Department of Electrical and Electronics Engineering KPR Institute of Engineering and Technology



NEWSLETTER





ELECTROBLITZ

VOLUME 9, ISSUE 2 February 2023

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VISION AND MISSION OF THE DEPARTMENT

Vision:

To be the **centre of higher learning** in the field of Electrical and Electronics Engineering by educating the students to meet the **global challenges** with **professional ethics and social consciousness**.

Mission:

- Providing technical, intellectual and ethical environment to the students through knowledge centric education and research.
- Collaborating with industries in the vicinity, nationally and internationally for exposure and **innovation**.
- Enabling the students to serve the society through prolific ideas.

Programme Educational Objectives (PEOs)

The Graduates of Electrical and Electronics Engineering will

- **PEO1** Possess an adequate knowledge to meet the needs of the stakeholders and excel in their chosen profession with good communication and managerial skills.
- **PEO2** Adapt to emerging technologies and practice their profession confirming to ethical and human values.
- PEO3 Continuously improve the habit of self-study through professional development activities.

Programme Outcomes (POs)

Graduates of Electrical and Electronics Engineering will be able to:

- **PO1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2 Problem Analysis: Identify, formulate, review research literature, and analyze complex
 engineering problems reaching substantiated conclusions using first principles of mathematics,
 natural sciences, and engineering sciences.
- PO3 Design/development of Solutions: Design solutions for complex engineering problems and
 design system components or processes that meet the specified needs with appropriate
 consideration for the public health and safety, and the cultural, societal, and environmental
 considerations.





- **PO4 Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- **PO5 Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- **PO6 The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7 Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- **PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9 Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO10 Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11 Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- **PO12 Life-long Learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

Programme Specific Outcomes (PSOs)

Graduates of Electrical and Electronics Engineering will be able to:

- **PSO1** Develop skills to the expectations of the dynamic industrial practices in Electrical Engineering and allied areas.
- **PSO2** Analyze, design, and integrate various renewable energy sources to meet the energy demand.





FACULTY DETAILS

S.NO	NAME OF THE FACULTY	DESIGNATION
1.	Dr.V.Kumar Chinnaiyan	Professor & Head
2.	Dr.J.Karpagam	Professor
3.	Dr.K.Mohana Sundaram	Professor
4.	Dr.V.S.Chandrika	Associate Professor
5.	Dr.P.Pandiyan	Associate Professor
6.	Dr.A.Karthick	Associate Professor
7.	Mr.S.Vivekanandan	Assistant Professor (Sl.G)
8.	Mr.G.Saravanan	Assistant Professor (Sl.G)
9.	Dr.R.Sampathkumar	Assistant Professor (Sl.G)
10.	Dr.C.Pazhanimuthu	Assistant Professor (Sl.G)
11.	Dr.D.Sathish Kumar	Assistant Professor (Sl.G)
12.	Dr.I.Baranilingesan	Assistant Professor (Sl.G)
13.	Dr.S.Ravindran	Assistant Professor (Sl.G)
14.	Dr.A.Matheswaran	Assistant Professor (Sl.G)
15.	Dr.V.Parimala	Assistant Professor (Sl.G)
16.	Dr.A.Rakesh Kumar	Assistant Professor (Sr.G)
17.	Dr.N.Prakash	Assistant Professor (Sr.G)
18.	Dr.Rangu Seshu Kumar	Assistant Professor (Sr.G)

19.	Ms.B.Lalitha	Assistant Professor (Sr.G)
20.	Ms.R.Revathi	Assistant Professor (Sr.G)
21.	Mr.A.Mohamed Ibrahim	Assistant Professor (Sr.G)
22.	Mr.P.Ravikumar	Assistant Professor (Sr.G)
23.	Mr.V.Kamalkumar	Assistant Professor (Sr.G)
24.	Mr.C.J.Vignesh	Assistant Professor (Sr.G)
25.	Mr.C.Dinesh	Assistant Professor (Sr.G)
26.	Mr.K.Balamurugan	Assistant Professor
27.	Mr.M.Mohana Sundaram	Assistant Professor
28.	Mr.G.Xavier Richards	Assistant Professor

