Vol
3 · Issue 1

KPR Institute of Engineering and Technology
Learn Beyond
(Autonomous, Affiliated to Anna University)

DEPARTMENT OF INFORMATION TECHNOLOGY

SPARK

Newsletter of the department · Academic Year 2026–27, Odd Semester

July – SEP 2026

VOL 3 · ISSUE 1

Highlights of the Issue

Six patents from the department

Inventions in embedded systems, machine learning, artificial intelligence, manufacturing inspection and product design by Dr M Ashok Kumar, Aman Tomar, Dr P Venkadesh, Sagarika Kar Chowdhury and Dr S Malathy.

19 publications from the department

Journal papers, conference papers and book chapters with Springer, IEEE, Wiley and CRC Press, indexed or due for indexing in Scopus.

IT Association INVADERZ inaugurated

The department launched its student association on 31 July 2026 with 300 participants; Mr Ranjith Poovaraghavan was the resource person.

11 events organized by the department

From the INVADERZ association launch, Career in AI World and the AI Tools workshop (65 participants) to Project Expo, a one credit course on Big Data Analytics and the Alumni Meet.

Faculty upskilling: 9 FDPs, 10 certifications, 3 workshops, 4 internships

Programmes on Agentic AI, multimodal deep learning, Industry 5.0, cyber security, quantum computing, Azure AI, MATLAB and full stack development.

Students win 19 prizes

17 students won 6 first, 9 second and 3 third prizes and an NCC bronze medal; IT students took all three top places in the CTF contest on 18 July, and Preethi D won three prizes.

Peer review, invited talks and industry connect

Four reviewer roles for IEEE, Frontiers and Springer, two resource-person invitations, and an industry interaction with Tekcrewz Infotech.

Events Organized

AI Workshop on Product Development and Incubation

Date: 15–17 Jun 2026 **Attendance:** 45 participants

Resource person: Segar and Balu

Coordinator: K Sameena Banu, Aman Tomar

The Department of Information Technology organized a three-day AI workshop on product development and incubation from 15 to 17 June 2026. The sessions were handled by Segar and Balu and coordinated by K Sameena Banu and Aman Tomar of the department, with 45 participants.

SDG 9 · Industry, Innovation and Infrastructure

IT Association Inauguration – INVADERZ

Date: 31 Jul 2026 **Venue:** KPR Knowledge Campus **Attendance:** 300 participants (internal)

Resource person: Mr Ranjith Poovaraghavan

Coordinator: D Divya

Event No.: 2026-27/ODD/001

The Department of Information Technology inaugurated its IT Association, INVADERZ, on 31 July 2026. Mr Ranjith Poovaraghavan was the resource person for the inauguration, which was coordinated by D Divya and attended by 300 internal participants.

SDG 4 · Quality Education

Understanding NBA Accreditation

Date: 01 Aug 2026 **Venue:** KPR Knowledge Campus

Event No.: 2026-27/ODD/002

The department organized a session on Understanding NBA Accreditation on 1 August 2026 at KPR Knowledge Campus.

SDG 4 · Quality Education

Career in AI World

Date: 12 Aug 2026 **Venue:** Thanam Hall

Event No.: 2026-27/ODD/012

The department organized "Career in AI World", a session on career opportunities in artificial intelligence, on 12 August 2026 at Thanam Hall.

SDG 4 · Quality Education

Workshop on AI Tools

Date: 21 Aug 2026 **Attendance:** 65 participants

Resource person: Aman Tomar, Department of Information Technology

The Department of Information Technology organized a workshop on AI tools on 21 August 2026. The session was handled by Aman Tomar of the department and was attended by 65 participants.

SDG 4 · Quality Education

One Credit Course – Big Data Analytics

Date: 07 Sep 2026 **Venue:** KPR Knowledge Campus

Event No.: 2026-27/ODD/003

The department conducted a one credit course on Big Data Analytics, beginning on 7 September 2026 at KPR Knowledge Campus.

SDG 4 · Quality Education

Project Expo

Date: 07 Sep 2026 **Venue:** Classroom – IT B

Event No.: 2026-27/ODD/004

The department organized a Project Expo on 7 September 2026, where students presented their projects.

