Reserve					Net Block			
		As on 01.04.2006	Additions/prev. year adjustment during the year	Deductions/prev. year adj. during the year	Gross Block of Assets as on 31.03.2007	Add: Capitalised Assets-from Plan Grant as on 31.03.07	Total Gross Block of Assets as on 31.03.07	Rate %	Dep. Reserve 31.03.2006	Depreciation for the year 2006-07 on (w.d.v.on 31.03.06+Addition-Deduction)	Adjus-ments upto 31.03.2007	W.D.V. as on 31.03.06	W.D.V. as on 31.03.07	
		1.00	0.00	0.00	1.00	0.00	1.00	0%	0.00	0.00	0.00	1.00	1.00	
1	Land	10300120.60			10300120.60	414141.00	10714261.60	10%	4765957.04	553416.36	0.00	5319373.40	5534163.56	5394888.20
2	A.C. & Stabilizers	589420.00			589420.00	0.00	589420.00	10%	260385.69	32903.43	0.00	293289.12	329034.31	296130.88
3	Audio/Video System	4379666.00			4379666.00	10226891.00	54023557.00	25%	40682132.93	778633.27	0.00	41460766.20	3114533.07	12562790.80
4	Back Vol. Of Journal	163150.00			163150.00	1110720.00	1273870.00	15%	77984.68	12774.80	0.00	90759.48	85165.32	1183110.52
5	Bar Coding & Security Equip.	12180.00	4800.00		16980.00		16980.00	20%	10179.25	1360.15	0.00	11539.40	2000.75	5440.60
6	Bicycles & Rickshaw Trolley	90070250.02	854582.00		90924832.02	3567709.00	94492541.02	25%	80451679.80	2618288.06	0.00	83069967.85	9618570.22	11422573.17
7	Books & Journal	129641454.85			129641454.85	17179918.00	146821372.85	10%	63160455.50	6648099.94	0.00	69808555.43	66480999.35	77012817.42
8	Building	479417.00			479417.00		479417.00	20%	322321.64	31419.07	0.1	353740.71	157095.36	125676.29
9	Car-Maruit Esteem	25717848.10	49465.00		25767313.10	24172232.00	49939545.10	20%	20171244.37	1119213.75	0.00	21290458.12	5546603.73	28649086.98
10	Computers & Peripherals	427103.40	38850.00		465953.40		465953.40	10%	243179.45	22277.39	0.00	265456.85	183923.95	200496.55
11	Coolers	9468.70			9468.70		9468.70	10%	6497.32	297.14	0.00	6794.46	2971.38	2674.24
12	Digital Multimeters	1688746.51	63455.00		16952201.51	771745.00	17723946.51	10%	8323100.79	862910.07	0.00	9186010.86	8565645.72	8537935.65
13	Electrical Fittings	61451.35			61451.35		61451.35	10%	42711.98	1873.94	0.00	44585.92	18739.37	16865.43
14	Electronic Typewriters	885000.00			885000.00		885000.00	15%	492320.80	58901.88	0.00	551222.68	392679.20	333777.32
15	Elevator	358408.00			358408.00		358408.00	15%	260745.22	14649.42	0.00	275394.63	97662.78	83013.37
16	Fire Alarm System	185888.00	33905.00		219793.00		219793.00	15%	71498.22	22244.22	0.00	93742.44	114389.78	126050.56
17	Fire Extinguishers	11899801.81	630878.00		12530679.81	3657753.00	16188432.81	10%	5545032.18	698564.76	0.00	6243596.95	6354769.63	9944835.86
18	Furniture & Fixture													

