



March – June 2018

# MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

## TECH SAGA

The newsletter of CSE & IT department



### **Editor's Note**

This session's focus of the department is on building a practical learning based academic ecosystem. The department has taken projects from the M.P. Police to improve law enforcement efficiency. We hope for the society's betterment with technology as a stepping stone.

Dr. Akhilesh Tiwari  
HOD, CSE & IT Dept.

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### **Editorial board -**

Faculty Members -

- Prof. Amit Kumar, Assistant Professor, Dept. of CSE & IT
- Prof. Punit K. Johari, Assistant Professor, Dept. of CSE & IT

Student Members -

- Sparsh Verma, CSE final year, Department of CSE & IT
- Sonali Bansal, CSE final year, Department of CSE & IT

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"We are what our thoughts have made us; so take care about what you think. Words are secondary. Thoughts live; they travel far."

Swami Vivekananda

## FACULTY OUTREACH

1. **Prof. Dheeraj Gurjar, Assistant Professor CSE & IT department,** Attended one day conference on Smart Innovations In Communications And Computational Sciences (ICSICCS-2018), **DAVV INDORE,** 29 May 2018.
2. **Prof. Khushboo Agarwal, Assistant Professor CSE & IT department,** Attended One Day Seminar on Digital Judiciary building smart course, MITS Gwalior, 15 April 2018.
3. **Dr. Manish Dixit, Associate Professor, Dept of CSE & IT,** Attended One Day Seminar on Digital Judiciary building smart course, MITS Gwalior, 15 April 2018.
4. **Prof. Jaimala Jha, Assistant Professor CSE & IT department,** Attended One Day Seminar on Digital Judiciary building smart course, MITS Gwalior, 15 April 2018.
5. **Prof. R.R. Singh Makwana , Assistant Professor CSE & IT department,** Attended One Day Seminar on Digital Judiciary building smart course, MITS Gwalior, 15 April 2018.
6. **Prof. Dheeraj Gurjar, Assistant Professor CSE & IT department,** Attended two day workshop on Assuring Global Quality In Technical Education Through Outcome Based Education(STC), MITS Gwalior, 10-11 March 2018.
7. **Prof. Khushboo Agarwal, Assistant Professor CSE & IT department,** Attended five days workshop on Optimization Techniques and its Engineering Application, MITS Gwalior, 15-19 March 2018.

8. **Prof. Jaimala Jha, Assistant Professor CSE & IT department,** Attended five days workshop on Optimization Techniques and its Engineering Application, MITS Gwalior, 15-19 March 2018.
9. **Prof. Amit Kumar Manjhvar, Assistant Professor CSE & IT department,** Attended two days STC on Assuring Global Quality In Technical Education Through Outcome Based Education(STC), MITS Gwalior, 10-11 March 2018.
10. **Dr. Manish Dixit,** Associate Professor, Dept of CSE & IT, Attended five days STC on Assuring Global Quality in Technical Education through Outcome Based Education at MITS Gwalior, 10-14 March 2018.
11. **Prof. Vishakha Agarwal, Prof. Nishtha Parashar, Prof. Kirti Gaur, Prof. Pallavi Gupta , Prof. Abhishek Dixit Assistant Professor CSE & IT department,** Attended two days STC on Assuring Global Quality In Technical Education Through Outcome Based Education(STC), MITS Gwalior, 10-11 March 2018.
12. **Dr. Sanjiv Sharma, Assistant Professor CSE & IT department,** Attended two days STC on Assuring Global Quality In Technical Education Through Outcome Based Education(STC), MITS Gwalior, 10-11 March 2018.
13. **Prof. Mahesh Parmar, Assistant Professor CSE & IT department,** Attended two days STC on Assuring Global Quality In Technical Education Through Outcome Based Education(STC), MITS Gwalior, 10-11 March 2018.
14. **Prof. R.R. Singh Makwana, Assistant Professor CSE & IT department,** Attended two days STC on Assuring Global Quality In Technical Education Through Outcome Based Education(STC), MITS Gwalior, 10-11 March 2018.
15. **Dr. R. K. Gupta, Dr. Akhilesh Tiwari, Dr. Manish Dixit , Prof. Punit Kumar Johari, Dr. Sanjiv Sharma, Prof. Vikas Sejwar, Prof. Abhilash Sonkar, Prof. Jaimala Jha** attended five days Summer Training Program on Active Learning for senior faculty under TEQUIP-III at IIIT Indore , 18-22 June & 25-29 June 2018.



