



**NTN:** 0367400-2

**GSN No.** 05-01-9999-855-55

www.ces.com.pk

#### **COMPANY BACKGROUND**

Computer Engineering Services was established in 2001 to provide quality scientific and laboratory equipment at affordable prices with focus on educational and health industry

The Company is a leading provider of educational and scientific laboratory equipment for more than a decade with focus on research and educational institutes in Pakistan. The Company has a wide and diverse base of clients in the industry and educational institutes which adds to its stable foundation.

Computer Engineering Services wide and diverse client base within Pakistan also adds to its stable foundation. Currently, 70% of its business consists of numerous projects with the government sector, while 30% is made up of transactions with the private sector.

Computer engineering Services has highly experienced and self-motivated staffs lead by a management team comprising of expert technical and administrative team. Computer Engineering Services also provides lab design and need estimation consultancy for its clients.

#### **OUR VISION**

- To be the best company in Pakistan--in the eyes of our customers, shareholders, and people.
- To be the company that best understands and satisfies the product, service and self-fulfillment needs of Scientists, Engineers and technologist of Pakistan.
- We expect and demand the best we have to offer by always keeping CES's values top of mind.









# **OUR PARTNERS**



#### The Lucas-Nülle Group of Companies

The LN Foundation - Lucas-Nuelle Stiftung gGmbH - is in charge of the Lucas-Nuelle group of companies. It supports institutions and projects worldwide with the aim of developing technical-industrial education and training. To this end, the foundation awards its own scholarships to selected individuals and supports educational projects financially or through the provision of training systems. Supporting science is the third pillar of the foundation's work.

Lucas-Nülle Group of Companies is made up of three companies Lucas-Nülle, PHYWE and INTEA all are rich in tradition, with different orientation but with a common cause: Trade and vocational training and further education.

Our competence, global organisation and high-quality products "Made in Germany", have resulted in the companies playing a leading role in the world market.

More than 300 highly qualified employees guarantee well-founded know-how, quality products, expert advice and excellent service.

For our customers, suppliers and employees this means a truly reliable and competent foundation for co-operation and team-work.

For more than 45 years, Lucas-Nuelle with its headquarters in Germany has been developing and producing training systems in key technologies in areas such as electrical engineering and electronics, automation technology, mechatronics, communications and automotive technology. Lucas-Nülle works with more than 60 sales partners worldwide. Three regional companys -the LN-Middle East located in Dubai, the LN WFOE located in Shanghai and the LN Inc. located in Williamsburg, USA focus especially on the regional markets.



AUTOMOTIVE TECHNOLOGY



ELECTRICAL POWER ENGINEERING



POWER ELECTRONICS / ELECTRICAL MACHINES



BUILDING MANAGEMENT SYSTEMS



TECHNOLOGY



AIRCONDITIONING



COMMUNICATIONS TECHNOLOGY



MICROCOMPUTER



RENEWABLE ENERGIES



UNITRAIN



MACHINERY AND SYSTEMS ENGINEERING



PROCESS AND CHEMICAL ENGINEERING



PROCESS CONTROL



LAB SYSTEMS



FLUID POWER



VOCANTO





**INTEA** is a provider of qualification measures for the automotive industry in the areas of technology, service and human resources. INTEA trainings provide commercial and technical skills as well as manual skills and creativity in solving tasks. With training centres in Germany, Austria and Spain, INTEA is in demand as a global service partner for manufacturers, importers and those involved in trade.

# PHYWE excellence in science

**PHYWE Systeme GmbH & Co.** KG was founded over 100 years ago and has been owned by Lucas-Nuelle since 1988. PHYWE has built up a reputation as one of the largest global providers of training materials for physics, chemistry and biology lessons. Devices and experiments devised by PHYWE are deployed across the board from primary schools to universities wherever people teach, learn and do research.