SUPPORTING STAFF

S.NO	NAME OF THE STAFF	DESIGNATION
1.	Mr.M.Vinoth Kumar	Technical Officer
2.	Mr.R.Vinoth Kumar	Technical Officer
3.	Mr.C.Gobalakrishnan	Lab Technician
4.	Mr.M.Muthukumar	Lab Instructor
5.	Mr.M.Karuppusamy	Lab Technician
6.	Ms.R.Suvalakshmi	Lab Technician
7.	Ms.P.Parameshwari	Office Assistant

ASSOCIATION ACTIVITIES

PROJECT PRESENTATION FIESTAA 23

The department of Electrical and Electronics Engineering organized a technical event named PROJECT PRESENTATION on 16/02/2023 under FIESTA 2023. The faculty coordinator of the paper presentation welcomed the gathering with warm welcome. There were 31 external students registered for the event and presented during the day. The Aim of the Project expo is to expose the student's projects developed and implemented based on various hardware and software The student's knowledge gathered during the course of study and implemented as hardware and also software projects. The external students from various institution were demonstrated the hardware model of the project based on the applications.









PAPER PRESENTATION

The department of Electrical and Electronics Engineering organized a paper presentation on 16/02/2023. The Paper Presentation event received 67 registrations online and another 15+ registrations on spot. A total of 35 participants presented their work in groups of three or more. A total of 11 teams participated and competed for the top three spots. An all girls team from Sri Ramakrishna Institute of Technology was the winner of the event, claiming the first position. The topic was Smart Braille. The second team was from Sri Eshwar College of Engineering, which bagged the second prize. A team from Pavai Engineering College was third in the top three. The evaluation criteria comprised of Novelty, Presentaion, Clarity, Communication and Relevance. A total of 30 marks were assigned. Dr. Rakesh and Dr. Baranilingesam served as the evaluators of the event.

Other presentations at the event included Hybrid Electric Vehicles, No to Plastic, and a Modified PI Controller. Many of the presentations were also focused on electric vehicles and the ways to improve them. Electric Vehicle Charging System is another area of focus during the event. No to plastic was a topic that was very relevant for a sustainable future, and the participants provided a lot of eye opening ideas and facts. The Modified PI Controller focussed on BLDC Motor for EV Applications. The controller proposed was an existing one, but students proposed a better way to tune the circuit and get proper results out of the controller. EV with safer battery technology was also another presentation that primarily focussed on making battery technology safer and affordable.







POSTER PRESENTATION

The Department of Electrical and Electronics Engineering of KPR Institute of Engineering and Technology organized a Poster Presentation on 16/02/2023. Mr.A.Mohamed Ibrahim, AP (Sr.G) / EEE will give welcomed the gathering. Dr. K.Mohanasundaram, Professor & Head / EEE, will give felicitation and highlighted the advantages of conducting this kind of poster presentation. Dr. M.Akila, Principal, will give the presidential address and deliberated the importance of studies to the outside participants. The 5 teams were participated and presented their emerging technology ideas as poster. Ms.B.Lalitha, AP (Sr.G) / EEE delivered the vote of thanks and event came to conclusion.









LINE FOLLOWER ROBOT

The Department of EEE organized a Line Follower Robot during FESTAA 2023 on 17/02/2023. About 30 student participated in the event and showcased their talent in designing the robot. The winners are encouraged by providing the cash award and shield along with the certificates.