SDG 4 · Quality Education

First Step in Research – From Idea to Research Paper

Date: 17 Sep 2026 **Venue:** Aryabhatta Block
Event No.: 2026-27/ODD/005

The department organized "First Step in Research – From Idea to Research Paper" on 17 September 2026 at Aryabhatta Block.

SDG 4 · Quality Education

Alumni Meet

Date: 26 Sep 2026 **Venue:** KPR Knowledge Campus
Event No.: 2026-27/ODD/006

The department hosted its Alumni Meet on 26 September 2026 at KPR Knowledge Campus.

SDG 4 · Quality Education

Alumni Interaction Session

Date: 26 Sep 2026 **Venue:** KPR Knowledge Campus
Event No.: 2026-27/ODD/009

An Alumni Interaction Session was held on 26 September 2026 at KPR Knowledge Campus, giving students the chance to interact with alumni of the department.

SDG 4 · Quality Education

MATLAB

Date: 26 Sep 2026 **Venue:** KPR Knowledge Campus
Event No.: 2026-27/ODD/007

The department organized a MATLAB session on 26 September 2026 at KPR Knowledge Campus.

SDG 4 · Quality Education

Industry Connect

21 Sep 2026

Tekcrewz Infotech

Industry interaction by Dr P Venkadesh on student benefits: offline industrial visits, internships and project-based learning.

Consultancy

Consultancy Project Overview

S.No	Name of the Consultancy	Purpose	Amount (₹)
1	Learn Square	GATE Training	25,000
2	Srinivasa Logistics	Technology Transfer / Product Commercialization	8,300
		Total	**33,300**

Publications

3 Journal papers **9** Conference papers **2** Book chapters **5** Other publications

- **JOURNAL PAPER**
  Dr P Jayapriya: "FashNet: An Improved Hybrid Deep Learning for Multi-Attribute Fashion Classification using Cuttlefish and Quantum Newton Optimization", International Journal of Computational Intelligence Systems (Springer; SCIE, impact factor 1.736), 10 Jun 2026. Scopus indexed.

- **CONFERENCE PAPER**
  K Sameena Banu: "Intelligent Prediction of Population Health Outcomes Induced by Healthcare Facility Waste Using Deep Neural Networks", 4th International Conference on Self Sustainable Artificial Intelligence Systems (ICSSAS 2026), Jul 2026. Scopus indexed.

- **PUBLICATION**
  Dr S Malathy: "Retrieval Augmented Generation for Natural Language Processing", Wiley, Jul 2026. Scopus indexed.

- **PUBLICATION**
  Dr S Malathy: "AI-Enhanced Traffic Management: AI-Driven Traffic Intelligence and Cloud-Based VCC (Vehicular Cloud Computing) for Smarter Mobility", CRC Press, Jul 2026. Scopus indexed.

- **CONFERENCE PAPER**
  Dr P Venkadesh: "Intelligent Fault Detection and Self-Healing in Cloud Infrastructure Using Hybrid Attention-Based Root-Cause & Reinforcement Learning Algorithm", International Conference on Circuit, Power and Computing Technologies (ICCPCT 2026), Baselios Mathews II College of Engineering, Kollam, 6–7 Aug 2026 (hybrid).

- **JOURNAL PAPER**
  Dr Amitha I C: "Adaptive Sparse Cross-Scale Transformer for Computationally Efficient Brain Tumor MRI Segmentation", Journal of Electronics, Electromedical Engineering, and Medical Informatics, Aug 2026. Scopus indexed.

- **CONFERENCE PAPER**
  Dr Amitha I C: "AI-Enhanced Multi-Model Medical Image Diagnosis: A Gated Multi-Scale Attention Framework for Brain and Lung Malignancy Detection", 17th International Conference on Advances in Computing, Control and Telecommunication Technologies (ACT 2026), Aug 2026. Scopus indexed.

- **BOOK CHAPTER**
  Dr S Muthu Lakshmi: "Unleashing the Potential of AI with Human Doctors: Role of Patient Diagnosis with Ensemble Models", in Emotional Artificial Intelligence: Practical Challenges and Applications, Aug 2026. Scopus indexing expected Dec 2026.

