

# START YOUR ENGINES!

*Accelerating into the future with  
Forsyth Tech's new Transportation  
Technology Center*

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*May the Best Bot Win*

**ForsythTech**

*More Than You Know*

*Sometimes I look in the mirror and I think,  
'You know,  
you've come  
so far. Not only are you a mom  
and a wife,  
now you're a  
graduate.'*  
*I'm just ecstatic.*

Those are the words of Janiet Coulson, who recently earned her GED at Forsyth Tech and is now enrolled in the college's Certified Nursing Assistant program. Working part time as a school custodian, Janiet would not have been able to afford the cost of the program without the assistance of the Forsyth Tech Foundation. With our help, she is on track to graduate next year.

Through the Foundation, Janiet and students like her are able to get the education they need for a better job and a better life. Donate now, and help us help them.

[www.ForsythTech.edu/support](http://www.ForsythTech.edu/support)

The  
Foundation  
of Forsyth Tech

## From the President | *On the Move*

Dr. Gary M. Green



**I**t's the American way. Mobility – from covered wagons to railroads to the Interstate highway system – has created the dynamic society we live in today. It has formed our economy and our self-image. This year Forsyth Tech has placed itself squarely in the forefront of that tradition with

the opening of our new Transportation Technology Center.

This wonderful state-of-the-art center is now home to all our transportation programs, and our faculty and students are still walking around with stars in their eyes, marveling at this beautiful new facility and the resources it contains.

Few could have imagined that an underutilized strip mall on the edge of Winston-Salem could be transformed into a facility that fulfills so many functions: workshop, showplace, classroom, computer lab, training center.

This new center is our response to the demands of the world in which we live. Not only are we preparing our students for jobs – we're preparing them for the *right* jobs. From the food we eat to the merchandise we order online, everything moves over the roads. And so do we.

But the vehicles that move us have now become rolling computers. It takes a well-educated person to work on and maintain these vehicles. We're now in a great position to train those people and send them out into our community to help keep us all moving.

The thing that will *not* move? These jobs.

You cannot outsource the work of maintaining the family minivan or a big rig – or a race car, for that matter. Those jobs will stay here at home, providing employment and economic activity far into the future. The Forsyth County Commissioners and the county's citizens knew this when they approved the bond issue that supported the center being built. We are so grateful for their foresight.

One important aspect of the new center is the partnerships the college has forged with businesses at all levels. Forsyth Tech is now the regional center for the Toyota T-TEN (Toyota Technical Education Center) program, preparing our students in all aspects of Toyota technology and making them ready to move into local dealerships. Toyota has donated vehicles, simulators and other teaching tools. The College is also a Snap-on training center and Snap-on has provided much-appreciated equipment. Salem Leasing and Bill Plemmons RV World have provided vehicles, advice and support.

With the help of these businesses, our wonderful faculty and students, and with a far-sighted community behind us, we're ready to keep moving.

## If it has wheels, Forsyth Tech's students can work on it.

The transportation technology programs, which have been a part of the college since its earliest days, now have a home worthy of their mission. The new Transportation Technology Center brings all the automotive programs together and provides a fitting venue for the high-tech training programs that now equip students for careers in the transportation industry, from race car technology to collision repair to heavy equipment. Starting from this beautiful new center, Forsyth Tech's students are ready to hit the road.



No project too small:  
Students painted  
this vintage toy car.

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Forsyth Tech is proud to be part of the North Carolina Community College System, with 58 institutions serving more than 800,000 students annually. North Carolina Community Colleges are creating success in our state by:

- Offering hope for a better future through vocational training and education
- Providing opportunity by making higher education available to all citizens
- Generating jobs by creating a skilled workforce for business and industry

For information about our "gainful employment" programs as defined by the Department of Education, please go to [www.forsythtech.edu/gainfulemployment](http://www.forsythtech.edu/gainfulemployment).

Forsyth Tech welcomes diversity and is dedicated to meeting the needs of students with disabilities, as mandated by the Americans with Disabilities Act. For more information, please contact Sarah Hawks, Coordinator, Disabilities Services Office, at 336.734.7155 or [shawks@forsythtech.edu](mailto:shawks@forsythtech.edu).