Date: 17.02.2023

Time: 10.00 AM - 12.00 PM Venue: EEE Department

Coordinators

Dr.D.Sathish Kumar, AP(Sl.G.)/EEE Prof.S.Vivekanandan, AP(Sl.G.)/EEE





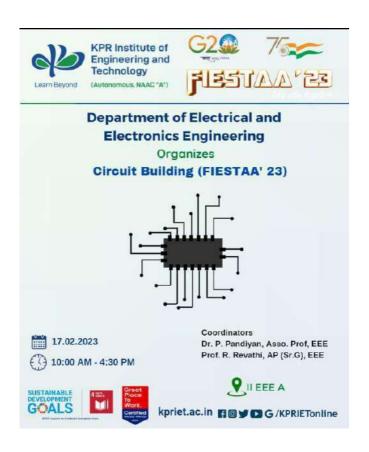




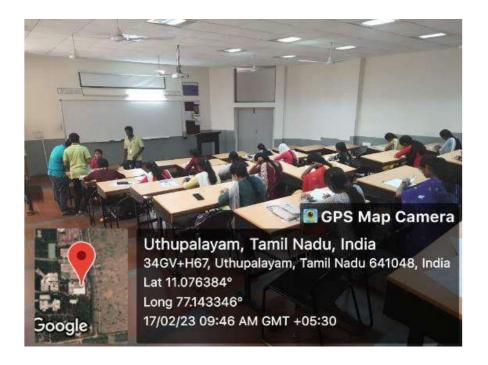


CIRCUIT BUILDING

The Department of Electrical and Electronics Engineering conducted the event circuit building on 17/02/2023 for 46 external participants. The event started with the welcome address by Dr.P.Pandiyan, AsP/EEE and has given the instructions to all the participants about the event. About 46 external participants were participated and they have given sufficient time to complete the design of the circuit. More clarifications were given to all the participants during the event about the question pattern. The participants from all years of study were interestingly attended the event. The question paper consists of two sections, Section A comprises of five questions and each carries 4 marks whereas Section B comprises of 15 questions, each carries 1 mark (Multiple Choice Questions). Announcement was given to the participants to collect the prizes after the evaluation. The evaluation was done by the volunteers. Finally two prize winners were selected based on the marks. The prize winners were awarded with cash prize, shield and certificate. The first prize was given to student of K.S.Rangasamy College of Engineering with cash prize of Rs.1000, shield and certificate. The second prize was given to student of K.S.Rangasamy College of Engineering with cash prize of Rs.500, shield and certificate. The participants were given the good feedback about the event and institute. They really enjoyed the event in taking digital circuit design. The event was concluded with vote of thanks by Prof.R.Revathi, Assistant Professor, Department of Electrical and Electronics Engineering.







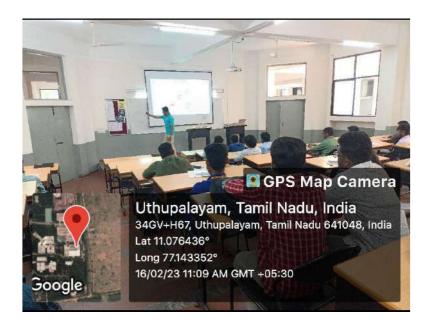
PRODUCT DEVELOPMENT USING ARDUINO

The department of Electrical and Electronics Engineering organized a workshop on "Product Development using Arduino" on 17/02/2023. Dr.C.Pazhanimuthu, Assistant Professor (Sl.G) has delivered a valuable presentation on role, importance, protocols for the development of product using Bluetooth and internet of things. He also delivered the basic Arduio programming concepts and programs for LED blinking, LED chaser, street light control, Bluetooth based home automation. As well deals about how to build a small app through MIT app inventor for controlling the developed products. In addition how to control the devices over cloud through open source cloud storage.

Finally showed the visual demonstration of various project development using Arduino controller to the participants. The following contents were delivered to the participants elaborately the basic types of sensors, actuators and controllers, Arduino types, Arduino programming basics, Controlling of loads using Bluetooth, Serial communication, Need and importance of IoT, Recent technologies in IoT for automation, Demonstration of automation projects such as street light control, control light and fan using Bluetooth over Mobile App, control light and fan using WiFi over Mobile App Dr.C.Pazhanimuthu, Assistant Professor (Sl.G) was showed the working model projects to the participants as well explained its function and how the communication takes place between the devices. The workshop program provided some of the interesting facts in development of projects using Arduino controller for automation. The vote of thanks was delivered by Prof.V.Kamalkumar, AP (Sr.G)/ EEE. There were 90 outside students participated the workshop and get benefited.







QUIZ ON EV TECHNOLOGY

The department of Electrical and Electronics Engineering organized the quiz on EV technology on 17/02/2023. The Quiz conducted in three levels. The successful winner of level one taken to level 2 and level 2 winner taken to level three. The top scorer of Level 3 awarded with cash prize, memento and certificate. The winners are from Erode Sengunthar Engineering College and Kalaignar Karunanidhi Institute of Technology. External participants of 42 students have participated in this quiz event. The 18 participants who reached level 2 are issued with appreciation certificates.







