

# Blitzschlag'14

**The Annual National Level Technical  
Festival of MNIT Jaipur**

**4<sup>th</sup> to 6<sup>th</sup> April 2014**

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## **EVENT BROCHURE**

**CASH PRIZES OF MORE THAN INR 6,00,000**

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# COMPETITIONS

## ROBOTICS

The Robotics Segment has 3 events.

For rules and regulations, eligibility and team structure, abstract submission details, pre-game setup, arena, specifications and judging parameters, please visit our website: <http://blitzschlagmnit.in/>

Please mail your abstract to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) with the event name in the subject.

**Contact:**

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## Robo-Strategia

**Problem Statement:**

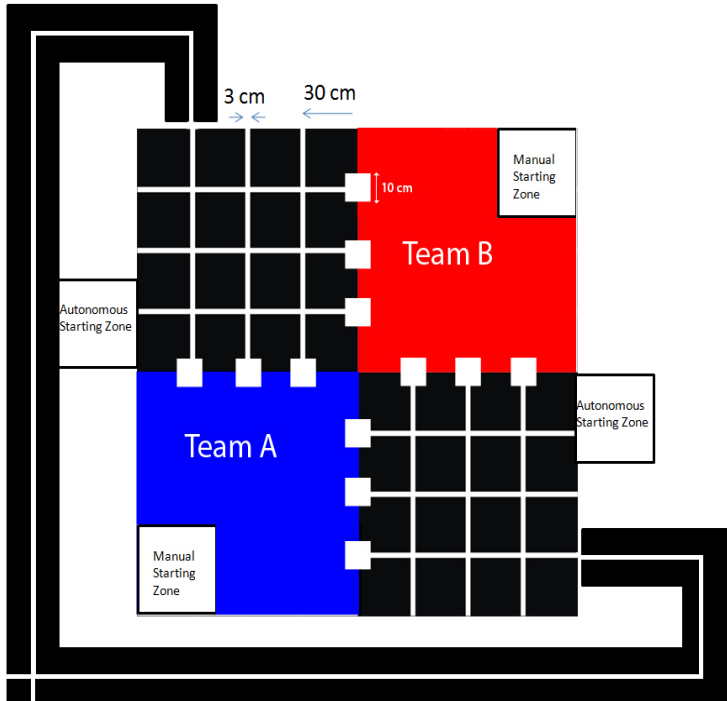
To design and build two bots, one autonomous and one manual & complete the given task in minimum time with gaining maximum points.

**CASH PRIZE of INR 20,000/- to be won.**

**Team Specifications:**

- Maximum 4 participants are allowed in a team.
- Team members can be students of same or of different university/college.
- A participant cannot be a part of two teams simultaneously failing which both teams will be disqualified.

## Arena:



## Gameplay:

- Task is full of strategy and tactics.
- The competition will be on one-on-one basis. There will be two separate zones for each team, one autonomous zone and one manual zone.
- Manual bot will be placed at the manual starting zone and autonomous bot at the autonomous starting zone as indicated in the figure.

## Tasks:

- The manual bot will pick up blocks from its manual picking zone and will deposit it at the autonomous bot picking zone.
- The autonomous bot will start after the deposition of blocks by manual butt will pick the blocks deposited by the manual bot.

- Manual bot is not allowed to aid the autonomous bot in picking the blocks.
- The autonomous bot will have to search for empty block zone in its deposition zone and will deposit the block there.
- If none of the positions is empty the autonomous bot has to signal by blinking an LED and has to drop the block at the last checked position.
- If any position is vacant after the checking by autonomous bot, it will be considered as filled and not empty for that run.
- The deposition zone of one team's autonomous bot is the manual's picking zone of other team.
- The cycle can continue as many times as the time permits. The time limit is Five minutes for the total event.
- If the autonomous bot drops the block during the run, in an area other than the dropping zone, team is allowed to restart the autonomous from the autonomous starting zone. The block will be placed at its original position of deposition by manual bot.
- The autonomous will have to go to the finishing zone for getting Bonus points. Once reached the finishing zone, it cannot go back to the main arena.

### **Judging:**

- 10/20/30 points will be awarded for picking up the block by the manual bot from respective zones.(For points systems see arena specifications)
- 10 points will be awarded for the deposition of each block by the manual bot.
- 30 points will be awarded for picking up the block by the autonomous bot correctly.
- 10/20/30 points will be awarded for dropping the block by the autonomous bot depending on the deposition zone. If there is no vacant position for the autonomous 50 points will be awarded, if it correctly indicates this condition by blinking an LED.
- An additional 100 point bonus will be awarded to the teams whose autonomous reaches the finishing zone first.

### **Bot Specifications:**

#### **Manual bot**

- Teams can use wireless or wired remote control for controlling the bot.
- Only one team member is allowed to control the manual bot in the game field.

- During the start of the run, the manual bot must fit within a box of dimensions 400 mm×400 mm×500 mm (l×b×h).
- The bot must be stable and be able to stand on its own at the beginning of the run when put in the manual start zone. Bots not fulfilling this criteria will be disqualified.
- The manual bot should not split into two or more units during the entire match.
- The manual bot should have an on-board power supply.
- The external remote control used to control the bot is not included in the size constraint.
- The manual bot cannot be constructed using readymade Lego kits or any readymade mechanism. However, readymade gear assemblies can be used. Violating this clause will lead to disqualification of the team.
- The potential difference between any two points should not exceed 24V DC.
- The bot should not damage arena and its surroundings in any manner otherwise team will be disqualified and disciplinary actions will be taken.

### **Autonomous bot**

- After the autonomous bot starts, no team member is allowed to touch the bot.
- The autonomous bot should fit within a box of size 250 mm×250 mm×250 mm (l×b×h) at the starting of the event. Bot must be started only by one on-board switch. However, a team may have separate on-board switches for restart. This switch has to be shown before the run to the organizers.
- During the run, the autonomous bot can expand itself provided it does not damage the arena in anyway. Autonomous bot is not allowed to leave anything behind or make any marks while traversing in the autonomous zone. Any bot found damaging the arena will be immediately disqualified.
- Autonomous bot should not split into two or more units.
- Teams are allowed to use readymade micro-controller boards/readymade sensor kits. However teams are not allowed to use readymade Lego kits or any such assemblies.
- The starting procedure of the bot should be simple and should not involve giving the bot any manual force or impulse in any direction.
- The potential difference between any two points should not exceed 24V DC.

**For rules and regulations, abstract submission details, pre-game setup, arena, specifications and judging parameters, please visit our website:**

<http://blitzschlagmnit.in/>

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# Robolympics

## Problem Statement:

Build a robot which can complete the given track in minimum possible time.

**CASH PRIZE of INR 10,000 to be won.**

## Gameplay:

The participants have to make a wired/wireless bot which completes the arena (a combination of different types of terrain) at minimum possible time.

## Team Specifications:

- Maximum 3 participants in a team are allowed.
- Team members can be students of same or of different university/college.
- A participant cannot be a part of two teams failing which both teams will be disqualified.

## Bot Specifications:

- Teams can use wireless or wired remote control for controlling the bot.
- Only one team member is allowed to control the manual bot in the game field.
- During the start of the run, the manual bot must fit within a box of dimension 400 mm×400 mm×500 mm (l×b×h).
- The bot must be stable and be able to stand on its own at the beginning of the run when put in the manual start zone. Bots not fulfilling this criteria will be disqualified.
- The manual bot should not split into two or more units during the entire match.
- The manual bot should have an on-board power supply.
- The external remote control used to control the bot is not included in the size constraint.



- The manual bot cannot be constructed using readymade Lego kits or any readymade mechanism. However, readymade gear assemblies can be used. Violating this clause will lead to disqualification of the team.
- The potential difference between any two points should not exceed 24V DC.
- The bot should not damage the arena and its surrounding in any manner otherwise team will be disqualified and disciplinary actions will be taken.

### **Rules and Regulation:**

- The bot will start from the bot starting zone
- Once started team members are not allowed to touch the bot
- Only one member is allowed to control the bot
- There will be three check points in the arena
- Three restarts are allowed during a run and bots will be placed at the last checkpoint it crossed
- Judges' decision will be last and final in case of any dispute

### **Judging:**

- Team with minimum time will be winner
- At every restart 10 sec will be added to your time

**For rules and regulations, abstract submission details, pre-game setup, arena, specifications and judging parameters, please visit our website:**  
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## **Robowars**

### **Problem Statement:**

Design and construct a remote controlled robot capable of fighting a one on one tournament.

**CASH PRIZE of INR 20,000/- and consolation prizes to be won.**

## **Team Specifications:**

- College teams: A team may consist of a maximum of 5 participants, all from the same institute.
- Open entries: A team may consist of a maximum of 5 participants, can be from different institutes.

## **Registration:**

- Teams using pneumatics will have to send a safety letter signed by any faculty in-charge/ Lab in-charge. For open entries they will have to get the letter signed from the faculty in-charge/ Lab in-charge of any one of the institute.
- The last date for sending confirmation letters and safety letters is 25th March, 2014.

