JOIN ASHRAE Join the Leaders in the Industry!



Tim Dwyer, CEng Professor, London South Bank University; London Bachelor of Science, Environmental Engineering; London South Bank University ASHRAE Fellow

As a child, Tim Dwyer was always tinkering around with small machinery at home. Whether working alongside his father doing car repairs or helping a

friend with a computer problem, you could say Tim has been an engineer all of his life. Now, as a college professor, he is ushering in a new generation of "Tim Dwyers" and introducing them to ASHRAE. "My path to ASHRAE is really through recognition of its great materials (books, guides, etc.). I wanted to be involved with the people who had the insight and experience to produce such great technical guidance. This industry will give you a great opportunity to reach out and improve the world while giving you a comfortable income for as many years as you choose."



Dunstan Macauley, P.E. Senior Engineer, Encon Group, Inc.; Kensington, Maryland Bachelor of Science, Mechanical Engineering; University of Maryland ASHRAE Member

Dunstan Macauley is a young engineer who already has a long history in the HVAC&R industry. Starting in middle school, Dunstan became intrigued by the

process of how systems worked and would spend hours taking things apart and trying to put them back together. Now, as a senior engineer, Dunstan specializes in project management, client management, business development and project design. Dunstan is most proud of his contribution to the design of the HVAC system that protects the Star Spangled Banner on display at the National Museum of American History. "The wealth of knowledge found within the ranks of ASHRAE membership provides resources to a member that is second to none. Joining ASHRAE provides access to this knowledge as well as training to grow into a future leader in the industry."



Carrie Kelty, EIT

Consultant Engineer – Mechanical Systems Design and Drafter, CMTA Consulting Engineers, Inc.; Lexington, Kentucky Bachelor of Science, Mechanical Engineering; University of Kentucky and Georgetown College Associate Member

Carrie Kelty realized early on that her interest in problem solving and art were leading her to a career in engineering. "When I found that I could combine the two in mechanical HVAC&R design, I was hooked," Carrie said. She joined ASHRAE in college while taking an HVAC course and found many things in ASHRAE that are important to college students — networking with other professionals and discounts on the publications she needed for class. "I believe my knowledge of HVAC systems and their impacts, my leadership skills, and my communication skills have improved since becoming a member of ASHRAE." Carrie feels that young professionals in the industry can make a huge impact on creating a greener world. "I would encourage any student who takes an interest in creating sustainable buildings for the benefit of the environment and human health to join ASHRAE."



Robert Linder, P.E.

Owner Services Department Manger, Karges – Faulconbridge; St. Paul, Minnesota Bachelor of Science, Mechanical Engineering; University of Madison – Wisconsin ASHRAE Member

Robert Linder was destined to be an engineer thanks to three siblings ahead of him who chose the field. "As I grew up, I couldn't image doing anything

else. It was too much fun getting dirty while fixing problems and making things work better. Who wants to sit in an office all day?" In his position at Karges–Faulconbridge, Robert is never idle as he leads an eight-person team performing commissioning, retro commissioning, energy studies, problem solving, testing, adjusting and balancing projects. He credits ASHRAE with helping him to get his job. "I was fortunate enough to be hired by a firm that was a strong supporter of ASHRAE. They encouraged me to get involved and supported my efforts." Robert encourages other young professionals to join ASHRAE to further their careers. "Don't sit back and watch it happen. Make it happen. Don't follow the crowd. Lead the crowd. ASHRAE will help you get there."



Ali Syed, P.Eng

HVAC/Mechanical Engineer & Energy Management Specialist, Jacques Whitford; Saint John, NB, Canada Bachelor of Science, Mechanical Engineering; University of Engineering &

Bachelor of Science, Mechanical Engineering; University of Engineerii Technology, Lahore

Master of Science, Mechanical Engineering; Dalhousie University ASHRAE Member

Ali Syed bucked tradition and became an engineer in a family of medical doctors. His love of physics and mathematics made engineering a natural fit. While working on his master's degree, Ali joined ASHRAE and found a place to volunteer and to meet other engineers like him. "I was motivated to join ASHRAE because I was always inspired by my professors and engineering consultants who cited ASHRAE standards in every technical conversation they had." Ali enjoys using ASHRAE standards in his work on hospitals, schools and commercial high-rise projects.