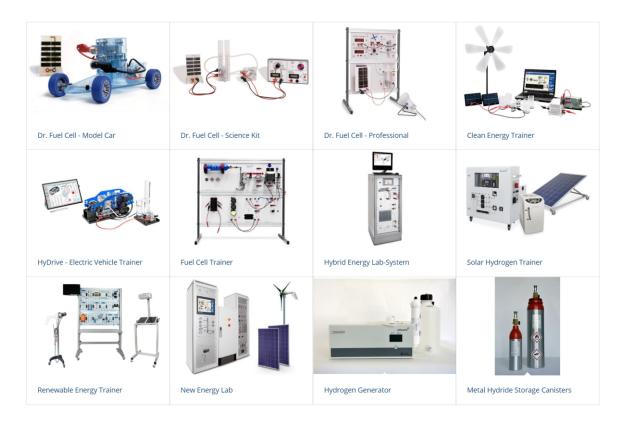
We provide our customers the tools and equipment they need to accurately test and manufacture products for alternative energy applications. Since 1992, Greenlight has supplied battery test systems, fuel cell testing solutions and energy storage test rigs to the world's leading OEMs and research organizations. The Greenlight difference:

We have been manufacturing fuel cell and battery testing equipment for 25 years, and we evolved in Vancouver Canada, right in the center of the fuel cell and EV industry cluster. We are able to draw on the vast local pool of talented and experienced resources. More than 75% of our staff previously worked in fuel cell and EV industries. With Greenlight, you can count on the fact that you are buying sophistication and experience.

- Ÿ Fuel Cell
- Ÿ Battery
- Ÿ Electrolyser
- Y Manufacturing Equipment
- Ÿ Diagnostics







The team at Heliocentris Academia International GmbH range back to its initiation in 1995, when the first educational products for teaching hydrogen and fuel cells were ever created.

Since then our team of engineers, educators and makers have in close collaboration with our clients and users developed a full portfolio of products, covering solutions for middle school, high school, colleges, universities and professional industrial training centers.

The product portfolio today covers different types of renewable energies, energy storage solutions and full energy management systems. Our services include clients' needs analysis, customized proposals, production, shipping, installation, training and rigorous after sales service.

Since February 2017 Heliocentris Academia became a part of Horizon Educational Group and is nowadays leveraging on a worldwide network of partners specialized in advisory of education and technical training solutions.





# Laboratory Chamber & Tube Furnaces

#### **Experts in Furnaces**

THERMCONCEPT develops, designs and manufactures furnaces and systems for a broad range of production and research applications. Many in our workforce have decades of experience in furnace engineering. The expertise we have amassed is deployed on a day-to-day basis in order to plan and realise your ideal furnace solution.

#### **Engineering**

Our highly-skilled development engineers and designers, hardware and software professionals, technicians and mechanics create cost-efficient and reliable furnace solutions. Direct contact with users



Testing
Analysing
Ashing
Drying
Preheating
Debinding
Firing
Sintering
Annealing
Melting

enables us to design furnaces that are practical to use. Our aim is to deliver crucial technical and financial benefits.

#### Fast and flexible

Many applications can be achieved with our extensive range of standard furnaces. The advantages for you are proven, fully-developed models, excellent value for money and quick delivery times. Of course, we also supply customised furnaces specially designed to meet your specific application. In close consultation with you, we develop a furnace system which meets your challenging tasks both reliably and economically.

#### **Global Sales and Service Network**

**THERMCONCEPT** furnaces and systems are proven in daily use at satisfied customers in many countries worldwide. Our international distribution network ensures that our customers receive individual support, rapid responses and expert local service.





KeithLink Technology Co., Ltd. has been providing "Probing and Measurement Total Solution Provider" as our company business direction. The company's business mainly covers:

#### **Self Manufactured Manual Prober (Probe Station/Micromanipulator)**



The prober covers a variety of applications, such as wafer (DC or RF) measurement, LCD Panel measurement, Four Point Sheet / Resistivity / Conductivity measurement for film, such as ITO/PET or ITO/Glass on touch panel, conductive polymer, silicon wafer, thin film solar cell, metal film, and others. It also applies to Solar Cell measurement, Flexible Display Measurement, Hall Effect Measurement, and customized measurement.

#### **Keithley Instrument and system integrator**



Keithley Instrument as well as keithley instrument based software are provided, developed, such as MOSFET I-V, Four Point Sheet Resistivity, Temperature-Resistance, Solar Cell Efficiency, etc., and integrated with manual prober as the total solution for device characterization measurement in the fields of Semiconductor and Electronics.

