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TECHNO TALKS

2009

A book of abstracts

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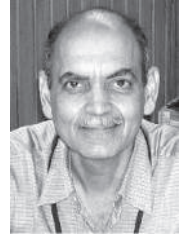
Master of Fashion Technology

Department of Fashion Technology

National Institute of Fashion Technology  
C.A. Site No. 21, 27th Main Road, Sector 1, H.S.R. Layout  
Bengaluru-560034



## DIRECTOR GENERAL'S MESSAGE



It gives me immense pleasure & happiness to introduce to you the passing out batch of Master of Fashion Technology 2007 – 09, NIFT, Bangalore. These young professionals are all set to take on the centre stage proving their mettle over the rest. I have no doubt that these students will make a mark in the coming years. They will not only be a valuable asset to the garment industry but also facilitate the Indian apparel industry to achieve newer heights. Even in the recessionary phase of the economy there is no slowing them down. They are confident and ready to take on the world in their stride. "Technosummit'09", provides an opportunity to take a look at their potential and see what they have in store for you. This platform explores new avenues & opportunities for industry as a whole. It also provides industry with fresh talent every year.

I would like to commend the efforts of Director, Registrar, Faculty & Staff of NIFT, Bangalore for the hard work they have put in to nurture, encourage and develop their latent potential. I also wish the graduating students a bright, rewarding & a fulfilling career ahead.

Rajiv Takru  
Director General  
National Institute of Fashion Technology

## DIRECTOR'S MESSAGE



The textile industry in India has always held a position of cardinal importance in our economy. Even in today's recession hit times, the industry continues to be a robust contributor to our foreign exchange earnings. Technological innovations in the garment industry assume greater importance in today's scenario. NIFT has always endeavored to underline this importance among our students.

Through "TECHNOSUMMIT", NIFT, Bengaluru presents to the industry, Masters of Fashion Technology (Batch 2007 – 09) as a complete solution to the various challenges faced by the industry today. This batch of 26 budding professionals is equipped with the relevant knowledge of different aspects of this business. "TECHNOSUMMIT" compiles their research project efforts towards addressing various problems in the industry. These projects have been able to touch upon the different business processes in the industry.

I would like to congratulate industry guides, faculty members, officers and staff of NIFT Bengaluru for providing the required guidance and support to the students in achieving their project goals. I would also like to express my gratitude to the sponsoring industries for providing the students with practical knowhow and experience of working in the industry.

Ms. Kakarla Usha, I.A.S  
Director  
National Institute of Fashion Technology  
Bengaluru

## CHAIRPERSON'S MESSAGE



The apparel Industry has always been a major contributor to Indian economy. However, it is yet to be fully rationalized & exploited so as to compete in the global arena. We at the Department of Fashion Technology, National Institute of Fashion Technology prepare such young talents to become the business master minds of the apparel industry. Not only they are equipped with the technical know-how of their domain but they also possess entrepreneurial abilities which make them a class apart. The need of the hour is innovative skillful thinking which gives an edge over the rest in the business. And that is what distinguishes a market leader from the rest. We at NIFT produce such leaders who with their pool of talents can serve in any area of the industry, be it at the shop floor or at the company headquarters.

Today most of the leading companies in India and abroad as well, have employed garment technologists from NIFT. This feat alone is a compliment to the success of this department. And we continue to bring this success to your company yet again through "Technosummit'09". This is a kaleidoscope depicting the potential of these young budding professionals, the challenges they have taken so far & efforts they have made to accomplish those challenges. The graduation projects that our students have taken up cover a wide range of research areas such as Supply Chain Management, Product Range Development, Process Improvisation, Software Solutions, Merchandising, Lean Manufacturing, Critical Path Management, Establishing Standard Operating Procedures, Plant Layout Design etc., the list is endless. Through this medium I would like to acknowledge & appreciate the efforts of the faculty & staff members who left no stone unturned for the successful completion of these projects. I also thank all the sponsoring companies for enriching the experience of these students. I also congratulate the passing out batch of 2007-09 of M. F. Tech for successful completion of their graduation projects & academic programme at NIFT. I wish them all the success in their future endeavours.