19	Generator Sets	5056222.30	34500.00	796956.00	4293766.30	78405.00	4372171.30	10%	2180290.00	211347.63	389168.41	2002469.22	2875932.30	2369702.08
20	Geysers	656204.05	13565.00		669769.05		669769.05	10%	350876.32	31889.27	0.00	382765.59	305327.73	287003.46
21	Gym. Equipments	165582.00			165582.00		165582.00	15%	81116.72	12669.79	0.00	93786.52	84465.28	71795.48
22	Health Center Equipments	36165.00	2685.00		38850.00		38850.00	15%	12871.79	3896.73	0.00	16768.52	23293.21	22081.48
23	Kitchen Equipments	454745.00	4973.00		459718.00		459718.00	15%	330105.69	19441.85	0.00	349547.54	124639.31	110170.46
24	Mach. & Equip.-Cluster	0.00	0.00	0.00	0.00	21573474.00	21573474.00	0%	0.00	0.00	0.00	0.00	0.00	21573474.00
25	Misc. Equipments	88668.00	62804.00		949472.00		949472.00	15%	575437.29	56105.21	0.00	631542.50	311230.71	317929.50
26	Projector	526289.00			526289.00	177560.00	703849.00	15%	361699.67	24688.40	0.00	386388.07	164589.33	317460.93
27	Refrigerators	531206.80	25888.00		557094.80		557094.80	10%	282881.68	27421.31	0.00	310302.99	248325.12	246791.81
28	Room Heaters	130369.98			130369.98		130369.98	10%	63659.30	6671.07	0.00	70330.36	66710.68	60039.62
29	Scientific Equipments	142320.71			142320.71		142320.71	15%	118504.30	3572.46	0.00	122076.76	23816.41	20243.95
30	Solar Light	304671.00			304671.00	55828.00	360499.00	10%	107535.09	19713.59	0.00	127248.68	197135.91	233250.32
31	Symphony Coolers	59359.60			59359.60		59359.60	10%	38853.04	2050.66	0.00	40903.69	20506.56	18455.91
32	Teleph. Equipments & Appt.	117705.00	10390.00		1188095.00		1188095.00	15%	812952.08	56271.44	0.00	869223.52	364752.92	318871.48
33	Telescope	2731044.00			2731044.00		2731044.00	15%	1677743.57	157995.06	0.00	1835738.64	1053300.43	895305.36
34	Television	188858.70			188858.70		188858.70	10%	107173.44	8168.53	0.00	115341.97	81685.26	73516.73
35	Theodolite Machine	16800.00			16800.00		16800.00	15%	12908.84	583.67	0.00	13492.51	3891.16	3307.49
36	Tullu Pump	81806.44	32433.00		114239.44		114239.44	10%	20871.38	9336.81	0.00	30208.19	60935.06	84031.25
37	U.P.S. & Batteries	4110275.80	38925.00	452050.00	3697150.80	718605.00	4415755.80	10%	1710174.43	198697.64	279241.58	1629630.48	2400101.37	2786125.32
38	Washing Machine	137666.00			137666.00		137666.00	10%	37764.40	9990.16	0.00	47754.56	99901.60	89911.44
39	Water Coolers	158393.00			158393.00		158393.00	10%	73594.06	8479.89	0.00	82073.95	84798.94	76319.05
40	Water Filter & Aquaguards	230797.00			230797.00		230797.00	10%	131534.28	9926.27	0.00	141460.55	99262.72	89336.45
41	Xerox machine	1504294.00	604431.00	99154.00	2009571.00		2009571.00	15%	898400.65	166675.55	74837.33	990238.87	605893.35	1019332.13
								Charged in the year-->						
42	HRI-Guest House Assets	1091028.42	38081.00		1129109.42		1129109.42	10%	370876.09	75823.33	0.00	446639.42	720152.33	682410.00
	Grand Total ====>	351864847.14	2544610.00	1348160.00	353061297.14	83704981.00	436766278.14		235245250.97	14600155.82	743247.32	249101247.60	116619596.17	187665030.54

Amount - Rs.	SCHEDULE - 6 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008	Amount - Rs.
As on 31st March 2007	Investments	As on 31st March 2008
1637364.00	Fixed Deposit in State Bank Of India	1637364.00
179096.00	Add: Interest Accrued but not due	281432.00
1816460.00	Total	1918796.00