## **Bot Specifications:**

### **Dimensions and Fabrications**

- The machine should fit in a box of dimension 500 mm x 500 mm x 500 mm (l\*b\*h) at any given point during the match. The external device used to control the machine or any external tank is not included in the size constraint.
- The machine should not exceed 50 kg of weight including the weight of pneumatic source/tank and the battery. If the tank is external, its weight would be considered 1.5 times its actual weight and if the battery is external, its weight would be considered 1.5 times its actual weight. Weight of adaptors and the remote controller will not be counted.

### **Mobility**

- All robots must have easily visible and controlled mobility in order to compete. Methods of mobility include:
  - Rolling (wheels, tracks or the whole robot).
  - Non-wheeled robots having no rolling elements in contact with the floor and no continuous rolling or cam operated motion in contact with the floor, either directly or via a linkage. Motion is "continuous" if continuous operation of the drive motor(s) produces continuous motion of the robot. Linear-actuated legs and novel non-wheeled drive systems come under this category.
- Jumping and hopping is not allowed.
- Flying (using air foil, helium balloons, ornithopters, etc.) is not allowed.

### **Robot Control Requirements**

- The machine can be controlled wirelessly or with wires. Off board power supplies are allowed. Refer below for further details on battery and power.
- If the machine is wired then the wire should remain slack under all circumstances during the competition. All the wires coming out of the machine should be stacked as a single unit. The wires should be properly insulated. Teams are suggested to use only rated wires. Loose connections or improper wiring may lead to direct disqualification even before the event.
- If the machine is controlled wirelessly, the machine must at least have a two frequency remote control circuit or two dual control circuits which may be interchanged before the start of the race to avoid frequency interference with other teams. The case of any interference in the wireless systems will not be considered for rematch or results.
- Remote control systems from toys might be used. Remote control systems available in the market may also be used.

### **Battery and Power**

- The machine can be powered electrically only. Use of an IC engine in any form is not allowed. On board Batteries must be sealed, immobilized-electrolyte types (such as gel cells, lithium, NiCad, NiMH, or dry cells).
- The electric voltage between 2 points anywhere in the machine should not be more than 36 V DC at any point of time. If a team is using AC voltage in any of its parts then the voltage should not exceed 36 V AC at any point of time as well.
- All efforts must be made to protect battery terminals from a direct short and causing a battery fire, failure to do so will cause direct disqualification.
- Use of damaged, non-leak proof batteries may lead to disqualification.
- Battery Eliminators are allowed and power source would be available at the venue for the eliminators
- Special care should be taken to protect the on-board batteries.
- Change of battery will not be allowed during the match.

### **Pneumatics**

- Robot can use pressurized non-inflammable gases to actuate pneumatic devices. Maximum allowed outlet nozzle pressure is 8 bar. The storage tank and pressure regulators used by teams need to be certified and teams using pneumatics are required to produce the Safety and Security letters at the Registration Desk at the venue. Failing to do so will lead to direct disqualification.

- Participants must be able to indicate the used pressure with integrated or temporarily fitted pressure gauge. Also there should be provision to check the cylinder pressure on the bot.
- The maximum pressure in cylinder should not exceed the rated pressure at any point of time.
- You must have a safe way of refilling the system and determining the on board pressure.
- All pneumatic components on board a robot must be securely mounted. Care must be taken while mounting the pressure vessel and armour to ensure that if ruptured it will not escape the robot. The terms 'pressure vessel, bottle, and source tank' are used interchangeably.

### **Hydraulics**

- Robot can use non-inflammable liquid to actuate hydraulic devices e.g. cylinders.
- All hydraulic components on-board a robot must be securely mounted. Special care must be taken while mounting pump, accumulator and armour to ensure that if ruptured direct fluid streams will not escape the robot.
- All hydraulic liquids are required to be non-corrosive and your device should be leak proof. Maximum allowed pressure is 8 bars.
- Participant must be able to indicate the used pressure with integrated or temporarily fitted pressure gauge.

### **Weapons Systems**

- Robots can have any kind of magnetic weapons, cutters, flippers, saws, lifting devices, spinning hammers etc.as weapons with following exceptions and limitations:
- Liquid projectiles.
- Any kind of inflammable liquid.
- Flame-based weapons.
- Any kind of explosive or intentionally ignited solid or potentially ignitable solid.
- Nets, tape, glue, or any other entanglement device.
- High power magnets or electromagnets.
- Radio jamming, tazers, tesla coils, or any other high-voltage device.
- Tethered or un-tethered projectiles.
- Spinning weapons which do not come in contact with the arena at any point of time are allowed. In no case should the arena be damaged by any bot. The

competition will be played on a knock-out basis. There can be some hazards in the arena (subject to change, will be notified as soon as decided).

## **Rules and Regulation:**

### **Abstract Submission**

Participants have to submit a portfolio of their machine, consisting of a written before the competition. Only the shortlisted teams will be eligible to participate in Robowars 2014. The last date of submitting the portfolio is 25th of March 2014.

### **Abstract**

- The written abstract should be prepared on the following lines:
- The weapon systems and power supply method should be explained in detail, along with proper diagrams. Picture(s) showing these should be attached.
- Description of any unusual advantageous mechanism used.
- The specifications of all the components used, including motors, suspension springs, remote controller, wires, battery etc. have to be mentioned.
- The abstract can be attached as a PDF file and must be uploaded at website.
- An email will be sent to the team leader confirming the receipt of the entry. Each team is allowed to make one written submission only. In case of multiple submissions, only the first submission will be used for judging purposes.

## **Judging:**

- A robot is declared victorious if its opponent is immobilized.
- A robot will be declared immobile if it cannot display linear motion of at least one inch in a timed period of 30 seconds. A bot with one side of its drive train disabled will not be counted out if it can demonstrate some degree of controlled movement.
- In case both the robots remain mobile after the end of the round then the winner will be decided subjectively.
- A robot that is deemed unsafe by the judges after the match has begun will be disqualified and therefore declared the loser. The match will be immediately halted and the opponent will be awarded a win.
- Points will be given on the basis of aggression, damage, control and strategy.
- Aggression – Aggression is judged by the frequency, severity, boldness and effectiveness of attacks deliberately initiated by the robot against its opponent.

If a robot appears to have accidentally attacked an opponent, that act will not be considered Aggression.

- Control – Control means a robot is able to attack an opponent at its weakest point, use its weapons in the most effective way, avoid Arena Hazards, and minimize the damage caused by the opponent or its weapons.
- Damage – Through deliberate action, a robot either directly, or indirectly using the Arena Hazards, reduces the functionality, effectiveness or defensibility of an opponent. Damage is not considered relevant if a robot inadvertently harms itself. Also, if a pressure vessel or a rapidly spinning device on a robot fragments, any damage to the opponent will not be considered "deliberate".
- Strategy – The robot exhibits a combat plan that exploits the robot's strengths against the weaknesses of its opponent. Strategy is also defined as a robot exhibiting a deliberate defence plan that guards its weaknesses against the strengths of the opponent. Strategy can also involve using the Arena Hazards to gain an advantage.
- Decision of event coordinators is final.

## **Safety Rules:**

- Compliance with all event rules is mandatory. It is expected that competitors stay within the rules and procedures of their own accord and do not require constant policing.
- Special care should be taken to protect the on-board batteries and pneumatics, robot without proper protection will not be allowed to compete.
- If you have a robot or weapon design that does not fit within the categories set forth in.
- These rules or is in some way ambiguous or borderline, please contact the event organizers. Safe innovation is always encouraged, but surprising the event staff with your brilliant exploitation of a loophole may cause your robot to be disqualified before it even competes.
- Each event has safety inspections. It is at their sole discretion that your robot is allowed to compete. As a builder you are obligated to disclose all operating principles and potential dangers to the inspection staff.
- Proper activation and deactivation of robots is critical. Robots must only be activated in the arena, testing areas, or with expressed consent of the event coordinators.
- All weapons must have a safety cover on any sharp edges.

- All participants build and operate robots at their own risk. Combat robotics is inherently dangerous. There is no amount of regulation that can encompass all the dangers involved. Please take care to not hurt yourself or others when building, testing and competing.

### **Certificate:**

- Certificate of Excellence will be given to all the winners.
- Certificates of Participation will be given to top teams.
- The teams which get disqualified due to disobeying any of the competition rules will not be considered for the certificate.

**Check out the website for Gameplay, specifications, Dimensions and Fabrications, Mobility, Robot Control Requirements, Battery and Power, Pneumatics, Hydraulics, Weapons Systems, Abstract Submission, Safety rules and Judging Parameters.**  
Please mail your abstract to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) with the event name in the subject.

### **Contact Us:**

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## **Line - Seeker**

### **Problem statement:**

The participants should build an autonomous bot that can follow the given path in minimum possible time, without deviating from the line. The aim of the event is to check the stability and sensing capabilities of the robot in comparison with other opponents.

**CASH PRIZE of INR 10,000/- to be won.**

### **Arena:**

**For 1<sup>st</sup> round**

The length and layout of the track will be revealed on the day of the event.

Other specifications of the track are as follows:-

1. The width of the line will be constant (3cm) throughout the track with a possible error of 5%.
2. The track will consist of sharp as well as smooth turns. There might be right angled turns also.
3. The track will be no closer than 15 cm to the edges of the rectangular arena on which the track is made.
4. The track will be of white color on a black background.
5. The arena is made of wood such that there is sufficient friction for the robot.
6. The track may have distractions by means of different lighting mechanisms.
7. The robot should be able to maintain its motion on the track despite these distractions.