Dr. A. K. Khare  
Professor and Chairperson  
Department of Fashion Technology,  
National Institute of Fashion Technology

## CENTRE COORDINATOR'S MESSAGE



The 2 – year Master Program in Fashion Technology is aimed to train people in varied aspects of the business of fashion & apparel. It imparts practical knowledge pertaining to application of technology in the apparel industry. The students of this course are a rare find as they serve many purposes for the industry such as production executives, industrial engineers, quality executives, merchandisers, consultants, retail planners, product managers, sourcing executives, and sales & marketing executives.

Technotalk '09 is an attempt to present an overview of the research projects undertaken by the final year students of Master of Fashion Technology students, providing the readers an insight into the approaches taken by students to tackle issues and provide innovative solutions spearheading various spheres of the Indian Apparel industry. I would also like to express my gratitude to all the sponsoring organizations for their invaluable support at every stage.

Through this medium, I also acknowledge the efforts of all the faculties & staff members of this department for their valuable mentoring and assistance in the successful completion of these projects. I would like to congratulate the students on successful completion of their project. I wish the students all the best in all their future endeavors.

Shipra Sharma  
Centre Coordinator  
PG Programme  
Department of Fashion Technology



## Avanish Dwivedi & Vishal Khillare

**Madura Garments Exports Limited,  
Ramnagaram Unit**

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### Project Name : Software Development for Line Balancing

**Faculty Guide :** Dr. A. K. Khare, Professor & Mrs. Sudha Singh, Associate Professor

**Industry Guide : Mr. Bhavin Reddy, Factory Manager  
Mr. Ashish Gupta, System Administrator**

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### Abstract

The project aim at developing software which could act as a planning tool by allocating the best suited operator for each operation. The software named "LINE BALANCING ENGINE" would also aid eliminate potential bottlenecks caused due to operator absenteeism in a sewing line. It would assist in overcoming the irregularity caused due to absenteeism in a sewing line. It would assist in overcoming the irregularity caused by the same in a balanced sewing line by providing the designated authority with the next best option of operator/s for a particular operation. More ever the software would inform the user about the operation/s for which additional operator/s need to trained. To develop a computer integrated solution for line balancing can give the better utilization of the manpower as well as machines to improve the productivity.

This tool can be effectively used by the apparel industry for basic initial balancing and predicting different conditions on the shop floor, which is otherwise impossible. Apart from balancing the line, this software also provides intangible benefits like maintaining updated operators skill inventory database, timely production records etc.

Thereby software would organize the system of Line Planning, Balancing & Operator allocation.

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### Findings

From the Retailers survey it was found that most of them were ready to provide the facility of MTM garments in their stores with good marketing strategies.

From the Customers survey it was found that right fit, customization, brand value, quality, price and convenience to purchase were important.

From the study of Manufacturers it was found that they had certain issues in production of such garments like trained manpower, problem of fabric sourcing, on-time delivery, manufacturing cost, return on investment, location or proximity and total cost incurred.



**Neha S Kanfode; Rashmi mv**

**Arvind Exports**

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**Project Name : Critical Path Analysis & Study of cost effectiveness In Cutting Room**

**Faculty Guide : Mr. Vasant Kothari, Assistant Professor**

**Industry Guide : Mr. Arun Kumar, FM, Arvind exports**

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**Abstract**

Data Collection from Cutting department in order to understand the work flow sequence, Time study was done for each event in order to find out total time and then critical path network was developed considering total time of each event

End loss was calculated ,for calculating end loss 5 orders were taken, which were being cut in the cutting room. at the end of laying by spreaders we measured the ends on both sides of the 5 plies, which we have selected randomly with the help of measuring tape in order to find out the average loss based on our study of five orders we have taken standard two garments and 100 plies for each order to find out the proportionate loss with respect to end loss.