Amount - Rs.	SCHEDULE - 7 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008	Amount - Rs.
As on 31st March 2007	CURRENT ASSETS, LOANS AND ADVANCES ETC.	As on 31st March 2008
	A- Current Assets	
42619.25	1. Cash Balance in hand	4626.25
	2. Bank Balances	
5267716.97	a. Current Accounts	
	SBI (MB) Current A/C	6533914.97
	b. Savings Accounts	82059830.37
1047286.97	Bank Of Baroda - 101 A/C	1122015.89
5846887.00	Bank Of Baroda - 102 A/C	63937699.00
11683924.63	Bank Of Baroda - 108 A/C	14926003.63
1779184.85	Bank Of Baroda - 109 A/C	2074111.85
2013210.00	c. Short Term Deposits with BoB HRI Branch Alld.	2013210.00
37008.65	3. Postage in hand (Franking Machine)	20883.12
27717838.32	Total A	90632464.71

Amount - Rs.	SCHEDULE - 7 FORMING PART OF BALANCE SHEET AS AT 31ST MARCH 2008	Amount - Rs.
As on 31st March 2007	CURRENT ASSETS, LOANS AND ADVANCES ETC.	As on 31st March 2008
	B - LOANS, ADVANCES AND OTHER ASSETS	
	1. Loans to Staff	
14700.00	Festival Advance	11400.00
3580.00	Aqua guard Advance	0.00
197855.00	Vehicle Advance	103509.00
134822.00	Medical Advance	170000.00
0.00	LTC Advance	17325.00
214694.00	Traveling Advance -Within India	211136.00
540624.00	Traveling Advance -Outside India	517750.00
	2. Advances and other amounts recoverable in cash or in kind or for value to be received :	
	a. On Capital Account	
17362810.00	Advance to Suppliers for Journals	15973011.00
	b. Deposits	
955800.00	With UPSEB	955800.00
262580.67	With Telephone Deptt.	262580.67
39900.00	With Gas Agency	39900.00

612502.00	Securities in Hand -Fixed Deposits of Parties	812679.00	
	3. Income Accrued:		395439.00
223384.00	a. On Short Term Deposits with Banks	349210.00	
	b. On Loans and Advances		
34528.00	1. Vehicle	46229.00	
	4. Claims Receivable		
	a. Amount Recoverable against completed projects/schemes		795271.00
14848.00	CARDMATH (DST Meeting)	14848.00	
12986.00	DST (C S Dalawat)	12986.00	
10031.00	DST (Ramanujan Math Society Meeting)	0.00	
58636.00	Grant Receivable-DST-SFT (Manoj Kumar)	58636.00	
64773.00	TPSC Fund	0.00	
117300.00	DST - Fellowship (Peter Brusov)	117300.00	
17030.00	Grant Receivable - NBHM	64563.00	
83000.00	WHEPP - VII	83000.00	
154645.00	INO Conference	249372.00	
400135.00	Grant Receivable-Homi Bhabha (Dr.Ashoke Sen)	0.00	
15787.00	Grant Receivable-CSIR (Dr.Ashok Sethia)	15787.00	
33579.00	NBHM Fellowships for two students	178779.00	
	b. Others		150364.00
41797.00	Directorate of Advertising	26572.00	
106190.00	Recoverable from Post Office & others	123792.00	
	5. Payment against ongoing sponsored projects/schemes		932200.00
30000.00	Deptt.of Physics Berhampur University	30000.00	
561200.00	C-Dac Pune	561200.00	
20000.00	IIT Kharagpur	0.00	
50000.00	International Workshop-Win 07 -Kolkatta	50000.00	
200000.00	ISM 06	200000.00	
50000.00	Registrar IIT Roorkee	50000.00	
0.00	Registrar IIT Kanpur	16000.00	
0.00	ISCQI-2008 Bhubneshawar	25000.00	
22639716.67	Total B		21348364.67
50357554.99	TOTAL A + B		111980829.38

