ASSOCIATION OF AUTOMOBILE ENGINEERS

SVCE | Sri Venkateswara College of Engineering

SAE COLLEGIATE CLUB OF SVCE

DEPARTMENT OF AUTOMOBILE ENGINEERING

PROGRAMS

B.E. AUTOMOBILE ENGINEERING

B.E. MECHANICAL ENGINEERING (AUTOMOBILE)

AUTOXPLOR

AUGUST '24,

VOLUME 4, ISSUE 2

SRI VENKATESWARA COLLEGE OF ENGINEERING

विद्या परा देवता

CONNECT @

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Assistant Professor

Dr. K. Paul Durai
Assistant Professor

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IV Year AUT

Mr. V. Shivabaalaj
III Year AUT

DEPARTMENT VISION & MISSION

Vision

To be recognized as a distinguished department renowned for producing competent and responsible mechanical engineers specialized in automobile engineering, meeting the dynamic demands of automotive industries on national and global scale, nurtured by exceptional facilities and support.

Mission

- Igniting the passion of individuals for learning, research, and innovation by establishing collaborative learning through dynamic teaching methodologies, hands-on experiences, and research opportunities, to contribute in the advancement of automotive technologies.
- Advancing the competency of individuals through comprehensive academic curriculum, state-of-the-art-laboratory facilities, and training on critical thinking skills to comprehend industry requirements and provide innovative solutions in the automotive and associated domains.
- Providing engineering and technological solutions for challenges such as sustainability, safety, and efficient transportation at national and global levels, through interdisciplinary collaboration, and cutting-edge research in collaboration with industry partners, government agencies, and academic institutions.

PROGRAMMES ORGANIZED

Industrial Visit

The Standards Club of Automobile Engineering, SVCE in collaboration with Bureau of Indian Standards (BIS), organized an Industrial Visit to Yoshika Engineering Pvt. Ltd., Sriperumbudur, on August 28, 2024. Total of 46 students from II Year, III Year and IV Year accompanied by Dr. K. Paul Durai and Mr. R. Sakthivel, Assistant Professors visited the industry. The main objective of the industrial visit is to provide students with practical exposure to the company's manufacturing processes involved in the production of wheel rims and handle bar for two wheelers.

PROGRAMMES ORGANIZED

SAE Collegiate Club of SVCE

The SAE Collegiate Club of SVCE successfully organized SAEINDIA Southern Section Students Convention Tier-I Events on August 7, 2024 at SVCE.

The event showcased dynamic technical competitions, hands-on experiences, and advanced skills in mobile app development and IoT, all aimed at the future of mobility. Students also gained valuable insights into startup management and demonstrated outstanding teamwork.

PROGRAMMES ORGANIZED

SAE Collegiate Club of SVCE

The SAEISS Tier-I Events 2024-25, held across various venues, saw active participation from students under the guidance of faculty coordinators.

AUTO QUIZ

Coordinators:
Mr.J. Dhanabal, AP/AUT and
Dr. G. Ravi, AP/AUT
Venue: Auto CAD Lab
Timing: 8:45 AM to 10:00 AM
Participants: 29 Students
I Place: A. Bharath Rajh (II-MEC)
D. Dhanush (II-AUT)
V. Guha Prasad (II-AUT)
G. Johin Gill (II-AUT)
E. Kaviraj (II-AUT)