#### **For 2<sup>nd</sup> round (the above arena specifications are included)**

1. The track might contain few crossovers (places where the line crosses itself), but they will be at 90 degrees to each other.
2. At certain parts, the track may fork into 2 paths.
3. At the beginning of each fork, there will be a White tag provided on any side of the track. It would be advantageous for the bot to proceed along the path indicated by the tag.
4. White tags will be painted before forks. The width of the tags is 2cm and they will be placed at the start of the forks. The tags will be 2cm away from the line.
5. There might be elevations at certain parts of the track of maximum 10 degrees.

#### **Team Specification**

1. Maximum 4 participants per team are allowed.
2. Team members can be of same or different university/college.
3. Any participant cannot be a part of two teams, failing on which both teams will be disqualified.

#### **Bot Specification**

1. The bot must be completely autonomous.
2. After the autonomous bot starts, no team member is allowed to touch the bot.



3. The autonomous bot should fit within a box of size 250 mm×250 mm×250 mm (l×b×h) at starting of the event. Bot must be started only by one on-board switch. However, a team may have separate on-board switches for restart. This switch has to be shown before the run to the organizers.
4. During the run, the autonomous bot can expand itself provided it does not damage the arena in anyway. Autonomous bot is not allowed to leave anything behind or make any marks while traversing in the autonomous zone. Any bot found damaging the arena will be immediately disqualified.
5. Autonomous bot should not split into two or more units.
6. Teams are allowed to use readymade micro-controller boards/readymade sensor kits. However teams are not allowed to use readymade Lego kits or any such assemblies.
7. The starting procedure of the bot should be simple and should not involve giving the bot any manual force or impulse in any direction.
8. The potential difference between any two points should not exceed 24V DC.

### **Gameplay**

The event consists of two rounds.

#### **Round 1:**

1. It is a preliminary round testing the line seeking capabilities of the participating robots.
2. The track will include some smooth turns and also some sharp turns (+right angle and acute angles) to check your line seeking capabilities.
3. Top ten teams with fastest line seeking (minimum time) will qualify in round 2.

#### **Round 2:**

1. This round aims in testing your line seeking as well as coding capabilities. Teams have to count and display the number of discontinuities in the path by LCD/LED.
2. There will be discontinuities, forks and crossovers in the arena involving more than one path. Each fork or crossover will have a white tag before it to show the right path.
3. The robot has to go the path indicated by the tag i.e. if tag is present in left side of fork or crossover; the bot has to take the left side.
4. The team with highest points at the end will be declared winner.

### **Rules and Regulation**

1. Caging will be done before the start of the event.
2. Teams are not allowed to feed any information about the track although they can calibrate their sensors as per the arena. Five minutes will be given to each team for calibration
3. Teams found using hard coding will be disqualified.
4. The bot cannot be constructed using readymade Lego kits or any readymade mechanism. However, readymade gear assemblies can be used. Violating this clause will lead to disqualification of the team.
5. Once started team members are not allowed to touch the bot.
6. Bot should not receive any signal from external means like wireless/RF/Bluetooth.
7. Three restarts are allowed during a run and bots will be placed to last checkpoint it crossed
8. Judges decision will be last and final in case of any dispute.
9. Rules and regulation are subjected to change, please visit the website regularly.

### Contact Us

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# ELECTRONICS/ELECTRICAL

The Electrical and Electronics Segment has 4 events.

**For rules and regulations, eligibility and team structure, abstract submission details, pre-game setup, arena, specifications and judging parameters, please visit our website: <http://blitzschlagmnit.in/>**

**Please mail your abstract to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) with the event name in the subject.**

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# Photo Waltz

## Problem Statement:

Design an electronic circuit which uses at least 10 LEDs which glow in different patterns. Just wait a minute. Condition is without using microcontrollers.

**CASH PRIZE of INR 5,000/- to be won.**

## Team Specifications:

- Maximum 3 participants per team are allowed.
- Team members can be of same or different university/college.
- Any participant cannot be a part of two teams, failing on which both teams will be disqualified.

## Gameplay:

- The participants need not bring any of the equipment with them. All the equipment and tools required will be provided to them by us on the basis of the abstract submitted by them.
- There will be 2 rounds of, one qualification and the final round.
- First round will be an elimination round to check out the knowledge about the subject of the participants.
- In final round team had to design the working circuit in the allotted time
- No extra time will be given to participants.
- At the end of the round the circuit will be submitted to the judges and will be evaluated.

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# Circuit Biz

## Problem Statement:

Are you the one who enjoys making circuit? So here is the perfect combination for you. This is the challenge for those who like to associate themselves to circuit designing.

**CASH PRIZE of INR 5,000/- to be won.**

## Gameplay:

### Round 1:

- This will be an elimination round consisting of an objective quiz that will contain questions related to electronic circuits.

### Round 2:

- All the qualifying teams will be given some virtual money which will be proportional to their scores in round 1.
- In this round, there will be several levels. Each level comprises of a separate problem question which is to be solved by making the required circuit correctly.
- Teams would have to buy the equipment needed for making the circuit by their virtual money.
- If after making the correct circuit for a particular level, if some equipment are not used by the participants, they can return it half of the equipment's cost.
- Bonus money will be decided on the basis of time taken in completing the circuit.
- The team completing all the levels with maximum leftover virtual money will be the winner of the competition.

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# Piezo Alert

## Problem Statement:

Design an electronic circuit which triggers an alarm on the applying pressure on a pressure sensitive plate.

## **CASH PRIZE of INR 5,000/- to be won.**

### **Team Specifications:**

- Maximum 3 participants per team are allowed.
- Team members can be of same or different university/college.
- Any participant cannot be a part of two teams, failing on which both teams will be disqualified.

### **Gameplay:**

- The task is to trigger two alarms when pressure is applied. For low pressure first alarm should trigger and if the time for which the pressure is applied exceeds more than 9 seconds than the alarm should go off.
- For high pressure another alarm should get trigger and if the time for which the pressure is applied exceeds more than 9 seconds than the alarm should go off.
- In case the pressure is removed before 9 seconds then the alarm should get off.

### **Rules:**

- The participants have to design the circuit at the time of event only.
- All the required tools will be given prior to the event.
- Further rules related to timings will be given at the time of competition only.

### **Judging criteria:**

The team completing the task in minimum time will be declared as winner.

### **Contact Us:**

Rakesh Mehra  
9785914939

Manvi Arora  
9414718566

## **Retro Electronics (Life Before Microcontroller)**

### **Problem Statement:**

Teams must build an autonomous line following robot without using any

microcontroller.

## **CASH PRIZE of INR 5,000/- to be won.**

### **Team Specifications:**

- Maximum 3 participants per team are allowed.
- Team members can be of same or different university/college.
- Any participant cannot be a part of two teams, failing on which both teams will be disqualified.

### **Gameplay:**

- The robot has to follow the white line on the black background and cover the arena (See the details of the arena in the point arena specification).
- The team that covers the arena in minimum time will be declared as winner.
- If the bot leaves the white line then teams have to take a restart. If no portion of the bot is on the line then it is considered as bot leaving the line.
- Only three restarts are allowed per team. The teams are allowed to take restart at any point of the game.
- In a restart, the timer will not be set back to zero and time will not be paused.
- 15 minutes per team will be given before the start of the game for calibration.
- During restarts for the autonomous bot contestants are allowed to adjust sensors and make repairs. A contestant may not alter a bot in a manner that alters its weight (e.g. removal of a bulky sensor array or switching to lighter batteries to get better speed).
- All restarts for autonomous bot and the manual bot require the approval of the organizers before the bot can be removed from the arena. If the bots were handled within the arena without approval, the run will be terminated.

### **Arena specification:**

- The arena consist of a white line on black background the bot has to traverse the white line. The width of the white line will be 3cm with an error margin of 5%.
- The arena is made of wood for providing sufficient traction.
- The arena will consist of some turns but no turn will be of 90 degree or less than that.
- The actual arena will be disclosed only at the moment of event.

- There will be three checkpoints in the arena.
- After a restart the bot will start from the last checkpoint.

### **Bot specifications:**

- Autonomous bot should not split into two or more units.
- Teams are allowed to use readymade sensor kits. However teams are not allowed to use readymade Lego kits or any such assemblies.
- The starting procedure of the bot should be simple and should not involve giving the bot any manual force or impulse in any direction.
- After the autonomous bot starts, no team member is allowed to touch the bot.
- The autonomous bot should fit within a box of size 250 mm×250 mm×250 mm (l×b×h). Bot must be started individually by only one on-board switch.

### **Rules:**

- The contestants have to make an autonomous bot with the condition that no programmable chip is allowed to be used in the robot.
- The bot is to be made using only non-programmable chips like gate IC's, counters, timers, registers, etc.

### **Judging criteria:**

- After crossing each checkpoint the team will be given 10 points.
- The team having maximum points will be declared as winner.
- In case two teams have same points the winner will be declared on the basis of time.