**HARISH-CHANDRA RESEARCH INSTITUTE
ALLAHABAD 211 019**

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED ON 31ST MARCH 2008

Amount in Rs. Year 2006-07	SCHEDULE 8 - GRANTS / SUBSIDIES		Amount in Rs. Year 2007-08
	(Grants & Subsidies Received)		
92100000.00	1. Central Government - DAE	100000000.00	
0.00	2. State Government	0.00	100000000.00
92100000.00	Total		100000000.00

Amount in Rs. Year 2006-07	SCHEDULE 9 - INCOME ON INVESTMENTS		Amount in Rs. Year 2007-08
0.00	1. INTEREST on Securities / Bonds	0.00	
0.00	2. DIVIDEND on Shares / Mutual Funds	0.00	
0.00	3. OTHERS (Specify) (Misc. Receipts -Pension & Gratuity)	0.00	0.00
0.00	Total		0.00

Amount in Rs. Year 2006-07	SCHEDULE 10- INTEREST EARNED		Amount in Rs. Year 2007-08
1061056.00	1. On Term Deposits with Scheduled Banks	874837.00	
0.00	with Others	0.00	874837.00
22814.00	2. On Loans to Employees /Staff		16341.00
1083870.00	Total		891178.00

Amount in Rs. Year 2006-07	SCHEDULE 11 - OTHER INCOME		Amount in Rs. Year 2007-08
627203.00	1. Licence Fee & Electricity from Rented Buildings		841992.00
297380.00	2. Guest House Receipts		592259.00
26000.00	3. Sale of Tenders		32900.00
104701.40	4. Recovery of Telephone Charges		136557.00
60525.00	5. Recovery of Cable TV Charges		58455.00
71118.00	6. Recovery of Transport Charges		55288.00
0.00	7. Sale of Scraps		17315.00
28765.00	8. Misc. Income		29493.92
1215692.40	Total		1764259.92

Amount in Rs. Year 2006-07	SCHEDULE 12 - ESTABLISHMENT EXPENSES	Amount in Rs. Year 2007-08
24157529.00	(A) PAY AND ALLOWANCES	29975423.00
855044.00	(B) HONORARIUM	936231.00
807121.00	(C) CONTRIBUTION TO PROVIDENT FUND (CPF & NPS)	657208.00
951313.00	(D) PENSION	1052166.00
2305838.00	(E) RETIREMENT BENEFITS	0.00
151529.00	(F) OVERTIME ALLOWANCE	159200.00
292583.00	(G) LEAVE TRAVEL CONCESSION	97579.00
2371554.23	(H) MEDICAL AID	2500836.00
538112.00	(I) STAFF WELFARE ACTIVITIES	447363.00
32430623.23	Total	35826006.00