WORKSHOP ON GRID TIED SOLAR POWER DESIGN AND INSTALLATION

The Department of Electrical and Electronics Engineering organized workshop on 17/02/2023. The event began with an introduction to the workshop's goal by Dr. A Karthick, AsP/EEE. Followed by Dr Rangu Seshu Kumar gave a brief talk on grid-tied solar photovoltaic design and installations. Grid-connected PV systems are comparatively easier to install as they do not require a battery system. Grid interconnection of photovoltaic (PV) power generation systems has the advantage of effective utilization of generated power because there are no storage losses involved. Many people are switching to solar since a solar system reduces electricity costs and protects the environment from carbon emissions. The grid-connected solar system is widely used for its various benefits. Although it has a few disadvantages, its benefits outweigh the cons. More than 75 students participated from various institutions across the country.



INNOVATE 2023

The Department of Electrical and Electronics Engineering of KPR Institute of Engineering and Technology organized an "Innovate 2023 – Expo for Polytechnic Students" on 24/02/2023. Dr.R.Sampathkumar, AP (Sl.G) / EEE welcomed the gathering. Dr. K.Mohanasundaram, Professor & Head / EEE, gave the felicitation and highlighted the advantages of conducting this kind of project expo. Dr. M.Akila, Principal, gave the presidential address and deliberated the importance of studies to the outside participants.





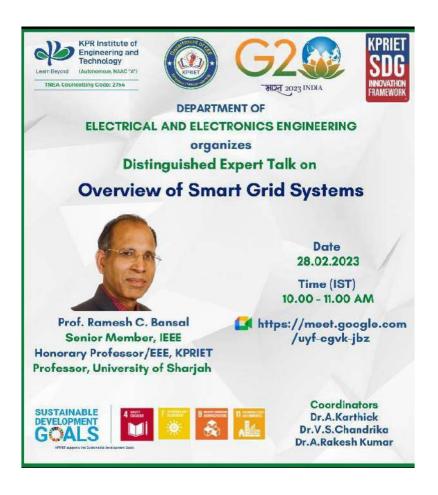
The resource person is Er.S.Jeevanantham, Lead Engineer, FIS Global, Chennai delivered inaugural speech. The participants from various parts of the state will showcase their technical talents in the project presentation, paper presentation, photography and talent hunt. Finally, the prizes were announced in the valedictory session. The total participants are 57 diploma students. Ms. B.Lalitha, AP (Sr.G) / EEE delivered the vote of thanks.





EXPERT TALK ON OVERVIEW OF SMART GRID SYSTEMS

The department of Electrical and Electronics Engineering organized the expert talk on 28/02/2023 at 10.00 am. The resource person discussed about the smart grid, particularly on the topic of the features of the smart grid. The concept of the smart grid is to add monitoring, analysis, control, and communication capabilities to the national electrical delivery system to maximize the throughput of the system while reducing energy consumption. The Smart Grid helps reduce greenhouse gas emissions and other pollutants by facilitating the connection of large amounts of renewable energy. It also enables technologies that make it easier for customers to reduce energy use or shift energy use to times when prices and emissions are lower. In conclusion, smart grid technology has changed the way power is generated and transmitted. Most developed countries have been using this technology for quite some time. Smart Grid includes electric network, digital control appliance, and intelligent monitoring system. All of these, can deliver electricity from producers to consumers, control energy flow, reduce the loss of what, and make the performance of the electric network more reliable and controllable, Reduce fuel costs. Dr Rakesh Kumar has given the vote of thanks.



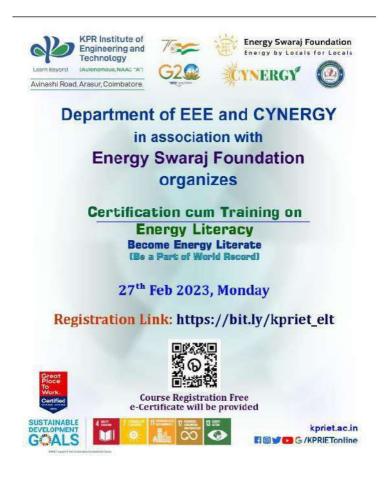






ENERGY LITERACY TRAINING

The department of Electrical and Electronics Engineering along with Centre for Energy Sciences and Engineering (CYNERGY) in collaboration with Energy Swaraj Foundation organized a "Energy Literacy Training" program as a part of "WORLD RECORD" event from 24/02/2023 to 28/02/2023, for all the third-year students of EEE, ECE, CIVIL, MECH and Chemical. In this regard, students and faculty members have completed the 3 hours training course on ENERGY LITERATE.