### **Contact Us:**

Manoj Sharma  
7597070396

Aditi Katara  
9460723815

# COMPUTER/IT

The Computer and Information Technology Segment has 4 events.

**For rules and regulations, eligibility and team structure, abstract submission details and judging parameters, please visit our website:**

<http://blitzschlagmnit.in/>

**Contact:**

**Saksham Srivastava**  
8386966929

**Ramesh Gupta**  
7891441244

## Algorismus'14

**Introduction:**

It was never just 1's and 0's. It is with these 1's and 0's that technology is taking such rapid strides forward at such a blurring pace that the so-called-dumbos computers occupy every modern field of engineering and life. Blitzschlag'14 brings you an opportunity to use your logics, clarity of thought and creativity and enter the matrix. So Code! Compile! Ship!

**CASH PRIZE of INR 4,500/- to be won.**

**Task:**

- Teams are required to solve the real life problems through coding. Programming skills of participants would be tested.
- It is an online programming contest. It will be an event where the teams will write codes for solving some unique coding problems. There will also be a limitation on the running time of the codes submitted by the teams.

**Gameplay:**

- You can work in teams of at most 2.
- Any malpractice would lead to straight disqualification.
- Code submitted by teams would be compared with that of other teams for similarity and those teams found submitting same code will be disqualified.



## Judging:

- Each problem would be graded first and foremost based upon correctness, followed by the space and time efficiencies of the solutions.
- Any malpractice would lead to straight disqualification. Also, conflicts will be resolved by organizers and would be considered as final and binding.

For rules and regulations, team structure, specifications and judging parameters, please visit our website: <http://blitzschlagmnit.in/>

## Contact Us:

**Akshay Kabra**  
9413086152

**Aabhas Jain**  
8947812587

# Line of Code

## Introduction:

Are you the smartest geek? Do you use python as calculator, consider keystrokes as music, caches as allies, crypto to be fun, bash as wand, recursion as poem? If CompSci defines you, then Line of Code is show time. If CompSci completes you, then Line of Code is your party time. Come unprepared, and you may win. Come prepared, and you will dazzle. Test's gonna be a stroll, if not a cakewalk. We know how awesome you are, just prove it one more time

**CASH PRIZE of INR 3,000/- to be won.**

## Gameplay:

- You can work in teams of at most 2.
- There will be only 1 round, and it'll be pen and paper based.
- The round will last for 2-3 hours.
- The event is an on-site event.
- Teams will have to solve numerous questions based on C and basic Computer Science knowledge.
- Questions asked will be Objective.
- You wouldn't be allowed to use resources (like Internet etc.) .This would be unacceptable to the organizers.

## Judging:

- Each problem would be graded based upon correctness.
- Any malpractice would lead to straight disqualification. Also, conflicts will be resolved by organizers and would be considered as final and binding.

For rules and regulations, team structure, specifications and judging parameters, please visit our website: <http://blitzschlagmnit.in/>

## Contact Us:

Vibhor Goyal  
8764057368

Saurabh Jain  
9462222010

# Mind Bender

## Introduction:

This event will introduce the participants to a new coding language having very few instructions, and with a simple data structure, and the participants are then required to code the given problems in that language. The details of the language will be told to the participants just before the start of the event and participants will be given 15 minutes to understand the language based on the documentation provided.

**CASH PRIZE of INR 3,000/- to be won.**

## Gameplay:

- You can work in teams of at most 2.
- There will be only 2 rounds. First round will contain simple coding or output questions on the new language. In Second participants will be provided with compiler/interpreter of that language and they have to code the problem statement given to them.
- The event is an on-site event.
- You wouldn't be allowed to use resources (like Internet etc.) unacceptable to the organizers.
- Any malpractice would lead to straight disqualification.

## Judging:

- Each problem would be graded based upon correctness.

- Any malpractice would lead to straight disqualification.
- Conflicts will be resolved by organizers and would be considered as final and binding.

**For rules and regulations, team structure, specifications and judging parameters, please visit our website: <http://blitzschlagmnit.in/>**

### **Contact Us:**

**Navin Purohit**

9413649851

**Perna Singh**

9414288760

## **Sherlocked'14**

### **Introduction:**

Compete with the cleverest minds in the country to claim yourself to be the best cryptic code breaker of Blitzschlag'14. Cherish the moments of glory after being crowned as the next Sherlock Homes. Here you will have to decipher the codes or puzzles based on some clues or hints given.

Remember "Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth. Be ready to get brain washed.

**CASH PRIZE of INR 3,000/- to be won.**

### **Gameplay:**

- You can work in teams of at most 2.
- There will be two round, and it'll be pen and paper based.
- The 1st round will last for 1 - 2 hours.
- Those selected in the first round will be eligible for the second round which will also be pen and paper base but a little twister and a bit harder.
- Final Judgement would be done after second round.

### **Rules:**

- Anybody putting answers or spoilers on the forum will be disqualified automatically.

- Any sort of attempt to contact moderators personally for answers will lead to disqualification of the participant.
- Funda for winning is simple: Solve all the questions before anybody else.
- The discretion and judgment of the moderators will be final.

### **Judging:**

- The person who completes the event first wins the event.
- In case of more than one person finishing the event, the person who solves all the questions first, will be the winner. The person who solves it second will be first runner-up and so on. In any case of cheating, participant will be immediately disqualified.
- The discretion and judgment of the moderators will be final.

**For rules and regulations, team structure, specifications and judging parameters, please visit our website: <http://blitzschlagmnit.in/>**

### **Contact Us:**

**Rishabh Gupta**  
7891170569

**Rohit Gupta**  
9413023157

## **Crack the Query**

### **GAME PLAY:**

There will be two rounds depending. After every round some teams will be eliminated depending on their scores.

### **ROUND 1**

- The first round will be on paper and will consists of multiple choice questions. Each team will get a set of multiple choice questions with a time limit of 30 minutes to complete those questions.
- At the end of the time, those teams which get maximum number of questions correct will be selected for the next round (rank wise) and the rest of the teams will get eliminated.
- In case of a tie, the team which has taken less time will get selected.

### **ROUND 2**

- The second round will be conducted on computer and will consists of queries. Participants have to solve queries in MYSQL.

- Relations will be given and corresponding queries need to be solved.
- These queries will have to be solved by the teams in a limited time of 1 hour.. At the end of the time, the team which solve the maximum number of queries will be the winner. In case of a tie, the team which has taken less time will be selected.

### **Format & Rules**

- You can work in teams of at most 2.
- The event is an on-site event.
- You wouldn't be allowed to use resources (like Internet etc.) unacceptable to the organizers.
- Any malpractice would lead to straight disqualification.

### **Contact Us**

**Shubham Jain**  
8560813976

**Rahul Verma**

8561067314

# MECHANICAL

The Mechanical Segment has 5 events.

**For rules and regulations, eligibility and team structure, abstract submission details and judging parameters, please visit our website:**

<http://blitzschlagmnit.in/>

**Please mail your abstract to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) with the event name in the subject.**

**Contact:**

**Sandeep soni**

8963090921

## Fork Lift

### **Introduction:**

This spectacular event, Fork-Lift, tests your skills to use entirely, the force of water to design a crane! Water seems strong, eh?

### **Problem Statement:**

Build a crane by Popsicle sticks which is able to place the weights on a platform using hydraulic mechanisms only. You may grab multiple weights at a time

**CASH PRIZE of INR 12,000/- to be won.**

### **Gameplay:**

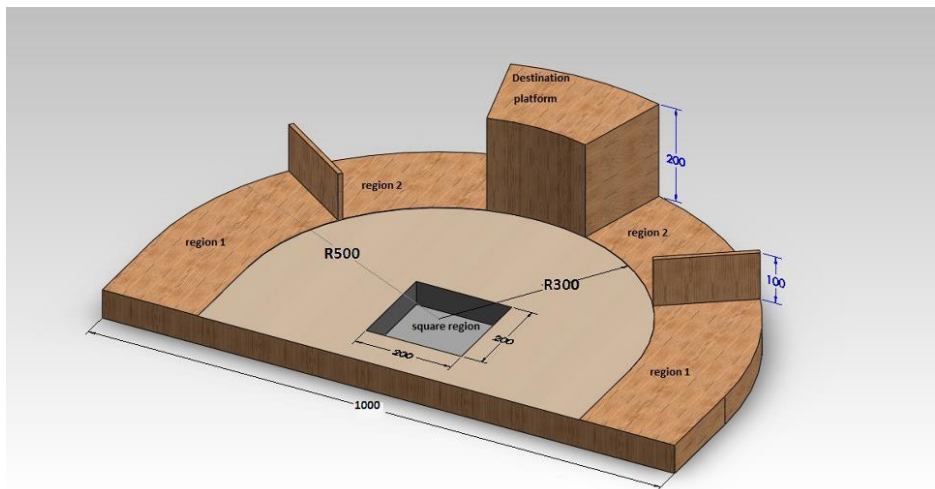
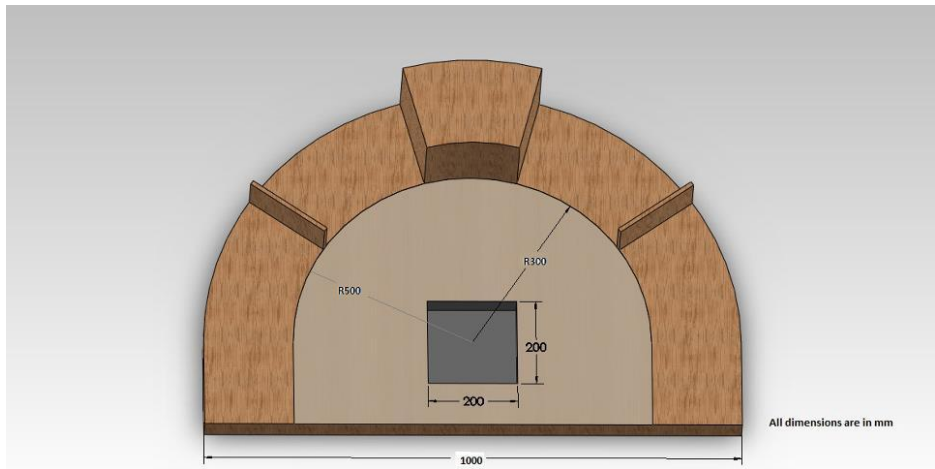
#### **Round 1**

- This is an elimination round.
- In this round crane of each team will be weighed and points will be given to each crane with respect to the lightest crane that will lift the 100 grams weight for 5 seconds.
- Marks of this round will be added in the final score.