## TRAINING PROGRAMMES ATTENDED BY STAFF

**Er. Santosh Sharma & Shri Sanjay Aroliya** attended five day training on “STTP on Linux Administration Using Centos”, NITTTR, Chandigarh, 30 April - 4 May 2018.

## RESEARCH PUBLICATIONS

1. **Shalini Stalin, Priti Maheshwary, Piyush Kumar Shukla, Akhilesh Tiwari, Ankur Khare** *"Fast Chaotic Encryption Using Circuits For Mobile And Cloud Computing: Investigations Under The Umbrella Of Cryptography"* Soft-Computing-Based Nonlinear Control Systems Design, **IGI Global USA**, p. 252-277, 2018.
2. **Pankaj Agrawal, Akhilesh Tiwari, Uday Pratap Singh**, *"An Innovative Design Of RF Energy Harvester For Wireless Sensor Devices"* Soft-Computing-Based Nonlinear Control Systems Design, **IGI Global USA**, pg 311-342, 2018.
3. **Shraddha Pandit, Piyush Kumar Shukla, Akhilesh Tiwari**, *"Fractal Compression of an AVI Video File using DWT and Particle Swarm Optimization"* International Journal of Computer Science and Information Security, Vol.16, No.1, p. 128-131, 2018.
4. **Shraddha Pandit, Piyush Kumar Shukla, Akhilesh Tiwari**, *"A Proficient Video Compression Method Based On DWT & HV Partition Fractal Transform Function"*, International Journal of Scientific Engineering And Technology, Volume 7, Issue 2, p. 20-24, 2018.
5. **Shraddha Pandit, Piyush Kumar Shukla, Akhilesh Tiwari**, *"Enhance the Performance of Video Compression Based on Fractal H-V Partition Technique with Particle Swarm Optimization"*, International Journal of Computer Science And Engineering, Volume 6, Issue 1, p. 31-35, 2018.
6. **Uday Pratap Singh, Akhilesh Tiwari, Rajeev Kumar Singh**, *"Approximation Of Nonlinear Discrete-Time System Using FA-Based Neural Network"*, Granular Computing (**Springer International Publishing**), Volume 3, Issue 1, p. 49-59, 2018.
7. **Krishna Kumar Sharma, Dheeraj Gurjar, Monika Jyotyana, Vinod Kumari**, *"Denoising Of Brain MRI Images Using A Hybrid Filter Method Of Sylvester-Lyapunov Equation And Non Local Means"*, International Conference on Smart Innovations in Communications and Computational Sciences (**ICSICCS-2018**), DAVV, Indore, April 2018.



## BOOK CHAPTER

1. **Sowkarthika B, Akhilesh Tiwari, R. K. Gupta, Uday Pratap Singh** “*Utility and Significance of Vague Set Theory and Advanced Optimization Mechanisms for Uncertainty Management*” *Soft-Computing-Based Nonlinear Control Systems Design, IGI Global USA*, p. 191-219, 2018.
2. **Vishakha Agarwal, Akhilesh Tiwari, R.K. Gupta, Uday Pratap Singh,** “*Discovering Optimal Patterns For Forensic Pattern Warehouse*” *Advances in Intelligent Systems and Computing (SCOPUS) (Springer Nature Singapore), Series Volume 562, p.101-108 , 2018.*