#### **PLED/OLED Test Systems**



Luminance-Current-Voltage (LIV) measurement system, Lifetime test system, and Photoelectric test system for device characteristics, lifetime parameters, and defect analysis of Organic Light Emitting Diodes (OLEDs), Organic Solar Cells (OPVs) and Organic Sensors.



**Keithley Instruments, Inc.** designs, develops, manufactures and markets complex electronic instruments and systems geared to the specialized needs of electronics manufacturers for high-performance production testing, process monitoring, product development and research. The Company has approximately 500 products used to source, measure, connect, control or communicate direct current (DC) or pulsed electrical signals. Product offerings include integrated systems solutions, along with instruments and personal computer (PC) plug-in boards that can be used as system components or standalone solutions. The Company's customers are engineers, technicians and scientists in manufacturing, product development and research functions.



# **Tektronix**®

Tektronix, Inc. is best known for manufacturing and a leading supplier of test and measurement equipment such as Oscilloscopes, Logic Analyzers Protocol Analyzers, Bit Error Rate Testers, Signal Generators, Spectrum Analyzers, Digital Multimeters, DC Power Supplies, Frequency Counters and Timers, RF Power Meters, Optical Modulation Analyzers and Video Test.

Tektronix is undisputed leader in test, measurement and monitoring. Customer satisfaction, integrity and respect for the individual are deeply rooted in Tektronix culture.

The company received a 2007 Technology & Engineering Emmy Awards for compliance standards monitoring systems for Advanced Television Systems Committee (ATSC) standard and Digital Video Broadcasting (DVB) transport streams.

# **OUR CLIENTS**

- Ÿ Establishment of Pulsed Current Voltage measurement facility at Nanotechnology Center COMSATS Institute of Information Technology Islamabad.
- Ÿ Provision of Source Measure Units in Super Conducting Materials Lab Department of Physics and Ceramics Materials research lab Department of Chemistry, Quaid-e-Azam University Islamabad.
- Ÿ Establishment of Two probe, Four probe, solar Cell IV testing facilities in Department of Physics, Lahore University of management Sciences (LUMS), LahoreCompletion of project at School of Chemical & Materials Engineering, National University of Science & Technology(NUST) Islamabad on electrical measurement of polymer materials.
- Ÿ Provision of FET/Solar Cell/Hall Effect Testing facilities with state of the art probing system at Center for Solid State Physics, University of Punjab Lahore.
- Ÿ Completion of project at Department of Electronics Engineering NED University of Engineering & Technology Karachi on IV/CV testing of JFETs and Solid State Devices.
- Ÿ Establishment of Automation & Robotics Laboratory, University of Engineering & Technology Peshawar
- Ÿ Provision of Semi Conductor Characterization System at Department of Electronics Balochistan University of Information Technology, Engineering and Management Sciences (BUITMS), Queetta.
- Ÿ Pakistan Atomic Energy Commission.
- Ÿ National Institute of Vacuum Science & Technology Islamabad.
- Ÿ Pakistan International Air Lines.
- $\ddot{Y}$  -----and more



#### **OUR CLIENTS**

- Institute of Space Technology, Islamabad Equipment Supplied: Keithley Instruments
- National Center for Physics, Islamabad Equipment Supplied: Keithley and Tektronix Instruments
- Air University, Islamabad
   Equipment Supplied: Keithley and
   Tektronix Instruments
- Semiconductor Characterization System
   Centre for Solid States Physics
   University of Punjab
   Equipment Supplied: Keithley Instruments, USA
- Probe Station for Semiconductor Lab Centre for Solid States Physics University of Punjab Equipment Supplied: Everbeing Int'l Corp
- Physics Lab (Research Lab)
   Department of Physics
   COMSATS Institute of Information Technology, Islamabad
   Equipment Supplied: Keithley Instruments, USA
- Probe Station for Semiconductor Lab
   Department of Electronic Engineering
   NED University of Engineering & Technology, Karachi
   Equipment Supplied: Everbeing Int'l Corp
- Semiconductor Characterization System
   Department of Electronic Engineering
   NED University of Engineering & Technology, Karachi
   Equipment Supplied: Keithley Instruments, USA
- Semiconductor Characteristics & Testing Lab
   Department of Electronics Engineering
   Balochistan University of Information Technology,
   Engineering and Management Sciences (BUITEMS), Quetta
   Equipment Supplied: Keithley Instruments, USA
- Research Lab
   Department of Chemistry
   Quaid-e-Azam University, Islamabad
   Equipment Supplied: Keithley Instruments, USA