#### **Round 2**

- In this round teams will compete with each other's in arena.

### Arena specifications:



- Arena will be consisting of two regions as shown in the picture.
- The regions are specified as region1 and region 2.
- Every team will be given 8 different weights which will be placed in region 1 i.e.4 weights on each side.
- The task for each hydraulic crane is to lift the weight from region 1 and place it on the destination platform which will be at some height.
- If the crane drops the weight in region 1, no points will be awarded.

- If the crane drops the weight in region 2 then only 40% of the total points applicable will be awarded.
- The load once fallen from the crane would not be allowed to lift back and the participants have to go for next weights.
- Square Pit (Crane base) Area: The arena will be consisting of a square region of size (20x20cm square) and having a depth of 6cm as shown in which the base of the crane would be put.
- Participants should make sure that their crane base area should not exceed the given permissible area.
- The weights are in the form of cube of 6cms

## **RULES**

### **General Rules**

- The maximum time of 10 minutes is given to each team to lift as much weight as they can.
- The crane should be controlled by syringes only.
- Team members are not allowed to touch any part of crane, except the controlling syringes. So they should be mounted separately.
- The crane has to pick the weight from the region 1 and place it on the destination platform using hydraulic mechanism only.
- Maximum of two people will be allowed to control the machine at any point of time.
- Use pin joints only.
- Maximum of 3 members per team are allowed.
- Team members can be of different colleges.
- Any damage to arena or weights is not allowed. Team found damaging will be disqualified immediately.
- The organizers reserve all rights to change any of the above rules as they deem fit. Change in rules, if any will be highlighted on the website.
- In case of any discrepancy the decision of the judges will be final and binding to all.
- All students will have to bring their college identification card

### **Rules for abstract submission**



- Participants have to submit a portfolio of their machine, consisting of a written abstract before the competition. Only the shortlisted teams will be eligible to participate in main event at Blitzschlag'14.
- The last date of submitting the portfolio at deepaksuthar000@gmail.com is 15th March 2014.

## Judging:

Points will be awarded on the base of 4 criteria:

### A. Weight of fork-lift

- For this criteria marks will be awarded based on the lightest vehicle.
- $A=50-[(W-WL)/50]*2]$
- W = Weight of Vehicle in Grams
- WL = Weight of lightest vehicle in Grams
- Minimum marks in this criteria will be zero.

### B. Weight lift

- The teams get the points according to the weight they placed on the destination platform.
- If the weight falls in the region 2 then 40% of the total point associated with that weight will be given.
- The points associated with weights are as follows:

Weight Number	Weight (in gm.)	Points
W1	100	10
W2	300	20
W3	500	30
W4	600	40
W5	700	50
W6	800	60
W7	900	80
W8	1000	100

### C. Time taken

- $C = (600 - \text{times taken in seconds}) * 0.2$

#### **D. Bonus points of 10 for lifting multiple weights simultaneously**

- Total marks secured by the team will be  $P = A+B+C+D$
- The winners will be solely decided on the basis of the total marks obtained by the team after both the rounds.

#### **Contact Us:**

Deepa Ram Suthar  
9587856650

Kalpesh Kumar Sharma  
9782940009

## **Ball Launcher**

#### **Problem Statement:**

Ball Launcher is an awesome event on ballistics, the study of dynamics of projectiles. We explore innovative ways for new propulsion systems to launch these devastatingly harmless balls at stationary and moving targets. The fastest way to learn is to compete. Expert marksmen and innovators are welcome to rain bullets till the ammo lasts or the target.

#### **CASH PRIZE of INR 10,000/- to be won.**

#### **Gameplay:**

- Team of 2 to 3 members
- Round one: Testing accuracy under ideal conditions (stationary targets)
- Round two: Testing precision on notoriously moving, slow targets and design.
- So, lock n load; shoot 'em up!

#### **Rules:**

- A team must consist maximum of 3 members.
- Each team will be preparing 1 launcher.
- Target will be approximately 15-30meters.
- For explosion teams can use deodorants etc.
- Use of hazardous explosive are strictly prohibited.

### **Round 1**

- Only 1 team occupies the arena to hit targets. Time limit will be 8 mins.
- Only 12 standard size tennis balls (approx. 6.7cm diameter commonly available) will be supplied for ROUND 1.
- Top 8 teams qualify for ROUND 2.
- 

### **Round 2**

- Two teams will now play simultaneously.
- Teams have to hit the target after every minute.
- The team which hit a target first, owns it.
- A wrong hit would also be counted a hit for opposition.
- Eight ball will be provided in Round 2.
- Top 5 teams will qualify for final evaluation.
- Target will be approximately 15-30meters.

### **Judging:**

- Each hit would earn a team 10 pts.
- Every second saved in Round 1 would earn a team 0.1 pt.
- Only one team will occupy the arena and marks will be awarded on the basis of accuracy to the target. Top 8 teams will proceed to ROUND 2
- Here those 8 teams will compete among each other and the top 5 teams will proceed for final evaluation.
- Among those 5 teams, top 3 will be decided on the basis of design, innovation, accuracy and points of Round 2.
- 20% marks will be awarded for design, innovation.
- Only 12 balls will be provided for each round.
- In case of any dispute decision of event committee will be final.

### **Contact Us:**

Deepak Lamba  
9462557257

Arun Sharma  
9468675472

# Hydro Propeller

## Problem Statement

Design a single stage water rocket using a 2 litre soft drink bottle that uses a combination of pressurized air and water for propulsion to complete a defined task.

**CASH PRIZE of INR 13,000/- to be won.**

## Team Specifications:

- A maximum of three members in a team is allowed in a team.
- Students from different educational institutes are allowed to make a team.

## Design specifications:

- Only water should be used as a propellant, no other gas than air is allowed to be pressurized and provide thrust to the rocket.
- Only pressurized air and water assembly should be used for launching. No other potential, kinetic, or any other form of energy will be permitted for the launch.
- For help you can go through video link mentioned below:
- <http://www.youtube.com/watch?v=X3Dd1HZd7fg>
- <http://www.youtube.com/watch?v=9-tyxuilj2c>
- No component or a body part of the rocket should get detached from the main frame during the flight of the rocket. If detached, then the team will be disqualified.
- The flange and the mouth of the bottle can be used to hold the rocket while pressurizing.
- Any attachments on the bottle should be at least 4cm above the opening of the mouth.
- The upper tip of the rocket should be visible and marked red.

## Rules of the competition:

### Round 1

- The task is to cover the maximum horizontal distance.
- The rocket is to be launched at a specified angle (Angle will be decided at instant) with the help of a platform available at the event place.
- The place where the red tip fall will be considered for scoring.

- Two trials will be given to the participants and the better of two horizontal distances (in meters) will be considered as Round 1 score.
- Participants are allowed to use different rockets for this round.
- The team who successfully crosses 7 meter of distance will be eligible for Round 2.

### **Round 2**

- The task is to take maximum time for the flight by the rocket.
- Two trials will be given to the participants and the best of two will be considered as Round 2 score.
- The participants are allowed to use different rockets for both the trials.
- If the bottle bursts in the air or while launching then the trial will be discarded.
- Students has to bring their own equipment used to construct their rocket.

### **Judging:**

- Final Score = Round 1 Score + 2 x (Round 2 Score)
- The team with highest score according to the scoring formula above will be declared as the winner.
- The judges' decision is final and no correspondence will be entered into.

### **Contact Us:**

Manish Mittal  
8952974465

Siddharth  
8947089488

## **CAD-esign**

### **Problem Statement**

As we all know the importance of intuitive Virtual Design in present technical/industrial era. The entire process including prototype creation, manufacturing, testing, enhancing intelligence begins with a 3D Model using CAD software like Autodesk Inventor, SolidWorks, Catia, Cre-O etc. CAD provides the opportunity to enhance your skills in the field of design which is reflected in improved work quality, more pertinent and usable information, improved control all of which are difficult to quantify.