- **BOOK CHAPTER**
  Dr S Muthu Lakshmi: "Exploring Emotions and Sentiment Analysis in AI: An Evolutionary Algorithm Based Perspective", in Emotional Artificial Intelligence: Practical Challenges and Applications, Aug 2026. Scopus indexing expected Dec 2026.

- **CONFERENCE PAPER**
  J Rathanaa Ranjeni: "Hybrid CNN–Vision Transformer Framework for IoT-Enabled Smart Waste Classification using Transfer Learning and Frequency Analysis", Second International Conference on Modern Sustainable Systems (CMSS 2026), Universiti Teknologi MARA, Malaysia, 12–14 Aug 2026 (online). Scopus indexing expected Dec 2026.

- **CONFERENCE PAPER**
  J Rathanaa Ranjeni: "Evaluation of Mechanical Durability Properties of Sustainable Concrete using Building Debris and Silica Fume", CMSS 2026, Universiti Teknologi MARA, Malaysia, 12–14 Aug 2026 (online). Scopus indexing expected Dec 2026.

- **CONFERENCE PAPER**
  J Rathanaa Ranjeni: "Hybrid CNN–Vision Transformer Framework for Explainable Defect Detection in Solar Panels", CMSS 2026, Universiti Teknologi MARA, Malaysia, 12–14 Aug 2026 (online).

- **CONFERENCE PAPER**
  Dr M Ashok Kumar: "A Hybrid Deep Learning Framework for Predictive Maintenance in Lithium-Ion Battery Manufacturing", CMSS 2026, Universiti Teknologi MARA, Malaysia, with RVS College of Engineering and Technology, 12–14 Aug 2026 (online; published 18 Sep 2026). Scopus indexing expected Dec 2026.

- **PUBLICATION**
  Dr P Venkadesh: "Intelligent Data Forwarding in Cloud Using Bio-ACO Integrated with ANN and SCTP (BIAS) Framework", Springer Lecture Notes, Sep 2026. Scopus indexed.

- **JOURNAL PAPER**
  Dr P Venkadesh: "AI- and Machine Learning-Assisted Optimization of a Low-Sodium Functional Seasoning Powder Enriched with Mushroom and Seaweed Extracts", International Journal of Artificial Intelligence and Machine Learning, Sep 2026. Scopus indexing expected Dec 2026.

- **PUBLICATION**
  Sriram Krishna S V: "Privacy-Preserving VPKI Using Federated Learning for Cross-Domain Vehicle Authentication", IEEE Xplore, Sep 2026. Scopus indexed.

- **CONFERENCE PAPER**
  Dr M Ashok Kumar: "An Explainable Deep Learning Approach for Skin Cancer Classification using MobileNetV3 and Grad-CAM", 2026 IEEE International Conference on Computing, Communications & Networks, DY Patil University, Ambi, Pune, 7–8 Sep 2026 (online). Scopus indexing expected Dec 2026.

- **CONFERENCE PAPER**
  Dr R Vijaya Rajeswari: "A Privacy-Preserving Federated Artificial Intelligence Framework for Next Generation Smart Healthcare Systems", First International Emerging Research and Technology Conference (INERT-CON 2026, IEEE technically sponsored), 25–26 Sep 2026 (paper presented). Scopus indexing expected Dec 2026.

- **PUBLICATION**
  Dr Kalaivanan: "Water Quality Prediction using Enhanced Parrot Optimization Algorithm with Ensemble Learning Techniques", Springer Nature Water Source, 30 Sep 2026. Scopus indexing expected Dec 2026.

Faculty: Patents and Recognitions

- **PATENT**
  Aman Tomar, Dr M Ashok Kumar and Sagarika Kar Chowdhury: "Explainable-AI Audit Trail System and Method for Automated Quality Rejection Decisions in Manufacturing Inspection" (Manufacturing Inspection), 24 Jul 2026.

- **PATENT**
  Dr P Venkadesh: "AI-Powered Refrigerator Food Shelf-Life Tracking using Computer Vision and Spoilage Prediction" (Artificial Intelligence), 24 Jul 2026.