Golda Weir, EIT

HVAC/Mechanical Engineer & Energy Management Specialist, Jacques Whitford; Saint John, NB, Canada

Reshalor of Science Machanical Engineering University of

Bachelor of Science, Mechanical Engineering; University of Engineering & Technology

Master of Science, Mechanical Engineering; Dalhousie University

Master of Science, Mechanical Engineering; Dalhousie University ASHRAE Member

Golda Weir's love of math and science in high school led her to a career as an engineer. She joined ASHRAE as a junior in college and now, in her job as an energy manager, she is responsible for the energy reduction and conservation of all county-owned assets, which includes buildings, vehicles and parks. Golda is most proud of attaining this position at such a young age and in such a key county in her state. She credits ASHRAE with many of her successes. "ASHRAE has helped me develop both personally and professionally by providing various avenues to develop interpersonal skills and keep abreast of new techniques and technologies within the HVAC&R industry. Getting involved is one of the greatest keys to success. By joining ASHRAE, students are able to take part in their success very early in their career."



Nicholas Lemire, Ing

Senior Project Engineer, Pageau Morel and Associates; Montreal, Canada Bachelor of Science, Engineering; École Polytechnique de Montréal Master of Applied Science, École Polytechnique de Montréal ASHRAE Member

Nicolas Lemire is very honest about what led him to join ASHRAE – the need to network to find a job before he graduated from college. Over the years, he has gotten so much more than he expected from ASHRAE, including opportunities to develop his soft skills and build his confidence. In his job as a senior project engineer, Nicolas designs, specs and serves as team leader for construction projects at his company. "HVAC&R is probably the best known alternative for mechanical/electrical engineers. It is the place where we can be part of the whole project from beginning to end." Nicolas highly recommends joining ASHRAE to help you further your career. "You want to be knowledgeable? Hang around with the top people of the industry."

Learn More! Join Us!

To join ASHRAE or for more information on careers in HVAC&R, contact:

Student Activities 1791 Tullie Circle NE Atlanta, GA 30329 USA

Phone: 678-539-1212; Fax: 678-539-2212; Email: students@ashrae.org
Web: www.ashrae.org/studentzone



Who is ASHRAE? ASHRAE is You!

You've done everything right — signed up for the right classes (and attended them!), studied for exams and packed your brain with all of the knowledge you need to get out there and score that dream job when you graduate.

So what's next? Joining ASHRAE, of course – to become the future of your industry. The ASHRAE members of today are the young professionals who brought

the HVAC&R industry into the exciting arena of sustainable design, net-zero-energy buildings and the ever-evolving standards that shape the future. As an ASHRAE member, you will help take the HVAC&R industry to the next level.

"I know you want a challenging job in constant evolution and are looking for the opportunity to make a difference for the future.....HVAC&R and ASHRAE are the answer!" Nicolas Lemire, a senior project engineer from Montreal, who has been involved with ASHRAE for 11 years.

Knowledgeable?
Hang around with the top people of the industry.

What does ASHRAE do?

The wealth of

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Our members share ideas, identify the need for and support research, and write the industry's standards related to energy efficiency, air quality and refrigeration. The result of these efforts is that engineers are better able to keep indoor environments safe, comfortable and productive while protecting and preserving the outdoors for generations to come, ensuring a sustainable world. By joining, you gain access to the more than 50,000 members worldwide who have been where you are right now, and know how to help you get where you want to be in your career.

What do you get out of ASHRAE?