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**Findings**

We suggested them that only 4 people are required at the fusing machine Human Resource is a very important resource after land and capital, which can be effectively used for enhancing the productivity of a unit. For this proper manpower allocation is required which can be done by proper deployment of it in the right jobs. For this we had found out in which event there is excess manpower and where is shortage so that they can be shifted to that job after proper training.



**Shamim**

**Dow Fiber Solutions**

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**Project Name : Finding The Behavior Of Stretch Denim Jeans In  
Garment Construction And Processing**  
**Faculty Guide : Dr. A.K.Khare, Porfessor**

**Industry Guide : Mr. Prem Sadhwani**

**Abstract**

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Present day stretch denim garment industry is facing different problems like measurement out issues, bleach restrictions, resin treatment issues, design restrictions. To find the new innovative solutions to these problems, problems are needed to be addressed and critically analyzed. On the back ground of the problem areas of stretch denim, the project is designed and solutions are tried to found with new and revolutionary poly olefin based fibre DOW XLA™.

**Findings**

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XLA™ denim shows better shrinkage regularity in washing procedure.  
Less measurement out problems in DOW XLA™ denim due to better shrinkage consistency.  
XLA™ recovery unaffected by bleaching procedure.  
Lower growth than other spandex fabric regardless of aggressive washing.  
Retains elastic qualities with no expansion as a result of bleaching.  
No process limitations for XLA™ denim.



## Amrendra Kumar & Neha Kaushik

**Project Name : Feasibility Of Made To Measure Garments**

**Faculty Guide : Dr. A. K. Khare, Professor**

**Industry Guide : Mr. Arun Kumar, FM, Arvind exports**

### **Abstract**

The project was based on "Study of Feasibility of Made-to-Measure Garments from the Retailers, Manufacturers and Customers point of view".

As Made-to-Measure concept is new in India so this study would help the organizations which are interested in it. The study is mainly carried out in three main segments of supply chain namely, Retailers, Manufacturers and Customers.

The first objective was to carry out the study on retailers as to know that how many of them are willing to go for this concept and what would be the issues related. As the manufacturers introduce those types of garments in the market and provide them to customers so it was necessary to carry out the study for them and find out how many are willing to go for this concept and what would be the main issues of concern for production. The study was carried out with customers also so as to know that how many were willing to go for this concept.

### **Findings**

From the Retailers survey it was found that most of them were ready to provide the facility of MTM garments in their stores with good marketing strategies.

From the Customers survey it was found that right fit, customization, brand value, quality, price and convenience to purchase were important.

From the study of Manufacturers it was found that they had certain issues in production of such garments like trained manpower, problem of fabric sourcing, on-time delivery, manufacturing cost, return on investment, location or proximity and total cost incurred.



**Aparna Roy**

**Alok Industries Ltd**

**Project Name : Analysis Of Factors Affecting Lead Time**

**Faculty Guide : Ms. Shipra Sharma, Associate Professor**

**Industry Guide : Mr. Sandeep Mahajan**

**Abstract**

Most of the delay problem is related to fabric in house in which 50% fabric is coming in late. From the observation it has been found that yarn dyed knitted single jersey fabric and diagonal printed knitted fabric is coming late.

Because of higher rework (15.42%) and rejection(13%) sewing time take more and that is responsible for sewing delay.

Factory following unit production system to run varieties of styles, for that they need highly skilled operators but most of the operators are new and they don't know proper method of stitching. Because of low efficiency and high absenteeism line balancing get affected and due to improper line balancing lots of waiting time involved in the line, one operator low efficiency will be the reason of whole line down production.