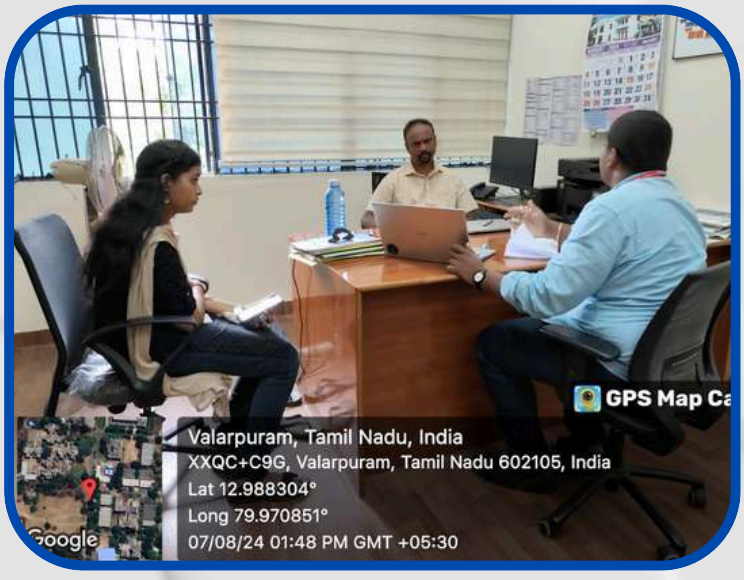
BUSINESS PLAN

Coordinators:
Dr.V. Ganesh, ASP/AUT and
Mr. R. Sakthivel AP/AUT
Venue: Automotive Research Cell
Timing: 1:30 PM to 2:00 PM
Participants: 08 Students
I Place: M. Dharshan Kumar (III-AUT)
Aryan Sreeram (III-MEC)

PROGRAMMES ORGANIZED

SAE Collegiate Club of SVCE

PAPER PRESENTATION



Coordinators:
Dr. S. Premnath ASP/AUT and
Mr. A. K. Boobalasenthilraj AP/AUT
Venue: Auto CAD Lab
Timing: 1:00 PM to 2:00 PM
Participants: 10 students
I Place: E. Kaviraj (III-AUT)
C. Prathipa (III-AUT)
G. Johin Gill (III-AUT

APP DEVELOPMENT

Coordinators:
Mr. AR.Guru Gokul AP INT,
Dr. P. Leela Rani ASP/INT
Dr. N. Devi, ASP/INT
Venue: Mobile App Lab
Timing: 1:00 PM to 1:30 PM
Participants: 03 students
I Place: D.B. Mittul Balaji (IV-AUT)
G. Johin Gill (III-AUT)

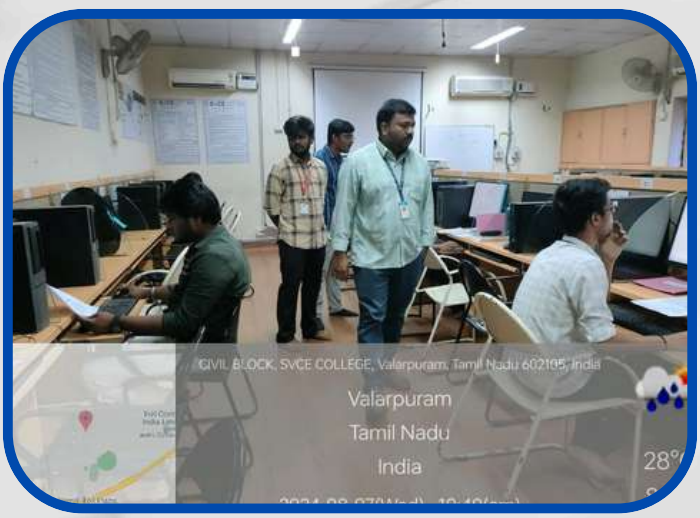
PROGRAMMES ORGANIZED

SAE Collegiate Club of SVCE

GEOMETRIC DESIGN & TOLERANCING

Coordinators:
Dr. S. Ilayavel ASP/MEC and
Mr. J. Sivarampandian AP/MEC
Venue: Metrology Lab
Timing: 10:00 AM to 11:00 AM
Participants: 03 students
I Place: B.G. Arya (III-AUT)
V. Naveen (III-AUT)
Priyesh (III-MEC)

Computer Aided Manufacturing (CAM)



Coordinators:
Dr. K. Paul Durai AP/AUT and
Mr. Ramanjaneyulu Kolla AP/AUT
Venue: Auto CAD Lab
Timing: 10:00 AM to 12:00 Noon
Participants: 06 students
I Place: K. Unnikrishnan (IV-AUT)
B. Velmurali (IV-AUT)
P.G. Gowtham (III-AUT)
G. Johin Gill (III-AUT)
V. Shivabaalaji (III-AUT)