HARISH-CHANDRA RESEARCH INSTITUTE
ALLAHABAD 211 019

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED ON 31ST MARCH 2008

Amount in Rs. Year 2006-07	SCHEDULE 13 - OTHER ADMINISTRATIVE EXPENSES ETC.	Amount in Rs. Year 2007-08
	a) Travel Expenses - Academic & Admn. Staff	
1977300.00	Within India	1261425.00
1027036.00	Outside India	1176396.00
884615.00	b) Conference /Symposia	443371.00
630878.00	c) Furniture & Fixtures - From Non-Plan Grant	1616539.00
2845302.23	d) Computers and Computer Service & Maintenance	2452250.00
460881.00	e) Supplies & Materials	824930.00
17130013.05	f) Library & Publications	21259937.00
5104889.37	g) Watch & Ward Services	5607121.78
3465372.17	h) House Keeping Services	3864694.00
	i) Maintenance Expenses	
612348.00	Civil Maintenance	3220178.00
1062878.00	Lawn Maintenance	1188779.00
897467.00	Electrical Installations	765561.00
1152699.00	Misc. Equipment / Installations	1738434.00
878584.00	Air Conditioners	1033400.00
46540.00	Fire Extinguishers	0.00
30695.00	Gas Bank	14000.00
40204.00	Aqua Guards	43220.00
107171.00	Photocopiers	120356.00
	j) Departmental Canteen / Guest House & Hostels	
198174.00	Canteen	159981.00
0.00	Pantry	132592.22
115117.00	City Guest House	125620.00
423474.00	Campus Guest House & Hostels	477835.00
	k) Electricity & Power	
5655387.00	Electricity	6601298.00
7420650.00	Generator Expenses	7766527.00
	l) Vehicle Running & Maintenance	
53758.00	Staff Cars	44475.00
218602.00	Hired Autos	165185.00
2020205.00	Hired Buses	2760061.00
923760.00	Hired Vehicles (Vans etc.)	480654.00
	m) Postage Telephone & Communication Charges	
85682.50	Postage	84125.53
1159207.00	Telephone, Telex ,Telegrams Etc.	1293611.00
523387.00	n) Stationery & Printing	1377736.53
308230.00	o) Consultancy & Legal Expenses	563377.00
15000.00	p) Auditors Remuneration	419236.00
596783.00	q) Advertisements	15000.00
	r) Others	308394.00
19826.00	Bank Charges	16868.00
46858.00	Binding Charges	54850.00
8069.00	Insurance	0.00

25200.00	HRI Pre-School	51700.00	
18933.00	Liveries	2684.00	
69296.00	Misc. Expenses	53158.00	
0.00	Entertainment Expenses	19726.00	
32164.00	News Papers & Periodicals	39107.00	
45777.00	Office Expenses	82324.00	320417.00
58338412.32	Total		68348980.53

HARISH CHANDRA RESERACH INSTITUTE ALLAHABAD-211019

SCHEDULE-14 FORMATTING PART OF BALANCE SHEET AND INCOME AND EXPENDITURE ACCOUNT FOR THE TEAR ENDED ON 31st MARCH 2008.

SIGNIFICANT ACCOUNTING POLICIES & NOTES ON ACCOUNTS.

Basis of Accounting

1. The accounts are prepared under historical cost convention on an accrual basis.
2. Accounting policies not specifically referred to otherwise are consistent and in consonance with generally accepted accounting principles.
3. Figures of the previous year and current year have been regrouped wherever necessary to confirm classification.

Fixed Assets

4. Fixed Assets are stated at cost of acquisition inclusive of freight, duties, taxes and incidental expenses related to the acquisition.
5. Depreciation on Fixed Assets has been charged on written down value method at the rates mentioned in the Schedule-5 of the Fixed Assets. Depreciation on purchase of fixed assets during the year has been charged for the whole year in view of the higher depreciation at initial stage.

Investment

6. Investments are valued at cost plus interest accrued thereon.

Plan Funds

7. Assets purchased from XIth plan funds for Rs. 6265784/- have been capitalized under the appropriate heads of accounts of Fixed Assets.
8. A sum of Rs. 1,53,93,879.00 had been advanced to UPPCL for a new dedicated 33 KVA power line using the funds from plan grant after getting the approved for re-apportionment from DAE in last financial year. A further sum of Rs. 742847/- has been advanced in F.Y. 2007-08 for the same purposes.

Grants-in-aid

9. Unspent balance of Non-plan grants are shown under the liabilities side of the Balance Sheet.
10. Non-plan grants, which have been utilized for the purchase of capital assets, are transferred to Capital Fund.

Expenses

11. Consumable, stores and stationery are charged to the Income and Expenditure Account in the year of its purchase.
12. Email, VSAT facility, annual maintenance charges of fixed assets is charged to the Income & Expenditure account in the year of its payment.
13. Purchase of Books and Current Journals out of Non Plan Grants are charged to the revenue account.
14. Non-Plan grants, which have been utilized for purchasing capital assets of Rs. 3168771.00, are also charged to other administrative expenses.