Operators are not enough trained about quality and method of stitching so rework and rejection percentage is higher

**Findings**

Fabric in house delay

Sewing delay: High absenteeism, high rework, low batch efficiency



**Kavindra kulkarni**

**IL&FS-CDI**

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**Project Name : Garment Finishing Training Module for Trainers**

**Faculty Guide : Mrs. Subhalakshmi, Assistant Professor**

**Industry Guide : Mr. Kunal Trivedi, Project Manager**

**Abstract**

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The project was to make “training module for garment finishing” department. Its key purpose was to assess current process of garment trimming, pressing, folding and convert it into effective learning material. Keeping this fact as the major focus the different pressing, folding, and packing methods for an immense number of procedures in garment finishing department has been explored and documented. Special emphasis has been laid on the various processes followed in the industry along with the specialized machines and work aids.

**Findings**

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Outcome of this new and attractive project will be beneficial for workers as well as trainers. This project will be beneficial for garment training institutions also.



**Prity Sahay**

**Prateek Apparels**

**Project Name : Lead Time Minimization In Merchandising Process**

**Faculty Guide : Mr. Vasant Kothari, Assistant Professor**

**Industry Guide :**

**Abstract**

Merchandising Department can be termed as the face of the company for buyer that takes complete responsibility of the order as soon as it approaches to the company and looks after it till it reaches buyer. Merchandisers have to be very clear and accurate while forwarding order details to other departments.

By analyzing the merchandising processes in further details few suggestive measures were added which could improve the merchandising for all buyers. Such measures would add on to the precision of the work of a merchandiser and also help in on time deliveries of respective orders

**Findings**

**KEY FACTORS AFFECTING THE LEAD TIME ARE LISTED BELOW :**

External factors:

- Supplier's delivery schedule
- Customs clearance
- Job works
- Lab testing reports
- Approval delays
- Transportation delays
- Holidays

Internal factors:

- Planning
  - Departmental communication
  - Inter department transfer of material
1. Store
  2. Cutting
  3. Sewing
  4. Finishing



**Manoj &  
Geetika**

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**Project Name : Comparison Of Different Levels Of Product Development & Marker Making**  
**Faculty Guide : Ms. Sweta Jain, Assistant Professor**

**Industry Guide :**

**Abstract**

Marker Efficiency: Manual is highly efficient for Stripes/plaids whereas high level is efficient for plain/printed. It also depends upon the no. of components.

Time: Lowest in high level technology but increasing towards manual level. With the use of auto marker, marker can be prepared in few mins.

**Findings**

Maximum companies are involved in export business, So they need advanced technologies

Maximum industries are semi automatic.

Few are automatic & highly automatic.

All companies are manufacturing ladies wear.

Fashion garments require high level of technology.

Marker Efficiency:

High level: Solid/print highest, Manual: Stripes/Plaids highest

Time:

With advancement of level Product development & marker making time decreases



## Nitya Prakash & Madan

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**Project Name : Re-engineering Batch Setting**

**Faculty Guide : Dr. A. K. khare, Professor**

**Industry Guide : Mr. Sudhir Khanna, Mr. Yusuf**

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**Abstract**

With the implementation of parallel line setting , source inspection and prior machine arrangements the batch setting time was reduced by 4 hours . how ever there is still scope to reduce it by focusing on bundle movement time (waiting time and queuing time) and implementing the machine layout . maintaining a well trained pool of operators will help in reducing the batch setting time further

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**Findings**

1. The machine setting time has been reduced to 134 min from 271 min.
2. Similarly the time taken for producing the first piece in total for all the operations has come down to around 37min from 64min due to the parallel line setting for the preparatory parts and delegation of personnel.
3. The correction time has also come down to 15min from 46min because of source inspection and on spot rectification by the QC checkers.



**Tameem Hussain**

**Shahi Exports Pvt Ltd**

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**Project Name : Venturing Feasibility into U.S. Kids wear Segment**

**Faculty Guide : Mrs. Jonalee Das Bajpai, Associate Professor**

**Industry Guide :**

**Abstract**

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From the trend seen in 2008 the population growth is negative and is continuing in 2009 also the trend in the sales growth of apparels I the 4th quarter of 2008 was negative and continued in 1st quarter of 2009, this was the effect of recession as this was unexpected scenario the end of this is unpredictable, so the population growth and sales growth may continue to slide down till the market becomes stable.