PROGRAMMES ORGANIZED

SAE Collegiate Club of SVCE

IOT

Coordinators:
Ms. R. Saktheeswari AP/INT
Venue: IoT Lab
Timing: 12:45 PM to 1:30 PM
Participants: 05 Students
I Place: S. Pradeep (III-INT)
M. Dharshan Kumar (III-AUT)

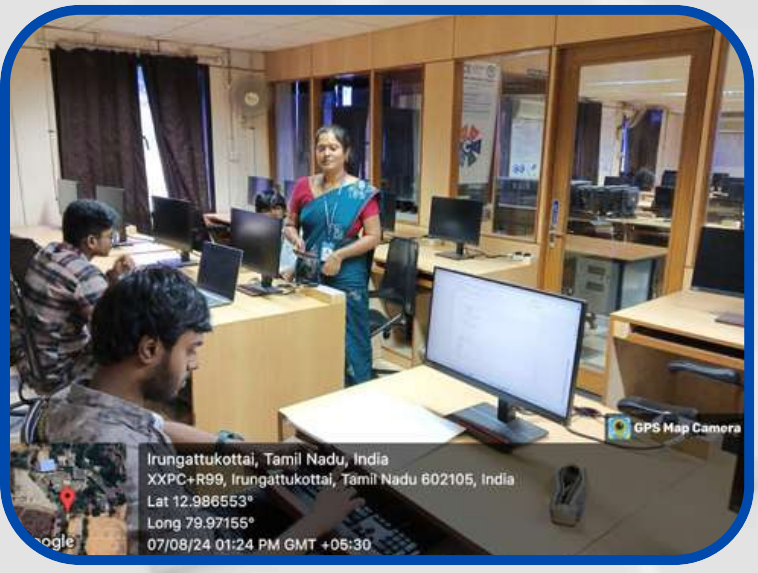
WELDING

Coordinators:
Mr. V. Gurusamy ASP/MAR
Venue: Welding Research Cell
Timing: 10:30 AM to 12:00 Noon
Participants: 28 students
I Place: R. Natraj (III-AUT)
S. Ragul (III-AUT)
D. Dhanush (II-AUT)
G. Subramanian (II-AUT)
D. Yuvaraj (II-AUT)

PROGRAMMES ORGANIZED

SAE Collegiate Club of SVCE

PYTHON PROGRAMMING



Coordinator:
Ms. N. Uma AP/INT
Venue: Computer Lab
Timing: 12:45 PM to 01:30 PM
Participants: 09 students
I Place: E. Kaviraj (III-AUT)
P.G. Gowtham (III-AUT)

SHEET METAL

Coordinator:
Dr. S. Ponnuvel ASP /MEC and
Dr. V. Sridharan ASP /MEC
Venue: Automobile Components Lab
Timing: 10:00 AM to 11:00 AM
Participants: 17 students
I Place: Priyesh (III-MEC)
C. Prathipa (III-AUT)
V. Guha Prasath (II-AUT)
M. Joshika (II-AUT)

FACULTY CONTRIBUTIONS

Tree Plantation for Partition Remembrance Day

The NCC cadets of SVCE celebrated "Tree Plantation for Partition Remembrance Day" on 14-08-2024 under the guidance of Capt. Dr. A. Bhaskaran. The event was coordinated by Dr. M. Sukumar, CTO - Army Wing, Mr. R. Sakthivel, CTO - Naval Wing and Mr. J. Sivarampandian, CTO - Air Wing. 35 Cadets from Army Wing, 20 cadets from Naval Wing and 20 cadets from Air Wing participated in the event. The event honored soldiers' sacrifices, emphasizing unity, resilience, and patriotism while reflecting on the 1947 Partition.