## STUDENT ACTIVITIES & ACHIEVEMENTS

S.No.	Name of student	CAT/GATE/CEED etc.	Year	Marks	AIR
1.	Akash Dohare	GATE	2018	17.33	27344
2.	Neeraj Sonaniya	GATE	2018	40.0	3135
3.	Sandeep Mishra	GATE	2018	35.33	5076
4.	Rashi Agrawal	GATE	2018	46.33	1644
5.	Ravi Kumar Singh	GATE	2018	42.67	2410
6.	Abhishek Singh	GATE	2018	37.0	4276
7.	Shraddhanand Shah	GATE	2018	26.67	11358
8.	Vikas Gupta	GATE	2018	25.33	12782
9.	Trisha Datta	GATE	2018	45.0	1893
10.	Kamlesh Marathe	GATE	2018	67.33	94
11.	Shraddha	GATE	2018	47.67	1401
12.	Prakhar Shukla	GATE	2018	49.0	1207
13.	Arjita Marelay	GATE	2018	42.0	2606
14.	Falguni Patil	GATE	2018	19.0	23327
15.	Samriddhi Sanadhya	GATE	2018	64.33	148
16.	Harshvardhan Shivhare	GATE	2018	62.0	213
17.	Sakshi Vyas	GATE	2018	27.67	10374
18.	Charu Singh	GATE	2018	46.0	1707
19.	Vikas Sharma	GATE	2018	51.33	918
20.	Aniraj Soni	GATE	2018	37.67	3988
21.	Aditya Ramteke	GATE	2018	19.33	22621
22.	Shivashish Thakur	GATE	2018	46.33	1644

23.	Poorvi Kundwani	GATE	2018	25.0	13185
24.	Shubha Pankaj	GATE	2018	36.33	4571
25.	Shivam Singh Thakur	GATE	2018	24.67	13600
26.	Pranjal Gupta	GATE	2018	53.67	687
27.	Alankrat Daga	GATE	2018	31.33	7414
28.	Manjul Mayank Tripathi	GATE	2018	31.67	7199
29.	Kishan Singhal	GATE	2018	45.33	1824
30.	Meghna Gupta	GATE	2018	28.33	9752
31.	Harshit Saxena	GATE	2018	41	2866
32.	Deeksha Chouksey	GATE	2018	37.33	4125
33.	Rohan Gupta	GATE	2018	45.67	1760
34.	Vipul Agarwal	GATE	2018	34.33	5615
35.	Suraj S	GATE	2018	56.67	453
36.	Ashutosh Sharma	GATE	2018	26.33	11708
37.	Shubham Katiyar	GATE	2018	39.33	3381
38.	Shiva Gupta	GATE	2018	50.67	1002
39.	Vivek Anand Sharma	GATE	2018	34.33	5615
40.	Yash Karkur	GATE	2018	24.33	14050
41.	Himanshu Goyal	GATE	2018	27.67	10374
42.	Arvind Nahar	GATE	2018	25.67	12404
43.	Shipra Sahu	GATE	2018	23	15952
44.	Aditya Sharma	GATE	2018	30.33	8122

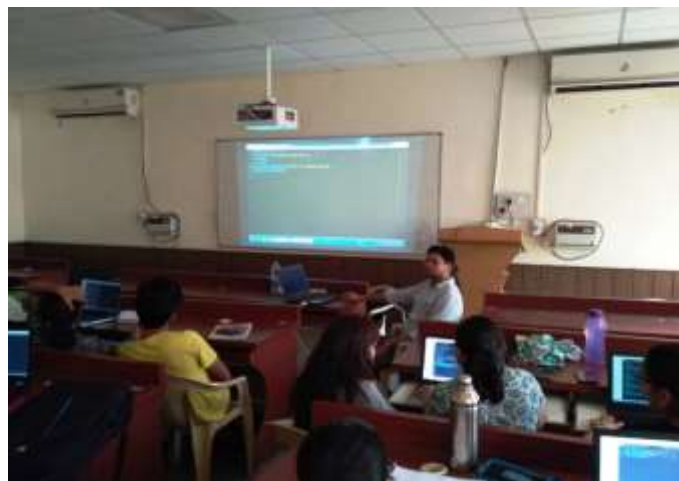
## CLUB ACTIVITIES

Animation club organize the “3D Gaming Event Ka-boom” A gaming event was organized on 17<sup>th</sup> march 2018. This is the virtual gaming event in which CS-GO, BLUR & FIFA 18 are organized. **Winners:** In **Counter Strike**, Karan Tripathi BE CSE final year & his team won the cash prize Rs 1100/-. In **FIFA 18**, Ashutosh Singh BE 1<sup>st</sup> year won cash Prize Rs 500/-



## SUMMER INTERNSHIP PROGRAMME

1. **User Interface Design** is conducted by Prof. Amit Kumar Manjhvar, 18 May-14 June 2018, registered participants 30.
2. **Problem Solving Through Programming** by Prof. Sheo Kumar, 18 May-14 June 2018, Registered participants 30.