The sales for the kids wear segment specially for the toddlers, as the result of low birth (parents postpone the plans for having babies due to the economical conditions and job insecurities)

From the year 2006 there is a marginal increase in the exports in value terms about 5-6% , but the growth in volume terms is about 10-15 % increase. The reason being the buyers strong strategy of offering value for money, the buyer are demanding on

Effective and efficient product development

Higher productive manufacturing

Strong sourcing operations

**Findings**

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**Bhumi Patel &  
Jyoti Pal**

**Bharat Tissues Pvt. Ltd**

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**Project Name : Optimization Of Export Merchandising Process**

**Faculty Guide : Mr. Vasant Kothari, Assistant Professor**

**Industry Guide :**

**Abstract**

Most of the apparel exporters have primitive style of working. There is a need to gear up and change the method of processing an order. It is not possible that any industry can upgrade their technological part over night, but what they can do is be more efficient and utilize the available resources up to the best.

An Export merchandiser should be quick in response to buyer's enquiry, on time sampling, sourcing right quantity of raw material at right time, follow-up the process, maintaining files, communication and coordination, following the time and action plan and timely issuance of the work order.

So our aim was to find the areas, where improvement in merchandising process of Bharat Tissus Private Limited can be done, by analyzing the process and to implement various systems for the smooth running of the export order

**Findings**

Areas where optimization is done are:

- Raw material order quantity
- Maintaining supplier data base
- Follow-up for order tracking
- Formats for accurate information



# Nikhil Jain & Priyanka

**Project Name : Effectiveness of SAP Implementation in Apparel Industry**

**Faculty Guide : Ms. Sudha Singh, Associate Professor**

**Industry Guide : Mr. K.Guru, Application Consultant, IBM Chennai**

## **Abstract**

This research study examines the impact of SAP solutions on the Apparel Industry. The focus of the research study is on looking after the Industry Specific SAP solutions provided for Apparel Industry and finding the reasons why Apparel companies are implementing SAP solutions and integrating Apparel supply chain. This research investigates the influence of Enterprise Systems implementation on operational performance.

This research enables to understand the impact of SAP solutions on Apparel industry and therefore creating focused solutions in the field of study. It has been found from the study that most of the Apparel companies are making their business effective and gaining financial benefits through SAP implementation. The SAP solution provides the right tools to manage entire supply chain from the initial purchasing of raw material to the final delivery of the finished product.

## **Findings**



**Kunal Saurabh**

**Datatex IT Solutions**

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 **Project Name :** Indian Market Survey And Analysis Of Erp In Textile & Apparel Companies

**Faculty Guide :** Ms. Sudha Singh, Associate Professor

**Industry Guide :**

 **Abstract**

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Information technology plays an important role in textile & garment industry. ERP is an interface between IT and user and has made IT easy for user. It was survey about finding how organized is garment industry in terms using ERP, which ERP is popular India and to find out factors which helps in evaluating ERP.

 **Findings**

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**Md. Jiaul Haque Shaikh**

**Decathlon**

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**Project Name : Vendor Evaluation from Buyer's Perspective.**

**Faculty Guide : Ms. Jonalee Bajpai, Associate Professor**

**Industry Guide : Mr. Amit Sharma**

**Abstract**

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There are different buying organization who works for the retailer to help them getting the right merchandise, in right quantity and quality at right place and right time with cheaper price. So Vendor Evaluation is one of the fundamental steps to evaluate a vendor on the adaptability towards one organization. It's help in establishing a vendor's credentials and capabilities in supplying specific goods/services to retailer.