FACULTY CONTRIBUTIONS

Independance Day Celebration

The NCC cadets of SVCE celebrated the 78th Independence Day on 15-08-2024 under the guidance of Capt. Dr. A. Bhaskaran. Dr. M. Sukumar, CTO - Army Wing and 35 Cadets, Mr. R. Sakthivel, CTO - Naval Wing and 20 cadets, Mr. J. Sivarampandian, CTO - Air Wing led 88 cadets from Army, Naval, and Air Wings, with 33 Air Wing cadets joining virtually. The event included flag hoisting, a parade, cultural programs, and a National Flag Rally.

STUDENTS PARTICIPATION

Mr. GOWTHAM NARAYANAN N M, Student of IV YEAR AUTOMOBILE ENGINEERING attended a Theory to Practice lectures on MAKING CO2 CAPTURE AND SEQUESTRATION - ONE OF THE MOST SUSTAINABLE PATHS FOR A NET ZERO WORLD conducted by The Energy Consortium of IIT Madras on August 31, 2024 at IIT Madras, Chennai.

PALS 2024 - 2025

THE ENERGY CONSORTIUM IIT MADRAS

CERTIFICATE OF PARTICIPATION

This certificate is awarded to

GOWTHAM NARAYANAN N M

Student of IV YEAR AUTOMOBILE ENGINEERING
SRI VENKATESWARA COLLEGE OF ENGINEERING, a Partner institute of PALS 2024-25.

The participant attended a Theory to Practice lectures on MAKING CO2 CAPTURE AND SEQUESTRATION - ONE OF THE MOST SUSTAINABLE PATHS FOR A NET ZERO WORLD conducted by The Energy Consortium of IIT Madras on 31st August 2024 at the IIT Madras Campus. The lectures were followed by guided lab visit to Gas Hydrates Lab, Industry Interface Lab, CCUS Lab and Mobile CO_2 Capture Demonstration Unit.

Anuradha Ramanujam
PALS Champion

Dr. Nikhil Tambe
CEO, The Energy Consortium, IITM

C N CHANDRASEKARAN
Chairman, PALS

PALS an initiative of volunteers from Alumni fraternity of IIT's, focused on augmenting engineering education. Details in www.palspgm.com

on 4th September 2024.

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STUDENTS PARTICIPATION

The Department of Automobile Engineering is pleased to share the participation of our students in various events organized by Institution's Innovation Council (IIC) SVCE during Quarter IV.

- **Mr. Velmurali B (IV Year) and Mr. Mittul Balaji (IV Year)** participated in the session on "Innovation-Based Entrepreneurship" on August 19, 2024.

- **Mr. Mohamed Muhshin M (III Year) and Mr. Puneeth Vignesh (II Year)** participated in the session on "Achieving Problem Solution Fit and Product Market Fit" on August 8, 2024.

- **Ms. Tharika R (IV Year) and Mr. Johin Gill G (III Year)** participated in the MoE Innovation Cell Live Session on "Creating and Managing YUKTI Innovation and IPR Repository (YIIR) in HEIs" on August 2, 2024.

- **Mr. Vishwa Tilak Kumar E (III Year)** participated in the session on "Achieving Value Proposition Fit and Business Fit" on August 7, 2024.

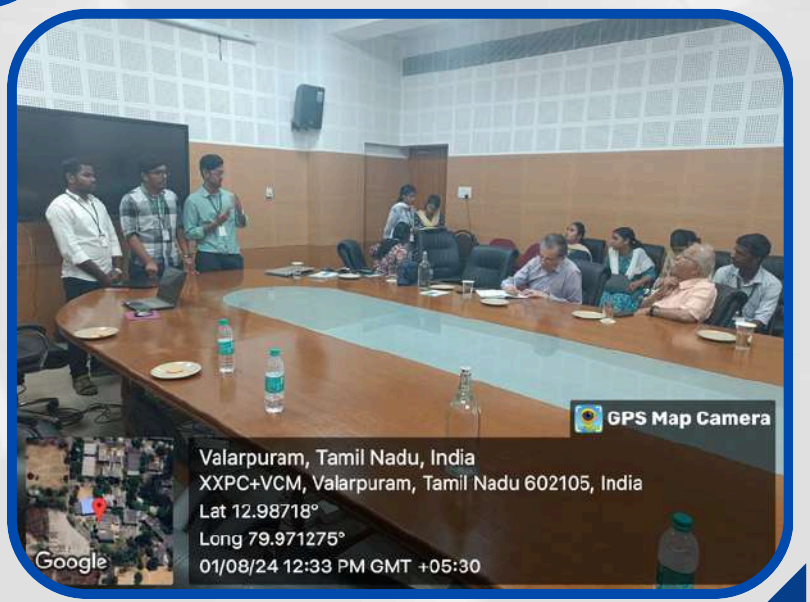
- **Mr. Sanjay R (IV Year) and Mr. Dharshan Kumar M (III Year)** attended the Mentoring Session on "Accelerators/Incubation for Early-Stage Entrepreneurs" by Dr. G. Sudha, Associate Professor & Innovation Ambassador, SVCE, on August 5, 2024.