3. **Microprocessor & Interfacing Techniques** by Prof. Vikas Sejwar, 18 May-14 June 2018, Registered participants 30.
4. **Google Services** by Prof. Abhilash Sonker , 18 May-14 June 2018, registered participants 30.
5. **Android Application Development** by Prof. Mahesh Parmar 18 May-14 June 2018, registered participants 30.
6. **Computer Hardware & Networking** by Prof. Dheeraj Gurjar, 18 May-14 June 2018, registered participants 30

## LATEST TECHNOLOGIES

### AI for Everybody

Cloud-based AI is making the technology cheaper and easier to use. Right now the use of AI is dominated by a relatively few companies, but as a cloud-based service, it could be widely available to many more, giving the economy a boost.

So far, Amazon dominates cloud AI with its AWS subsidiary. Google is challenging that with TensorFlow, an open-source AI library that can be used to build other machine-learning software. Recently Google announced Cloud AutoML, a suite of pre-trained systems that could make AI simpler to use.

Microsoft, which has its own AI-powered cloud platform, Azure, is teaming up with Amazon to offer Gluon, an open-source deep-learning library.

It is uncertain which of these companies will become the leader in offering AI cloud services. But it is a huge business opportunity for the winners.



## Babel-Fish Earbuds

Near-real-time translation now works for a large number of languages and is easy to use. In an increasingly global world, language is still a barrier to communication.

One person wears the earbuds, while the other holds a phone. The earbud wearer speaks in his or her language—English is the default—and the app translates the talking and plays it aloud on the phone. The person holding the phone responds; this response is translated and played through the earbuds.

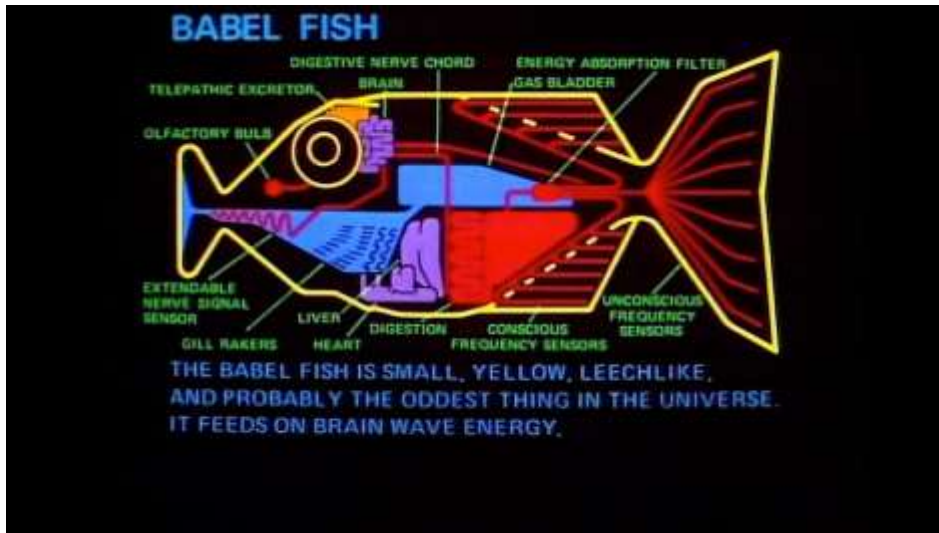


Figure 1 Babel Fish, From the Hitchhiker's Guide to the Galaxy

## Perfect Online Privacy

Computer scientists are perfecting a cryptographic tool for proving something without revealing the information underlying the proof.

The tool is an emerging cryptographic protocol called a zero-knowledge proof. Though researchers have worked on it for decades, interest has exploded in the past year, thanks in part to the growing obsession with cryptocurrencies, most of which aren't private.

Much of the credit for a practical zero-knowledge proof goes to Zcash, a digital currency that launched in late 2016.