Thus, we bring you a platform to hone your skills, get a hands-on experience on the software and get rewarded for acquiring these skills and have a glimpse how you can

design a product that can revolutionize the whole world.

## **CASH PRIZE of INR 9,000/- and exciting gift vouchers to be won.**

### **Team Specifications:**

- Any student pursuing B.E., B.Arch., B.Tech.or M.Tech from a recognized institute/ college can participate in this event.
- Maximum 2 participants are allowed in a team.
- Students from different colleges can form a team.

### **Gameplay:**

#### **Stage A**

After the registration, each team will be given a problem and the team have to model the problem on the CAD software. The problem statement will be mailed to the team after registration. Model can be made in any CAD software (Inventor, Cre-O, Catia and Solid Works) but have to submit IGES/IGS/STP format also. In this contest the contestants have to submit online the following:

- 3D Model (Part files, Assembly file, IGES/IGS/STP file of the model)
- 2D Drawing of the same model with proper dimensions in 3rd angle projection.
- Animation of assembly (if possible).
- At least 5 snapshots revealing your work in the same order as done.
- Abstract: A short description about your model within 100 words.

#### **Stage B**

- Top 10 teams from the Stage 'A' are qualified for the Stage B.
- Stage B will be held at MNIT Jaipur campus.
- In this stage, you have to model in a given time constraint.
- Problem Statement for the Stage 'B' will be provided on the spot.

### **Rules:**

- Design should be unique.
- Model should be self-created.

- Aesthetics, Ergonomics will be taken into consideration.
- 2D Drawing, snapshots and abstract are must along with the 3D model; absence of any of the above will lead to rejection.
- Model should be submitted in IGS/IGES/STP format also. (Hint: You can make your model in any CAD-software and export it into IGS/IGES/STP format)
- Decision would be final and binding.
- Submissions after the deadline (25th March, 2014) will not be considered.
- Each team will be given a problem with some variation. Fundamentally problem for all participants will be same but little variation will make them different from other. So all the participants will get different problems.
- If models in the two submissions from different teams are found to be same then this may lead to rejection of both the teams.
- The top 10 teams have to bring their own systems (Laptop) having the CAD software, for Stage B.

### **Judging:**

Distribution of marks are as following:

Sr. No.	Criteria	Marks
1	3D Model	80
2	2D Drawing	20
3	Abstract	10
Total		100

Bonus marks will be provided for animation of assembly.

Marking will be based on the following:

- Accuracy of your model in Stage A
- Creativity in the model
- Clarity of the Abstract
- Proper dimensioning
- Understanding of the software

**For rules and regulations, eligibility and team structure, abstract submission details, pre-game setup, arena, specifications and judging parameters, please visit**

our website: <http://blitzschlagmnit.in/>

### Contact Us:

Rajat Jain  
8946897934

Vijendra Jain  
8963090904

## AutoQuiz

### Introduction

Do you know who coined the term Automobile? Which is the first Hybrid Car in India? Did you know that Dodge Tomahawk bike had 10 cylinders? Or the Adolf Hitler gave the order that led to the production of the Volkswagen Beetle? If the answer is yes, you're in luck. This April comes a treat for all Auto Aficionados, The AutoQuiz. With a combination of mind boggling questions, core concepts and some really exciting rounds, AutoQuiz promises to be a challenging test of your intellect! AutoQuiz is more than people demonstrating their auto gyaan. It's about auto lovers learning from each other and exploring the exhilarating world of automobiles. To sum up, for an auto lover Auto Quotient is not just a platform, it's a destination. The time to prove yourselves has come.

**CASH PRIZE of INR 1,000/- and exciting goodies to be won.**

### Contact Us:

Ashu Airan  
9782094876

Ankit Garg  
9509309837





- The dam must be made out of cardboard, covered with layers of butter paper or gelatin sheet for water resistance.
- Only Fevicol or fevi-kwik are allowed to be used as adhesives.
- Foundation material will be provided (hardboard sheet), which, the participants will have to join to their dam using the same material provided.
- Foundation should fit in the brackets provided in the reservoir so as to make the dam stable for loading.
- No restrictions on the type of dam.
- Dimensions: Height 30 cm, Length 50 cm, Thickness Variable

#### **Team Specifications**

- A team may have a minimum of 3 and a maximum of 5 members.
- Each and every member must have the identity card of their respective institutes with them.

#### **Reservoir Specifications**

- The reservoir will be a cuboidal container (made of iron) open from one side for fixing the dam.
- It will be divided in three compartments separated by an iron plate so as to increase the water load.

#### **Material Constraints**

- Cardboards, Butter papers, Popsicle sticks (length 115 mm, width 10 mm and thickness 3 mm approx.) and adhesives (fevicol and fevi-kwik only) will be provided to the contestants.
- The popsicle sticks can be cut or trimmed to any shape or size.
- Use of any material other than those specified will lead to disqualification.

#### **Testing:**

- No alterations in the design will be allowed, it has to be the same as mentioned in the abstract.
- The structure will firstly be weighed.
- The dam will be placed at the open edge of the reservoir and water will be filled gradually with the iron plate in the first position.
- If the dam sustains full load of first compartment, the reservoir capacity will be increased by shifting the plate to the next position.

- If more than 1 structure sustains full capacity of the reservoir, dynamic effects of water will be tested and the time and load of failure will be calculated.
- The structure will be declared failed in case water starts leaking through it or if the structure topples completely under the effect of the load.

### **Judging:**

- The winners will be decided by calculating the efficiency of the dam given as:
- Efficiency = load sustained (kg) / mass of the dam (kg)
- Extra points will be awarded for innovation in the design.
- In any case, the decision of the coordinators or the judges will be final and binding to all.
- Certificates of excellence will be provided to the top 3 teams and certificate of consolation to the top 5 teams.

**Contact Us:**  
**Shubham Goyal**  
 8952003690

## **Bridge The Gorge**

### **Problem Statement:**

You have to design and construct a statically determinate & stable bridge truss using limited number of popsicle sticks and other limited material such that your bridge fulfils following dimensional criteria:

- Span (length) of the bridge = 60 centimetres
- Clear width of the bridge = 10 centimetres
- Height of the bridge = 10 to 20 centimetres

A vehicle having height of 10 cm should pass from one end to another end of the deck without any obstruction. Position of members in the deck should be such that there should be no difficulty in placing a metallic plate of size 20cm x 6cm for applying load using a chain and pan arrangement at the middle of the deck (during final testing of the bridge).

**CASH PRIZE of INR 5,000/- to be won.**

### **Gameplay:**

### **Round 1**

This round consists of some basic questions related to the structure design of the bridges so you have to have some conceptual knowledge before designing.

### **Round 2**

This round is the designing round and you have to design the bridge with the materials provided and check for the most stable structure takes place.

#### **Contact Us:**

**Avichal Sharma**  
94132650

## **Civiquest**

#### **Introduction:**

Stop saying "I wish" start saying "I will". With this will power, knowledge and little fate jump in the challenge and never know what awaits you in next question.

**CASH PRIZE of INR 3,000/- and goodies to be won.**

#### **Contact Us:**

**Deepesh Gupta**  
9252999939

## **CHEMICAL**

The Civil Segment has 4 events.

**For rules and regulations, eligibility and team structure, abstract submission details and judging parameters, please visit our website:**

**<http://blitzschlagmnit.in/>**

**Please mail your abstract to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) with the event name in the subject.**

**Contact:**

**Kuldeep Singh Bhati**  
**8764305365**

## Fire Extinguisher

### Introduction

First thing which comes into our mind when we see blazing lashes of fire is fire extinguisher. We all know how a fire extinguisher works but here we provide you a chance to showcase your talent. Come and grab this opportunity as you get heated up by this event.

**CASH PRIZE of INR 4,500/- to be won.**

### Gameplay:

- Each team will consist of two members.
- Only those materials mentioned above should be used in making the extinguisher.
- Event coordinator's decision will be final & abiding.
- Teams should emphasize on creativeness in making the extinguisher.
- Make an abstract having information about how you will make your fire extinguisher.
- Mail this abstract along with names and contact numbers of group members to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) by 31st March, 2014.

### Contact Us:

Govind Gautam  
8952991665

Vaibhav Bafna  
9950622701

## Torpedo

### Introduction

Torpedo brings the opportunity for all those enthusiastic and innovative minds, who are never tired of playing with chemicals. Torpedo is a fun, interactive and open-ended learning experience for undergraduate chemical engineering students.

## **CASH PRIZE of INR 6,000/- to be won.**

### **Gameplay:**

- Make a report in pdf/doc format giving details about your Torpedo generator and description of chemicals used for producing smoke.
- Send the report to sarin4593@gmail.com with the subject "Torpedo\_Full Name" latest by midnight of March 31st, 2014. Please title your file/entry as \_ and mention your email id as well as contact number to be used for further contact.

### **Contact Us:**

Prateek Sarin  
8559883632

Vijendra Gupta  
9461410188

## **ChemDrive**

### **Introduction**

Chem-drive brings the opportunity for all those enthusiastic and innovative minds, who are never tired of playing with chemicals. Chem-drive is a fun, interactive and open-ended learning experience for undergraduate chemical engineering students.