STUDENTS PARTICIPATION

Mr. Abinandan P, Mr. Aravind A, Mr. Pavan Krishna. S, Mr. Sanjay R, Mr. Subin Siddharthan J , and Mr. Yeshwanth K, final-year Automobile Engineering students, visited the Ola Electric Future Factory through the Ola Sankalp 2024 event. During their visit, they witnessed the unveiling of the 'Bharat Cell,' the announcement of 'MoveOS 3', the introduction of the new 'Gen 3' platform, and the launch of the 'Roadster' series of bikes, which includes the Roadster Pro, Roadster, and Roadster X.

STUDENTS PARTICIPATION

The Department of Automobile Engineering, SVCE extends its congratulations to Mr. Abinandan P, Mr. YESHWANTH K and Mr. Elango K from IV year, Automobile Engineering for their excellent presentation of their innovation titled "Design and Implementation of a Two-Wheeler Anti-Lock Braking System with an Intelligent Controller" under the mentorship of Mr. Sakthivel R, Assistant Professor to the PALS IITM team members on August 1, 2024, in the Library Seminar Hall.



PROGRAM OUTCOMES (POs)

Students in the Automobile Engineering program should, at the time of their graduation, be able to

1. Apply the knowledge of mathematics, science, engineering fundamentals and concepts of Civil Engineering to the solution of complex engineering problems. **(Engineering knowledge)**
2. Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. **(Problem analysis)**
3. 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. **(Design/Development of Solutions)**
4. 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 for complex problems. **(Conduct Investigations of Complex Problems)**
5. Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations. **(Modern Tool Usage)**
6. 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. **(The Engineer and Society)**
7. Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development. **(Environment and Sustainability)**
8. Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice. **(Ethics)**
9. Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings. **(Individual and Team Work)**
10. 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. **(Communication)**
11. 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. **(Project Management and Finance)**
12. Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change. **(Life-long Learning)**

PROGRAM SPECIFIC OUTCOMES (PSOs)

Students in the Automobile Engineering program should, at the time of their graduation, be able to

- **PSO1: Design, analyze, and optimize automotive systems and components using principles of mechanical engineering and specialized knowledge in automobile engineering.**
- **PSO2: Integrate advanced technologies into automotive systems, including electric and hybrid powertrain, autonomous driving systems, vehicle-to-vehicle communication, and advanced driver assistance systems.**
- **PSO3: Plan, conduct, and interpret tests and experiments to validate the performance, reliability, and safety of automotive systems and components.**

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Automobile Engineering graduates during the first few years of graduation will:

- **PEO1: Graduates will have acquired a strong foundation in mechanical engineering principles and specialized knowledge in automobile engineering, adapted to technological advancements leading to successful careers in the automotive and manufacturing industries.**
- **PEO2: Graduates will showcase the ability for innovation and flexibility in embracing technological progress and evolving industry dynamics, fostering a commitment to ongoing learning, culminating further academic pursuits and research endeavors.**
- **PEO3: Graduates will understand the ethical, social, and environmental implications and adhere to the principles of ethical conduct, sustainability, and corporate responsibility to become responsible professionals and successful entrepreneurs.**