The aim of the project is to establish an efficient vendor evaluation framework for the buying house for the evaluation and selection of vendors, structuring the vendor base. The main emphasis is given to make this framework more defined as per requirements, short, and objective type rather than to be very subjective, which will help to grade the vendors as per their performances.

**Findings**

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## Naseeb Ahmad & Pradeep Kumar Singh

**Project Name : Layout Modification For Single Piece Movement**

**Faculty Guide : Ms. Sweta Jain, Assistant Professor**

**Industry Guide : Mr. Bibhuti Pradhan**

### **Abstract**

By implementing single piece movement in finishing the distance traveled reduced and area was saved and productivity increased. There were still scope of improving productivity in finishing by changing the positions of ironer and thread sucking machine.

### **Findings**

Material movement in finishing reduced by 39.36%

Area saved by 14.77%

Throughput time reduced by 6.79%

Productivity increased by 5.7%



# Sandeep H.M & Shuyeb Ahmed

## Life Style

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**Project Name : Reduction Of Lead Time**

**Faculty Guide : Mrs. Rajni Jain, Associate Professor**

**Industry Guide : Mr. Ramnath**

**Abstract**

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Reduction of lead-time ,analysis of non-value adding process & eliminating it or postponing to vendor side. Cost saving ,on shelf availability at right time. The impact that a well-known product will have on a customer will largely depend on how such these products are reached in the market. Supply chain execution is managing and coordinating the movement of materials, information and funds across the supply chain, the flow are bi-directional. Supply chains exist in both service and manufacturing organizations, although the complexity of the chain may vary greatly from industry to industry and firm to firm.

**Findings**

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Necessary non value adding activities in processing of goods  
Locating of goods was a major task due to wrong updation of vendor to binning rack data Wrong communication through processed goods, lack of knowledge of SOP's to be followed.Late delivery of goods to stores from Regional Distribution Centers due to n number of cross checking the quantity of packed goods. RDC environment clearly conveys implementation of 5's in order to improve over all environment



# Saikat Kumar Mitra

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**Project Name : Streamlining trims store and trim procurement process**

**Faculty Guide : Ms. Rajni Jain, Associate Professor**

**Industry Guide :**

**Abstract**

The sewing and packing trims used in the garment industry, unlike fabric procurement, needs a more diversified methodology of storing and procuring because of their characteristically different sizes and lead times. An organization seeking to find a cost and streamlining advantage would want to optimize a methodology wherein they neither fall short of trims at the production date order the trim ahead of requirement date so as to constrain their limited stocking space / negotiating price. This is suitably achieved by estimating the lead time means and standard deviations, delay mean and deviations, buffer time for store planning and approximating trim storing capacity and devising a procure planning schedule model, following which the respective organization can achieve its goal.

**Findings**

The packets in which trims are procured and sizes of racks available for storing them can directly affect stocking capacity of a store.

The methodology of stocking trims in a store is a function of production capacity, buyer requirements, minimum order quantity and store planning area.

The procurement of trims should be a complimentary fit between the fabric in house date and the date of production.

## FACULTY RESOURCE

### Professor & Chairperson

Dr. A.K. Khare

### Associate Professor

Ms. Shipra Sharma (Centre Co-ordinator - M.F.Tech)

Ms. Jonalee D. Bajpai (Centre Co-ordinator - B.F.Tech)

Ms. Sudha Singh

Ms. Rajni Jain

### Assistant Professor

Mr. Abdul Salam Sait

Ms. Sweta Jain

Ms. Subhalakshmi Kropi

Mr. Vasant Kothari

### Visiting Faculties

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Mr. Rohit Gugnani

Mr. Ravi Kishore

Mr. Piyush Kothari

### Research Assistant

Mr. G. Thirumalai Kumaran

Mr. Balvinder Paul (Senior Machine Mechanic)


Mr. Srinivasa M.R (Lab Assistant)

Mr. N. Chandrashekar (Attendant)



Masters of Fashion Technology  
Batch: 2007-09



 National Institute of Fashion Technology, Bangalore



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