- Physics Lab (Research Lab)
   Department of Physics
   COMSATS Islamabad
   Equipment Supplied: Keithley Instruments, USA
- Physics Lab (Research Lab)
   Department of Physics
   COMSATS Islamabad
   Equipment Supplied: Keithley Instruments, USA
- Physics Lab (Research Lab)
   High Reflecting Cavity Mirrors
   Department of Physics
   COMSATS Islamabad
   Equipment Supplied: Las Gatos Research, USA
- 14. Materials Laboratory Department of Physics COMSATS Islamabad Equipment Supplied: Keithley Instruments, USA
- 15. RF/Wireless Laboratory Department of Electrical Engineering NWFP University of Engineering & Technology, Peshawar Equipment Supplied: Keithley Instruments, USA
- Department of Physics
   Bahauddin Zakariya University Multan
   Equipment Supplied: Keithley Instruments, USA
- 17. Maintenance Division Pakistan Institute of Nuclear Science & Technology, Islamabad Equipment Supplied: Keithley Instruments, USA
- Mechanical Engineering Workshop
   NDC Islamabad
   Equipment Supplied: Keithley Instruments, USA
- 19. Electronics Laboratory Department of Electrical Engineering NWFP University of Engineering & Technology, Peshawar Equipment Supplied: Keithley Instruments, USA
- 20. Semiconductor Characterization System Department of Physics COMSATS Islamabad Equipment Supplied: Keithley Instruments, USA



#### **OUR CLIENTS**

- 21. Soil Mechanics Lab Department of Civil Engineering University of Engineering & Technology, Taxila Equipment Supplied: Impact Test, UK
- 22. Digital Design (VLSI) & DSP Laboratory Department of Electrical Engineering NWFP University of Engineering & Technology, Peshawar Equipment Supplied: Lucas-Nulle, Germany
- 23. DC Machines Department of Electrical Engineering COMSATS Institute of Information Technology, Islamabad Equipment Supplied: Lucas-Nulle, Germany
- 24. Microwave Antenna Lab Department of Electrical Engineering COMSATS Institute of Information Technology, Islamabad Equipment Supplied: Lucas-Nulle, Germany
- 25. Machines Lab

  Department of Electrical Engineering

  COMSATS Institute of Information Technology, Islamabad

  Equipment Supplied: Promax, Sapin.
- 26. Automation & Robotics Lab NWFP University of Engineering & Technology, Peshawar Equipment Supplied: Lucas-Nulle, Germany
- 27. Telecomm unication Laboratory NWFP University of Engineering & Technology, Peshawar Equipment Supplied: SUN Equipment Corporation, USA
- 28. Soil Mechanics Laboratory NWFP University of Engineering & Technology, Bannu Campus Equipment Supplied: Impact Test, UK
- 29. Electrical Machines Laboratory Department of Electrical Engineering COMSATS Abbottabad Equipment Supplied: Lucas Nulle, Germany
- Electrical Machines Laboratory
   NWFP University of Engineering & Technology,
   Abbottabad Campus
   Equipment Supplied: Lucas Nulle, Germany

- 31. Earth Quake Centre Civil Sysmology Department NWFP University of Engineering & Technology, Peshawar Equipment Supplied: Quanser, USA
- 32. Department of Electrical Engineering Pakistan Institute of Engineering & Applied Sciences, Islamabad Equipment Supplied: Tektronix, USA
- 33. Department of Electrical Engineering University of Engineering and Technology Peshawar and Bannu Campus Equipment Supplied: Lucas Null Germany, SUN Corporation USA
- 34. Gem Stone Development Cell
  University of Engineering and Technology Peshawar
  Equipment Supplied: Covington USA, Rubin \$ Sons,
  Graves USA
- 35. Gem Stone Development Cell
  University of Engineering and Technology Peshawar
  Equipment Supplied: Covington USA, Rubin & Sons
  Belgium, Graves USA
- 36. Department for Electronics Engineering University of Engineering and Technology Peshawar Abbattabad Campus Equipment Supplied: LUCAS Nulle Germany, SUN Equipment USA,
- 37. U.S.-PAKISTAN CENTER FOR ADVANCED STUDIES IN ENERGY (USPCAS-E) National University of Sciences and Technology NUST H-12, Islamabad, Pakistan
- 38. SCHOOL OF NATURAL SCIENCES (SNS) National University of Sciences and Technology NUSTH-12, Islamabad, Pakistan
- 39.International Islamic University, Islamabad Department of Physics.
- 40.Khawaja Fareed University of Engineering and Information Technology (KFUEIT) Abu Dhabi Rd, Rahim Yar Khan.
- 41. National Institute of Vacuum Science & Technology National Center for Physics, Shahdara valley road, Islamabad, Pakistan