- **PATENT**
  Dr M Ashok Kumar: "AI-Enabled Embedded System for Real-Time Fabric Defect Prediction and Corrective Process Control" (Embedded Systems), 21 Aug 2026.

- **PATENT**
  Dr M Ashok Kumar: "AI-Enabled Smart Cricket Ball with Embedded Multi-Sensor System for Real-Time Performance and Decision Analytics" (Embedded Systems), 21 Aug 2026.

- **PATENT**
  Aman Tomar: "Explainable Multimodal AI-Based Dynamic Preoperative Readiness Assessment" (Machine Learning), 25 Aug 2026.

- **DESIGN PATENT**
  Dr S Malathy: "GPS-Assisted Campus Navigation Device", 08 Sep 2026.

- **REVIEWER**
  Dr S Malathy reviewed for Discover Computing (Springer; SCI, impact factor 1.9), 22 Sep 2026.

- **REVIEWER**
  Dr P Venkadesh reviewed for Frontiers in Neuroscience (Frontiers; Scopus), 21 Sep 2026.

- **REVIEWER**
  Dr M Ashok Kumar served as reviewer for the 2026 IEEE International Conference on Sustainable AI for Social Impact and Global Development (SASIGD; Scopus), 13–14 Aug 2026.

- **REVIEWER**
  Dr P Venkadesh served as reviewer for the IEEE International Conference on Circuit, Power and Computing Technologies (ICCPCT 2026; Scopus), 6–7 Aug 2026.

- **RESOURCE PERSON**
  Dr M Ashok Kumar delivered a guest lecture on Scheduling Algorithms at St. Mother Theresa Engineering College, Thoothukudi, 7 Aug 2026 (online, 1 hour).

- **RESOURCE PERSON**
  Dr S Muthu Lakshmi was resource person for the Tech Trio Symposium (national level) at KPRIET, 8 Sep 2026 (offline, 9.00 am – 1.00 pm).

- **MENTOR**
  Dr P Venkadesh served as faculty mentor for Ideafest 2026 (international, online), 9 Aug 2026.

Faculty Development

9 FDPs / STTPs **10** Certifications **3** Workshops **4** Internships

Faculty	Programme	Organised by	When
FDPS / STTPS			
Dr P Jayapriya	Multimodal Deep Learning and Vision-Language Models: The New Era of Visual Intelligence	Coimbatore Institute of Technology	27–31 Jul 2026 5 days · Online
K Deepiga	AI-Based Fault Diagnosis and Predictive Maintenance for Industry 4.0	Karunya University	10–14 Aug 2026 5 days · Online
Dr P Venkadesh	Cyber Security & Industry 5.0	Indira College of Engineering and Management, Pune, and ISTE New Delhi, with Savitribai Phule Pune University	17–21 Aug 2026 2 days · Online
J Rathanaa Ranjeni	Microsoft Azure AI Apps & Agents Development	KPR College of Arts, Science and Research	17–21 Aug 2026 5 days · Offline
Dr P Venkadesh	Data Driven Intelligence and Data Management	Dr M.G.R. Educational and Research Institute	19–25 Aug 2026 6 days · Online
Suganya Ganesan	Agentic AI for Industry 5.0: Building Autonomous, Intelligent, and Sustainable Enterprises	Institute of Engineering and Management, Newtown	24–28 Aug 2026 5 days · Online