## **CASH PRIZE of INR 7,000/- to be won.**

### **Gameplay:**

- Make a report in pdf/doc format giving details about your Vehicle design and description of chemical reaction/power source.
- Send the report to chemical@blitzschlagmnit.in with the subject "ChemDrive\_Full-name" latest by midnight of March 31st, 2014. Please title your file/entry as \_ and mention your email id as well as contact number to be used for further contact.

### **Contact Us:**

Aayush Agarwal  
9460804673

Manish Mehta  
7891212811

# ChemiQuiz

## Introduction

Do you have the grit, passion and skills to be an ultimate CHEM-E? Then put your thinking caps and be ready to face the maze of questions which will lead you to the world of “Chemical Engineering”. Equip yourself and get ready to face the heat.

**CASH PRIZE of INR 2,000/- to be won.**

## Contact Us:

Anchal Sharma  
9461478875

Lipi Arora  
9462729747

# CONCEVOIR (The Archi fest)

The Architecture Segment has 7 events.

**For rules and regulations, eligibility and team structure, abstract submission details and judging parameters, please visit our website:**  
**<http://blitzschlagmnit.in/>**

**Contact:**

## Castle Clay

### Problem Statement:

Show your creativity and design a structure (building component) from clay, a game you must have played in your childhood, if not, now is the time, but this time it should be bigger and better. The structure should be aesthetically appealing, meaningful and stable. The time allotted will be 2 hour.

**CASH PRIZE of INR 2,000/- and goodies worth INR 1,500/- to be won.**

**Contact Us:**

Tarun Verma  
9001108844

Sunil Kumar  
9549878138

Vikram Saraswa  
9530296417

## Elevated Elevation

**Problem Statement:**

Design a tall building structure using jute sticks and wool as the basic element. The variation in the elevation can be done by colour and form of structure. inspiration can be taken from skyscrapers and different styles of knitting practices.

**CASH PRIZE of INR 1,500/- and goodies worth INR 1,500/- to be won.**

**Contact Us:**

Somya Mishra  
9530078115

Nikhil Bhandari  
8952985202

## Klotter

**Problem Statement:**

Klotter is a Graffiti Design Competition.

**CASH PRIZE of INR 2,000/- and goodies worth INR 1,500/- to be won.**

**Contact Us:**

Arvind Dahiya  
8952017452

Avinesh Gangwal  
8560021935

## Mural Making

**Problem Statement:**

Mural design is an art of making wall hangings intricately ornamented with the materials provided. Designs would be judged on the basis of concept behind the Design, neatness, form and style.



**CASH PRIZE of INR 1,600/- and goodies worth INR 1,500/- to be won.**

**Contact Us:**

Shally Suhag  
9785105239

Mayuri Sodani  
9413003943

## **Tattoo Making**

**Problem Statement:**

Description:-participants are request make a tattoo on each other on any part of the body on a given theme and joining the two should justify the given theme.

**CASH PRIZE of INR 1,500/- and goodies worth INR 1,500/- to be won.**

**Contact Us:**

Poonam Sharma  
9660539775

Kapila Suthar  
9461376634

## **T-shirt Design**

**Problem Statement:**

Participant is free to design the t-shirt in any style, may be slogan, logo, abstract. Every participant will be awarded the t-shirt designed by himself.

**CASH PRIZE of INR 1,500/- and goodies worth INR 1,500/- to be won.**

**Contact Us:**

Rakshith Chatrala  
9785493123

# Twist N Mould

## Problem Statement:

Making an interesting standing / constructible form using wire. Each team has to design a structure (building, monument, art figure) which should have emotions or expression shown in it. The structure should have a dynamic character as well as depicting motion or fluidity in its form. Or in other words it can be said as the structure should have a life of its own.

**CASH PRIZE of INR 1,600/- and goodies worth INR 1,500/- to be won.**

## Contact Us:

Silvi Jhangra  
9529472266

Komal Thawrani  
8239939154

# MOMENTS

**For rules and regulations, eligibility, team structure and judging parameters, please visit our website: <http://blitzschlagmnit.in/>**

## Introduction:

To Promote Photography as an art form at National Level, we plan to accomplish several goals by arranging "National Photography Exhibition: Moments'14":

- Organizing workshops and competitions related to photography.
- Maintain liaison with other photographic societies and prominent photographers of India.
- To develop the photography skills of fresh minds and encourage their creativity.

**CASH PRIZE of worth 20,000/- to be won.**

## Gameplay:

- A total of ten category of photographs will be exhibited: Issues, People, Heritage, Street, Nature, Portrait, Abstract, Campus life, Engineering Marvels and Mobile Photography.

## **Timeline (Tentative):**

- Inauguration Ceremony: 4th April 2014
- Photo Exhibition: 4th April -6th April 2014
- Exhibition Closure Ceremony: 6th April 2014

**For more info on type of topics please visit our website:**

**<http://blitzschlagmnit.in/>**

## **Contact Us:**

**Vikas Rathore**  
7568156181

**Mayank Rathi**  
8890067748

# **FILM FESTIVAL**

The Film Festival Segment has 4 events

**For rules and regulations, eligibility and team structure, abstract submission details and judging parameters, please visit our website:**

**<http://blitzschlagmnit.in/>**

## **Contact:**

**Bhuwan Somani**  
9829384198

## **72 Hours**

### **Introduction:**

Editors, this is an event for you. With a handful of hours you gotta make your passion a reality. All you have to do is to perform the task we give you in 72 hrs. Remember,

it's all about innovation.

**CASH PRIZE of INR 2,000/- to be won.**

**Contact Us:**

**Rahul jangid**  
9929337654

**Aamod**  
8386099714

## Cut Shots

**Introduction:**

Lights, Camera, Action! We suppose you know what this is all about. Yes! It's the main event people! Send in your short film to us of any genre which you believe is capable of winning not just the audiences' hearts, but even the critics'. Give it your all, because it's going to get really tough.

**CASH PRIZE of INR 26,000/- to be won.**

**Contact Us:**

**Bhuwan**  
9829384198

**Anmol**  
8890171501

## Limitless

**Introduction:**

This one is for all you critics. Aren't you tired of watching the same type of films over and over again? How about making your own script this time? Think you got what it takes? Well it's time to put your thinking caps on and giving the world a taste of something fresh and riveting! Not to forget, you've only got 3000 words to produce some magic.

**CASH PRIZE of INR 2,000/- to be won.**

**Contact Us:**

**Sourabh**  
9413552305

**Rashika**  
7568072229

**Sakshi**  
9413579753

## VINE-O-MANIA

### Introduction:

Think you can entertain a crowd and make them laugh insanely within 10 seconds? If yes, then take up your phone, digital camera, DSLR, etc. and record a random video of length 6 to 10 seconds, and upload it on the FILM FESTIVAL MNIT JAIPUR page. Try it out! It's short, simple, and you might just be the lucky one to win a prize.

**CASH PRIZE of worth 4,000/- to be won.**

### Contact Us:

Rishiraj  
9461673637

Gaurang  
8239395332

## MANAGEMENT

The Management Segment has 5 events.

Please mail your abstract to [abstract@blitzschlagmnit.in](mailto:abstract@blitzschlagmnit.in) with the event name in the subject.

### Contact:

Gopi  
9799921301

## Ad-mania

### Introduction:

The world is but a market place and we are the best advertisers. We market our emotions every day in front of our friends, strangers. This makes you perfectly capable of conceptualizing ads. Remember those conversations with friends and the one liner you came up with? It's time. They must be made public!

**CASH PRIZE of INR 5,000/- to be won.**

**Contact Us:****Gopi****9799921301**

## Biz Quiz (Business Quiz)

**Introduction:**

Are you an avid tabloid reader? We mean an avid 'business' tabloid reader? And you know about the who's who of the bizz town? Looks like you make a match! Test your hippocampus and earn some goodies in the bargain!

**CASH PRIZE of INR 3,000/- to be won.****Contact Us:**

Surangama Banerjee

7727049562

Sameer Aggarwal

9571619005

## Bull and Bear

**Introduction**

Have you ever tried to invest money in Share Market? If you haven't done yet then now you have the opportunity to test your luck in the game of 'Bulls and Bears'. In this game, you will be provided some virtual money and the list of companies will be displayed to you. All you have to do is Transaction of shares of given companies using the virtual money provided! Then you have to face the ups and downs in share marketing tantalizing, brain racking, brow beating.

**CASH PRIZE of INR 9,000/- to be won.****Contact Us:**

Rahul Shahi

7733013900

Priya Mittal

9617366678

## Business Blueprint (Business Plan)

**Introduction**

Come up with an innovative business plan and be the poster boys of Indian business!

**CASH PRIZE of INR 4,000/- to be won..**

**Contact Us:**

**Gopi Yadav  
9799921301**

## **Management Roadies**

**Introduction:**

DMS Roadies Events is organizing MNIT Jaipur version of the popular reality show Roadies, one of the major hits amongst the junta. With more or less every one coming here from their transient period of rigorous mental activity a sneak out to the adventurous and thrilling world is a major hit!