PROGRAMS

- **B.E. Automobile Engineering**
- **B.E. Mechanical Engineering (Automobile)**

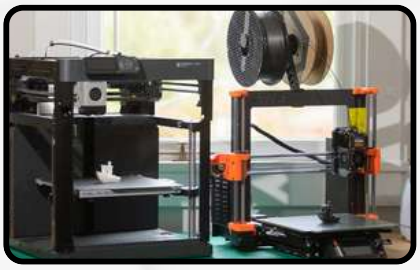
SVCE | Sri Venkateswara College of Engineering

DEPARTMENT OF AUTOMOBILE ENGINEERING

B.E. MECHANICAL ENGINEERING (AUTOMOBILE)

(With a special focus on hybrid and electric vehicles)

EARN DEGREE WITH MUTILPLE CAREER OPPORTUNITIES



Why Mechanical Engineering (Automobile) at SVCE?

- **First College** in **Tamil Nadu** to Introduce this program from the **Academic Year 2024-25**
- The College is an **ISO certified** institution and is accredited by **National Assessment and Accreditation Council (NAAC) with A+ Grade**
- Students can explore **multiple career opportunities** in leading mechanical and automobile industries in India and Abroad
- Special focus on **Hybrid & Electric Vehicles**
- **Semester-in-Abroad** programme in third year
- Exposure to real-world challenges and practices through **Semester-in-Industry** programme
- Earn **Honours / Minor degree** along with basic degree
- Guidance for 100 % placement
- **Full fee waiver** for Government School students under WINGS and SEEDS scholarship schemes
- **Management scholarships** on the basis of Merit Means, Merit-cum-Means, Economic Means, Performance in Sports and Performance in NCC activities

Honours and Minor Degree

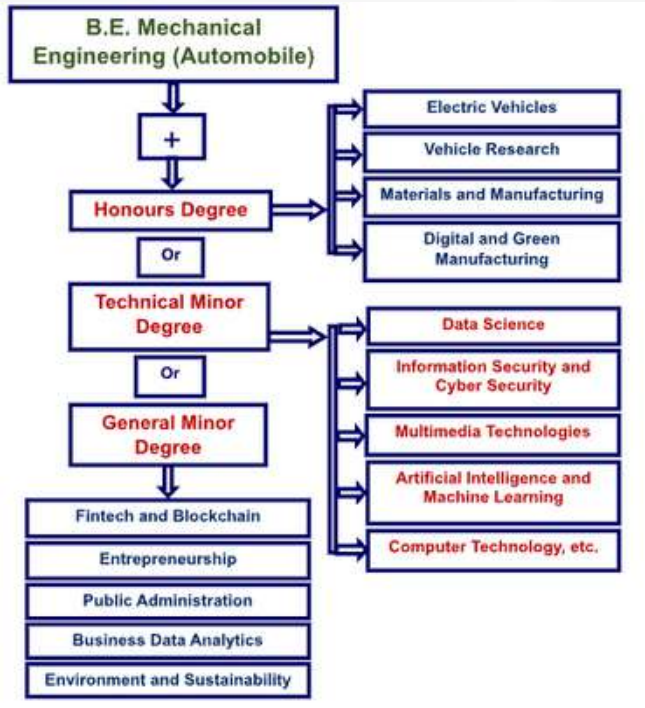
- In addition to the basic degree B.E. Mechanical Engineering (Automobile), the students can get an additional Honours Degree or Minor Degree by earning additional credits.

Placement

An average of more than **95%** eligible students of Automobile Engineering got placed in reputed core and other companies

Higher Studies

- Students are provided with **supportive training** pertaining to their future plans for doing a master's.
- Students pursue their master's in the field of Engineering and Technology and also in Business Administration and Management in reputed Universities worldwide including Clemson University-USA, Wisconsin Madisson University-USA, RWTH Aachen University-Germany, Inglostadt University-Germany, University of Sheffield-UK, Oxford Brookes University-UK, etc.



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