Faculty	Programme	Organised by	When
Dr S Malathy	Agentic AI for Intelligence Data Science and Autonomous Analytics	Coimbatore Institute of Technology	31 Aug – 09 Sep 2026 10 days · Online
Dr S Muthu Lakshmi	Agentic AI for Intelligence Data Science and Autonomous Analytics	Coimbatore Institute of Technology	31 Aug – 09 Sep 2026 10 days · Online
Dr P Venkadesh	FutureTech Nexus: Converging Quantum Computing, AIoT and Digital Twins for Next Generation Intelligent Systems	Dr N.G.P. Institute of Technology, Coimbatore	21–26 Sep 2026 6 days · Online
CERTIFICATIONS			
Dr M Ashok Kumar	Networking Basics	Cisco Networking Academy	20 Jul 2026 20 days · Online
Dr M Ashok Kumar	Machine Learning Onramp	MathWorks	30 Jul 2026 2 hours · Online
Dr P Venkadesh	MATLAB Onramp	MathWorks	01 Aug 2026 2 hours · Online
Dr P Venkadesh	Simulink Onramp	MathWorks	14 Aug 2026 1 hour · Online
Dr P Venkadesh	Machine Learning Onramp	MathWorks	20 Aug 2026 2 hours · Online
Dr P Venkadesh	Calculations with Vectors and Matrices	MathWorks	21 Aug 2026 2 hours · Online
Dr M Ashok Kumar	Python for Deep Learning: Build Neural Networks in Python	Udemy	24 Aug 2026 2 hours · Online
Dr P Venkadesh	Teaching with MATLAB	MathWorks	24 Aug 2026 2 hours · Online
Dr P Venkadesh	Explore Convolutional Neural Networks	MathWorks	24 Aug 2026 2 hours · Online
Dr P Venkadesh	MATLAB Associate	MOVIE @ MATLAB	Sep 2026 1 month · Online
WORKSHOPS			
Aman Tomar	AI Workshop (international)	Taiwan	09 Aug 2026 1 day · Hybrid
Dr M Ashok Kumar	AI Tools Workshop	be10X	23 Aug 2026 45 mins · Online
Aman Tomar	Workshop	be10X	Aug 2026 Online

Faculty	Programme	Organised by	When
INTERNSHIPS			
Dr M Ashok Kumar	Full Stack Development (Python)	Approtech R&D Solutions Pvt. Ltd., Chennai	24 Jun – 08 Jul 2026 15 days · Completed
J Rathanaa Ranjeni	Full Stack Development (Python)	Approtech R&D Solutions Pvt. Ltd., Chennai	24 Jun – 08 Jul 2026 15 days · Completed
Sagarika Kar Chowdhury	Full Stack Development (Python)	Approtech R&D Solutions Pvt. Ltd., Chennai	24 Jun – 08 Jul 2026 15 days · Completed
K Sameena Banu	Full Stack Development (Python)	Approtech R&D Solutions Pvt. Ltd., Chennai	24 Jun – 08 Jul 2026 15 days · Completed

Student Achievements

19 Prizes **6** First **9** Second **3** Third **1** Bronze **17** Students

Student	Event	Organised by	When
FIRST PRIZE			
Danial Rajakumar J 24IT018	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Deepakumar R V 24IT019	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Arunkumar S 24IT012	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Kanishka K 25IT075	Prompt-X	KPRIET (Online)	15 Aug 2026
Preethi D 25IT124	World Lung Day Quiz Contest	KPRIET (Online)	25 Sep 2026
Preethi D 25IT124	Bug Busters – MATLAB Debugging Contest	KPRIET (Offline)	26 Sep 2026
SECOND PRIZE			
Gayathri K 25IT043	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Janani M 25IT063	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Preethiga A T 25IT125	Fast and Furious	KPRIET (Offline)	01 Aug 2026
Jenofiya Shamini 25IT071	WOD Day – Quiz Series	KPRIET (Online)	13 Aug 2026
Kanishka M 25IT076	Technical Treasure Hunt (Tech Trio 2K26)	KPRIET (Offline)	08 Sep 2026
Padmini J 25IT114	Technical Treasure Hunt (Tech Trio 2K26)	KPRIET (Offline)	08 Sep 2026
Preethi D 25IT124	Brand Battle (Poster Presentation)	Sri Ramakrishna College of Arts & Science for Women (Offline)	16 Sep 2026
Prakalya M 25IT118	Brand Battle (Poster Presentation)	Sri Ramakrishna College of Arts & Science for Women (Offline)	16 Sep 2026
Jeevitha B 25IT070	Cyber Fuse	PSG College of Arts & Science (Offline)	26 Sep 2026

Student	Event	Organised by	When
THIRD PRIZE			
Adithya P 24IT007	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Harin V C 24IT034	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
Kavin D 24IT046	Capture The Flag (CTF)	KPRIET (Offline)	18 Jul 2026
MEDAL			
Jayaraj P R 24IT041	IDSSC 2026 – Bronze Medal	National Cadet Corps	21 Jul 2026



BEYOND LOOP

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