**CASH PRIZE of INR 6,000/- to be won.**

**Contact Us**

**Ankit Gangwal  
9001460658**

**Sarita Bansal  
9001434158**

# LABYRINTH – LAN Gaming

For Rules and regulations, eligibility and team structure and judging parameters, please visit our website: <http://blitzschlagmnit.in/>

**CASH PRIZE of INR 10,000/- to be won.**

## Counter Strike 1.6

Counter-Strike is a first-person shooter in which players join either the terrorist or counter-terrorist team. Each team attempts to eliminate the opposing team. Various LAN tournaments are held throughout the world to compete in the extreme environment of Counter Strike.

## Age of Empires II

Its time to unleash the beast within . Come fight your demons. Fight, perspire, destroy on your way to the top. BLITZSCHLAG'14 presents to you an exhilarating experience of Age Of Empires. Come and game your way to the top that is if you got what it takes. BLITZSCHLAG'14 promises to test your skills to their upmost level. So gear up and be prepared for a hell of a fight.

## FIFA

Experience the 90 mins of heart pumping football, feel the team chemistry of your side and sense of momentum shift as you battle for supremacy on the ground. As the midfieldpace and performance of your players as you execute strategic ld general dictating the decision through tactical play button configuration.

## Need For Speed - Most Wanted

Wanna know what it feels like when the adrenaline rushes up one's veins when one speeds through dirty city streets in a sleek highly customized machine of pure power built solely for the purpose of breaking speed limits. Test your skills against other racers as you race through breathtaking realistic urban settings.



# HIGHLIGHTS OF BLITZSCHLAG'14

## WORKSHOPS

- Ethical Hacking & Information security
- Android
- Legged mobile botix
- 3D Animation
- Automotive IC Engines
- **Individual Certified Certification will be given to all participants.**
- **Contact: Chirag Jain 9413085091**

## TECH CARNIVAL

- Technology Exhibitions
- Rural Exhibitions
- Technology Behind Latest Gadgets
- Whiz Kids

## FUN ZONE @ BLITZSCHLAG

- Treasure Hunt
- Board Games
- Technobuzz
- Labyrinth
- Cube-o-Shire
- Adventure Games

## GUEST LECTURES

## GRAND NITES

- Laser Show
- 3D Show
- Celebrity Night

## RAMBA SAMBA

DANCE FIRST...THINK LATER!!

R u creative like the jabbawockeez?

R u high flying like the super crew?

R u flamboyant like the quest crew?

R u show stoppers like the We are heroes?

R u agile like the poreotix?

R u iconoclastic like the I am me?

R u backstabbers like the Elektorlytes?

So if you think you have any one of the above talents with you then it's time to BANG ON!! **BODIES NEVER LIE**...get ready to shake your body, show your talent and to become the best amongst the best with hip-hop in your heart, b-boying in soul, krumping with aggression, tapping in your legs, tutting in your hands. Burn the stage with your passion!!

### ROUND 1:

Best Video entries get a direct entry to the Round 1. Teams would be required to submit a 5 minute video of their performance with minimum 5 dancers.

Sole judging criterion would be choreography, Energy and Synchronization.

Video Recordings (accompanied by the name of the college, details of participants and scanned copy of college ID cards) must be submitted before the first week of February, 2013 in one of the following ways:

1. Upload the video on [www.youtube.com](http://www.youtube.com) or any other such website and mail the link to [rambasamba14@gmail.com](mailto:rambasamba14@gmail.com)

2. E-mail to [rambasamba14@gmail.com](mailto:rambasamba14@gmail.com)

\*Note that the size of the file may be too large to mail depending on your video clip, and your email provider. In such a case, use one of the other options.

3. Burn on a CD/DVD and post it to:

AAYUSH GEHLOT

Address: Room no 23 Hostel 6 , MNIT Jaipur, Malaviya nagar, Jaipur  
Please confirm the receipt of your entry by calling on 8947845963.

### **ROUND 2 (PRELIMS):**

Teams selected after video round need to perform an energetic western dance from the main dance sequence without any theme for the same. Participants must incorporate any style(s) from Hip-Hop, Popping, Tutting, Krumping, Breakdance, Stepping, B-boying, Contraptions and Western

TIME LIMIT: 2-3 minutes (including setup and clearance time)

### **ROUND 2:**

Teams qualified from prelims will perform an extended version of the dance sequence in prelims.

**TIME LIMIT:** 7-10 minutes for performance  
3 minutes for setup and clearance time.

**NOTE:** Total members present on the stage during performance shall be in the range including 4 to 15.

### **FINALS:**

Details of final round will be updated after the video round.

### **RULES:**

- Registration fees for each team is Rs 1000/-.
- Max 3 teams per college are allowed and each member must bring his/her original ID cards on the day.
- Usage of props is allowed. These have to be brought by the teams themselves but the organizers hold the discretion of allowing it on stage.
- Pre-recorded music should be brought in a CD/DVD or a pen drive in .cda or .mp3 format only (Other formats may not be supported on the computer – use them at your own risk).
- Teams must follow the Time Limits. Teams shall be penalized by judges for not doing so.
- Any kind of fluid, flame or heavy object is not allowed on stage.
- Obscenity of any kind is not allowed and will lead to immediate disqualification.
- The decision of the judges shall be final and binding.
- No professional dancers are allowed for any of the college teams.

### **Contact:**

**Aayush Gehlot**  
8947845963

**Pamaljeet Singh Sidhu**  
9649970579

# TECH EXPO

## Objective:

This event is an open call for ideas encompassing realms of Science, Technology, Engineering, Social issues, among others. The domain of Tech-Expo'14 stretches right from the foundations of basic science to the marvels of engineering. Furthermore, it also encompasses the realm of Social Sector, Entrepreneurship, Management, etc. You surely do not want to miss that! So brace yourselves and be a part of this amazing three day event and have the time of your life. An unforgettable experience awaits you..

## Guidelines:

1. Please fill the form to register your project (link given below).
2. Attach your work (PowerPoint Presentations, Images of Papers, Working or Non-Working Models and Relevant Videos) along with the form.
3. Each team may consist of a minimum of 1 member and a maximum of 4 members, from same or different disciplines. The team should have one representative out of its members, who can be contacted for information and updates.
4. In response to your registration, you will be given a project code.
5. The project code will act as a reference or identity through which all the relevant information and updates will be shared with you.
6. Students can register for one or more projects.

## Evaluation:

Your projects would be judged by a panel of eminent academia, pioneers from the industry among others. Feedback for all projects will be given.

## Awards and incentives:

1. Recognition and acknowledgement through certificates.
2. Cash awards of INR 2,00,000 are to be given.
3. Since necessary authorities/companies/investors will be called for the event, if your project is found fantastic, they might like your idea and mentors/industries may fund it.

## Contact Details

Siddhartha Shah  
+91 9414408675

Deenbandhu Agrawal  
+91-8824778970

# DETAILS FOR ACCOMODATION

Details regarding the accommodation in MNIT during BLITZSCHLAG'14 are as follows:

- An amount of Rs. 700/- per person (Rs 100/- refundable) is accommodation fee for all three days (which will also enable you to participate in all three days events).
- Separate accommodation will be provided in well furnished rooms to boys and girls.
- Accommodation along with required accessories (mattresses, buckets, and mugs) per room basis will be provided beforehand itself.
- Each participant must provide his/her college identification card.
- Damage to any college property and misbehaviour of any kind will not be tolerated and a fine will be imposed accordingly.
- Carry valuables at your own risk. BLITZSCHLAG'14 will not be held responsible for any loss of property.
- Limited accommodation thus on first come first serve basis.

For further queries please contact:

**Manish Mehta** +91 7891212811

Or mail us at: [hospitality@blitzschlagmnit.in](mailto:hospitality@blitzschlagmnit.in)

# GENERAL PARTICIPATION RULES

- Entry only on valid college ID or college fee receipt with valid photo ID.
- Any kind of obscenity, vulgarity, misbehavior will lead to immediate disqualification.
- Judge's decision is final and binding.
- Registration counters of events open 1hr 30 mins before the event and close 30 mins before the event unless specified otherwise.
- All sharp objects, batteries, inflammable objects, cameras, lasers and torches will not be allowed.
- No time jumps at the Tech-Desk during the event.
- Participants have to follow general audience flow once the event gets over.

For further queries please contact:

**Deenbandhu Agarwal** +91 8824778970

Or mail us at: [technical@blitzschlagmnit.in](mailto:technical@blitzschlagmnit.in)

# CONTACT

For any queries please contact:

## Technical Secretaries

**Siddhartha Shah**

+91 9799918797

**Chirag Jain**

+91 94130850091

**Deenbandhu Agarwal**

+91 8824778970

## Organizing Secretary

**Anshul Goyal** +91 8946905590

**Anshulgoyal65@gmail.com**

## General secretary

**Aditya Kumar** +91 9785234810

## Joint Secretaries

**Vikas Legha**

+91 9782460637

**Mukul Jain**

+91 8947957142

**Prithvi Jain**

+91 9983370165

## Accommodation

**Manish Mehta**

+91 7891212811

For further details, please visit our  
website: <http://blitzschlagmnit.in/>

In case of any enquires please mail us at: [contact@blitzschlagmnit.in](mailto:contact@blitzschlagmnit.in)