- Scholarships engineering and engineering technology students are eligible for both Society and chapter-level scholarships.
- Discounts on publications you can use in your coursework and throughout your professional life.
- Complimentary registration to ASHRAE
 Annual and Winter Conferences where you
 can share experiences with other members
 and meet potential employers.
- Monthly chapter technical programs hosted by leaders in the industry allow you to take the latest industry technology back to your classmates and professors.
- The annual Student Design Project Competition offers an opportunity to apply your classroom knowledge of practical design to a real project.
- The Senior Undergraduate Project Grant Program awards funds colleges and universities worldwide to promote the study and teaching of HVAC&R, encouraging undergraduate students to pursue related careers
- Grants-in-Aid offer opportunity for graduate students to continue their education in the HVAC&R industry.

Would encourage any student who takes an interest in creating sustainable buildings for the benefit of the environment and human health to join ASHRAE. ??

Our Industry

Through the design and development of equipment and systems, HVAC&R industry professionals have created comfortable, healthy and energy-efficient indoor environments at home and at work, in schools, hospitals, automobiles, airplanes, and even space capsules. The industry offers countless opportunities in a variety of disciplines and fields, allowing you a world of possibilities to engineer the world we live in.

Consulting

Consulting engineers design systems for new facilities and apply energy conservation principles in existing facilities. Consulting engineers prepare specifications and drawings, estimate costs, supervise installation of equipment and systems, and approve projects at completion. Frequently, they are challenged to ensure environmental health and safety and to design complex systems for specific industries.

Teaching and Research

Faculty at colleges, universities, and vocational and technical schools develop courses and teach engineers and technicians the knowledge and skills they need to succeed. Research is an important role for faculty who develop new technologies and to test and improve existing systems. Research is also conducted in independent research laboratories as well as the research and development units of large companies.

Utilities

Utility companies are involved in generating and distributing the energy that operates HVAC&R systems. Without this energy being available on a continuous and uninterrupted basis, most systems could not operate. While the utility industry's main function is to provide the energy required by the public, they share with the rest of the industry the responsibility for seeing that this energy is used wisely and without waste. Jobs in the utilities sector include estimators, administrators, technicians, consultants/designers, project managers, and purchasing and inspection agents.

Contracting and Service

After plans and specifications for new or renovated projects are completed, HVAC&R contractors provide the skills for assembling, building, testing, and operating systems. Contracting companies employ mechanical and electrical engineers to provide the link between construction and design engineers. Contracting firms also require the services of draftsmen, CAD layout designers, consulting/design engineers, project managers, purchasing agents, estimators and supervisors, project administrators and supervisors of the construction process.

Manufacturing

Manufacturers develop and produce equipment and systems used in the HVAC&R industry. Manufacturing companies come in all sizes and are the source of many innovations in technology. Many have extensive investments in facilities for product development, testing and production. Careers are available for engineers, technicians and production personnel including sales, administration, CAD layout, consulting/design, purchasing, production, inspection, installation, repair, research, estimation and inventory control.

Merchandising and Sales

Merchandising and sales professionals are an important link among equipment manufacturers, consulting engineers and contractors. Being successful in this aspect of the industry requires not only engineering know-how, but excellent communication skills. Engineers and technicians involved in merchandising and sales provide technical support needed by the consulting and contracting industries to properly apply the latest technology and systems concepts. Careers in merchandising and sales include purchasing, inventory control, administration, estimation and management.

Facilities

Facility management requires a range of engineering and management skills to achieve optimal facility performance. Facilities engineers manage the planning and construction of new buildings and oversee the renovation of existing buildings. Some of the more challenging problems for facilities engineers are of an environmental nature, such as handling indoor air quality issues, toxic waste from a manufacturing process and CFC refrigerant replacement in chillers. Facilities engineers also oversee preventative maintenance projects and supervise management of the operation staff, such as central plant operators and HVAC&R technicians.

Government Agencies

Government agencies in city, state, and federal government develop policy and regulations that affect the design and construction of buildings. Engineers who work in these agencies are the vital technical link between the elected officials and the construction industry, serving in facilities management, energy management, research and deployment. The regulatory agencies present engineers with demanding opportunities such as the evaluation of energy management programs for a public utility commission or the development of building requirements for public schools. Knowledgeable and capable engineers review the construction and operation of hospitals, jails and other facilities used by or for the public.



66 wanted to be

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