#### WHAT OUR CLIENTS SAY

Dr.Nazar Abbas Shah **Asst. Professor Dept. of Physics COMSATS**, Islamabad



Hashim Raza Khan Asst.Professor **Electronic Engineering Department** NED University, Karachi

measurement of a few ZnO devices and I am a

very impressed by its user friendliness and

intuitive interface. This was well complemented by prompt and efficient after sales support

provided by Computer Engineering Services,



Keithley is exceptionally great as far as their accuracy, reliability and multifunctional resting is concerned. Keithley is very well exclusively represented by a team of professionals whose technical support and after sales services are the best. CES Pakistan on behalf of Keithley is doing a great job.

Dr. Shahzad Naseem Director University of Punjab, Lahore



I have known keithley since my graduate studenship (1980) and have been working with their instruments thoughout my research carier since than. A wonderful collection of instruements for various stages R&D.

Dr. Wagar Adil Syed Asst. Professor **Dept. of Physics** COMSATS, Islamabad



I have found Keithely's Products and their local exclusive partners M/S Computer Engineering Services Extremely reliable and efficient.

Dr. Sadia Faraz Asst. Professor **Electronic Engineering Department NED University Karachi** 



The on site training of Keithley 4200-SCS/F proved to be very effective and it helped us in building the skills to use keithley more efficiently. It is expected that with its reliable and advanced features we will be able to achieve more accurate results for Research and Education.

Dr. Muhammad Asghar Hashmi **Professor Department of Physics Islamia University Bahawalpur** 

Islamabad.



Keithely's 4200-SCS is a versatile system for obtaining all transport characteristic parameters of а semiconductor device. Keithlev Instruments, Inc. designs, develops, manufactures and markets complex electronic instruments and systems geared to the specialized needs of electronics manufacturers high-performance production testing, process monitoring, product development and research. The Company has approximately 500 products used to source, measure, connect, control or communicate direct current (DC) or pulsed electrical signals. Product offerings include integrated systems solutions, along with instruments and personal computer (PC) plug-in boards that can be used as system components or stand-alone solutions. The Company's customers are engineers, technicians and scientists manufacturing, product in development and research functions.



# **SERVICES**

#### **Electrical Engineering Department Jalozai Campus, UET, Peshawar**

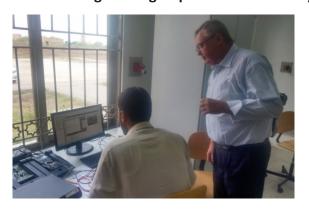








**Electrical Engineering Department University of Engineering & Technology, Mardan** 











# **SERVICES**

# USPCAS-E, Peshawar, Installation & Training

















#### **SERVICES**



Training on Solar Cell Test System in Taipei, Taiwan, to engineer of Lahore College for Women University Lahore (2011)



Training on SCS-4200 at Department of Physics, COMSATS Institute of Information Technology Isb, to Dr. Waqas Adil and research students (2010)









1- One Week Automation & Robotics lab Training in the Industrial Engineering Department of University of Engineering & Technology, Peshawar Campus by Dr. Hans Laufer (2011)



Training on 2400SMU at Department of Chemistry, Quaid e Azam University Islamabad, to Dr. Aamir Saeed & students (2012)



Training on SCS-42000 at Department of Electronics, NED University of Engineering & Technology Karachi, to Dr. Qamar-ul-Wahab, Dr. Hashim Raza & Dr. Sadia Faraz (2009)



Computer Engineering Services CEO Mr. Sahibzada Saleem ur Rehman with Tektronix Director Sales EMEA Mr. Stefano Milani (2012)