Provision for retirement benefits

15. Provision for pension, gratuity, leave encashment etc. has been made on the basis of actuarial valuation.

As per our separate report of even date attached.

Ashok Usha Jain & Co.
Institute
Chartered Accountants

For Harish Chandra Research

(Ashok Kumar Jain)
Proprietor

(Raaj Gulati)
Accounts Officer

(P.B. Chakraborty)
Registrar

(Amitava Raychaudhuri)
Director

Place: Allahabad
Date: 17-07-2008

Comments on Auditor's Report pertaining status of accounts for the financial year 2007-08

1. That the amount recoverable against completed projects shown, as claims recoverable are outstanding as per details given below seems to be bad debts. Institute should take necessary steps to recover or write off the following amounts:

1	CARDMATH DST	since 2004	Rs. 14848.00
2	DST (CS Dalawat)	since 2005	Rs. 12986.00
3	DST Fellowship- Peter Brusov	since 2004	Rs.117300.00
4	DST Grant-Ashoke Sethia	since 2006	Rs. 15787.00
5	WHEPP VII	since 2005	Rs.83000.00

Reply: The Institute has made several correspondences with the respective agencies towards recovery of the above advances and is quite hopeful of the recovery of most of the above.

2. That the Library & Publications includes the receipts of Current Journals on the basis of a statement of periodicals and advances as on 31-03-08 without detailing out the journals and publications received during the year. Institute is advised to take necessary steps to keep detail records of journals and verification thereof and proper accounting thereafter. Moreover non-receipt of journals for Rs. 1,278,07/- for the year 2006 should either be recovered or written off.

Reply: The Institute would like to state that:

1. The library keeps a timely record of all arrivals of periodicals. All arrivals are recorded manually in Kardex entry system and also electronically in the LibSys software system.
2. Transparency of all arrivals is ensured as the maintained catalogue can be searched from anywhere in the HRI campus. This includes latest arrival of books and journals.
3. Regarding the unadjusted advances of Rs. 1,27,807/- for the year 2006 we would like to state that -
 - a. Currently this amount has been reduced to Rs. 1,02,140/- only because a few issues have since been received.

- b. A few issues which were received under damaged conditions (Rain soaked) have been shown as unadjusted because the Institute has to get their replacement.
- c. The Institute has a regular policy of issuing reminders to publishers/ vendors for timely supply and adjustment of advance outstanding with them.

We will take all the necessary steps to ensure the total adjustment of the advances paid within the current financial year.

- 3. That the fixed assets maintained by institute have that particular including quantities details and location of fixed assets for the year current financial year only. The gross figures of previous years are shown without complete disclosure of quantitative details and locations of each assets item. Institute has not carried out physical inventory verification of assets items during the period under audit to reconcile and find discrepancy if any.

Reply: The fixed assets register, which was not being prepared earlier, is now being maintained, last years record is also being updated. It is expected the work will be completed shortly. The Institute will also take steps for physical verification of all asset items.

- 4. That the institute needs improvement in internal control procedure commensurate with the institute and nature of its activities with regard to purchase of various items, annual maintenance contracts and expenses, recording receipts of goods and materials including current journals, attendance verification, vouching & scrolling and control over submission of bills against advances including domestic and foreign travel advances.

Reply: The Institute could not carry out the necessary internal control procedures commensurate with the nature of its activities due to shortage of manpower. However, necessary steps will definitely be taken to improve the internal control system.

- 5. That there are few cases of less deduction/ no deduction of tax at source on party's payment and also delays in depositing and filling of TDS returns.

Reply: The cases of less deduction / no deduction of tax at source on parties, are cases where gross payments in one financial year exceeds the minimum limit of taxation (e.g. Rent for Guest House) are being recalculated and TDS recoveries will be affected in the year 2008-09. There has been an improvement in avoiding delay in filing TDS returns which will be further improved in the current financial year, as advised.