Publication by the Faculty Members

- 1. Mr,V.Kamal Kumar, "Optimum Transistor Sizing of CMOS Differential Amplifier using Tunicate Swarm Algorithm" Journal of Circuits, Systems and Computers, February 2023.
- Dr.A.Kathick and Dr.V.Kumar Chinnaiyan, "Energy Forecasting of the building-integrated photovoltaic facade using hybrid LSTM", Environmental Science and Pollution Research, February 2023.
- 3. Dr.R.Seshu Kumar, "An Enhanced Space Vector PWM Strategies for Three Phase Asymmetric Multilevel Inverter", International Transactions on Electrical Energy Systems, February 2023.
- 4. Dr.R.Seshu Kumar, "A New Switched Capacitor based Five-Level Inverter for PV Applications" International Conference on Intelligent Healthcare and Computational Neural Modelling, February 2023.

Book Chapter Publication by the Faculty Members

1. Dr.K.Mohana Sundaram, "Battery Monitoring System and SOC Enhancement Analysis Using Artificial Intelligence Techniques", Artificial Intelligence Applications in Battery Management Systems and Routing Problems in Electric Vehicles, IGI Global Publishers, February 2023.





List of Eminent Academicians/Scientists Visit

S.No	Name and Designation	Organization
1	Er.S.Jeevanantham Lead Engineer	FIS Global, Chennai
2	Prof.Ramesh C. Bansal Professor	University of Sharjah, UAE

Faculty Participation in FDP/Seminar/Workshop/Orientation Program

S. No	Faculty Name	Type of the Event	Event Name	Venue	Duration of the Event
1	Dr. I. Baranilingesan AP (Sl.G)	FDP	Research Opportunities in AI, ML & IoT in the Field of Electrical Engineering	Gargi Memorial Institute of Technology, Kolkata	08/02/2023 - 14/02/2023
2	Dr. K. Mohana Sundaram Professor & Head	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
3	Dr. V. Kumar Chinnaiyan Professor	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
4	Dr. J. Karpagam Professor	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
5	Dr. V. S. Chandrika Professor	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
6	Dr. A. Karthick Associate Professor	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
7	Dr. P. Pandiyan Associate Professor	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
8	Mr. S. Vivekanandan AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
9	Mr. G. Saravanan AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
10	Dr. R. Sampath Kumar AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
11	Dr. C. Pazhanimuthu AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023



12	Dr. I. Baranilingesan AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
13	Dr. S. Ravindran AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
14	Dr. V. Parimala AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
15	Dr. A. Rakesh Kumar AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
16	Dr. D. Sathish Kumar AP (Sl.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
17	Dr. Rangu Seshukumar AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
18	Ms. B. Lalitha AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
19	Mr. A. Mohamed Ibrahim AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
20	Ms. R. Revathi AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
21	Mr. P. Ravikumar AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
22	Mr. V. Kamal Kumar AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
23	Mr. C.J. Vignesh AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
24	Mr. C. Dinesh AP (Sr.G)	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023
25	Mr. K. Balamurugan Assistant Professor	Online Training	Energy Literacy Training	Energy Swaraj Foundation	27/02/2023

Student Placement Details

S.No.	Student Name	Organization		
1	Gowtham Shankar Y.	Adecco, Coimbatore		
2	Udaya Prakash V.	Adecco, Coimbatore		
3	Vasantharaj.S.	Adecco, Coimbatore		
4	Narendra Prasath R.E.	Adecco, Coimbatore		
5	Asweenraj M.	Adecco, Coimbatore		
6	Balamurugan R.	Electrodrain - Powerdrain Solutions, Coimbatore		
7	Praveen K.	QSPIDER, Chennai		



Centre for Excellence













Industry Institute Interaction















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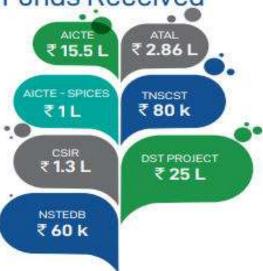
Top Recruiters



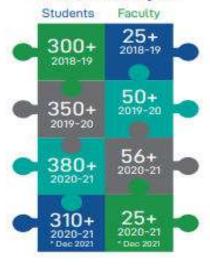
R&D

h index	95+	i10	110+	Publications	410+
Patents	22+	Conferences	120+	Copyrights	1
NPTEL	250+	Awards	18+	Citations	5450+

Funds Received



Internships



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