Forsyth Technical Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees, diplomas and certificates. Contact the Commission on Colleges at 1966 Southern Lane, Decatur, GA 30033-4097 or call 404.679.4500 for questions about the accreditation of Forsyth Technical Community College. The Commission can be contacted to file a third-party comment during the time of the College's decennial review or to file a complaint if there is evidence appearing to support the College's noncompliance with a requirement or standard. All other inquiries about the College should be addressed directly to the College.



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### 6 { On the Cover

The word "mechanic" no longer describes the person who maintains today's cars and trucks. It's a high-tech business, and the students preparing for it deserve a high-tech home. That's what they now have at Forsyth Tech's new Transportation Technology Center, which opened officially in January.

### 22 { Working

From career counseling to on-the-job training, Forsyth Tech's programs offer anyone in the Triad a path toward employment.

### 26 { Nano Challenge

Students in Forsyth Tech's nanotechnology program got to watch two cutting-edge particle sizers vie for supremacy in the realm of the really, really small.

### 28 { Journeys

An extraordinary couple visited the college in November to tell their story of survival and hope during the Holocaust in France – and to highlight the little-known history of Jewish children who came through that terrible time.

We're Listening!

If you'd like to comment on anything in this issue of *Tech Quarterly*, we'd love to hear about it. You can email us at [TQ@forsythtech.edu](mailto:TQ@forsythtech.edu).

## Where Credit's Due

Students in the Associate Degree Pharmacy Technology program just got a big career boost: The program has been accredited by the American Society of Health-System Pharmacists, or ASHP. Forsyth Tech is the first college in the state to be awarded this accreditation for its Associate program.

According to Sarah Clement, the program's coordinator, the new national recognition will give potential employers the confidence that Forsyth Tech graduates are prepared to start work with a minimal amount of training; they'll be employable anywhere in the United States. "It grants a stamp of approval for them," she notes. "They can go anywhere now."



## Great in the State

The Order of the Longleaf Pine is granted by the Governor to North Carolinians who have a record of extraordinary service to the state. One of the most prestigious awards a resident can earn, it has been granted to luminaries such as Billy Graham, Danny Glover, Charles Kuralt and Maya Angelou.

Now one of Forsyth Tech's own has earned the award: former Coordinator of Admissions Sandra Suggs. Sandra was nominated for the award by her successor, Jean Groome, who says Sandra was an inspiration to her and to the college for her devotion to the job and to Forsyth

Tech. "For her, it was all about the students," Jean asserts.

## Cops for Tots

Forsyth Tech's criminal justice students worked to give some Forsyth County kids a great Christmas last year. Their Sigma Theta Kappa organization, a community outreach group, presented a check for \$1,050 to the Police Chief of King, a Stokes County town just north of Winston-Salem. Chief Paula May accepted the check at the college's Northwest Forsyth Center, on behalf of the department's Cops for Tots program.

The money was used to provide clothing and toys for 75 children in King last Christmas. Members of Sigma Theta Kappa, an affiliate of the national criminal justice association Lambda Alpha Epsilon, raised the money for the Cops for Tots program through two hog sales and a slow cooker fundraiser.

At the same time Phi Theta Kappa, the college's academic honor society, also contributed \$250 to the King Cops for Tots program. Modeled on Phi Beta Kappa, the honor society for four-year colleges, Phi Theta Kappa invites students with excellent academic records at two-year colleges to be members.



## A New Head for Health



"Health care is my passion," says Bonnie Pope. Bonnie has just been named Dean of Health Technologies at Forsyth Tech after serving for six months as Interim Dean and as Director of Nursing for six years.

The new dean is excited about the division she leads and its mission. "Forsyth Tech's division is a real mover and shaker," she boasts. "We have an outstanding reputation in this community and beyond. I intend to continue to support the integrity of our health programs and make sure we're preparing the most qualified members of the next workforce generation."



## A Force for Good

A pilot mentoring program at Forsyth Tech was awarded a \$5,000 grant from the Winston-Salem Foundation. Eminent Force encourages minority male students who are rising high school seniors to continue their education at the college. Through the Minority Male Mentoring Program, Forsyth Tech students will help guide a group of local high school students through the process of applying to the college and prepare them for the college experience over the summer.

The program is a response to the falling enrollment rates for minority males at the college, explains Greg Young, the Minority Male Mentoring Program's coordinator. "We want to allow more of these kids access to the community college system. Then we'll offer them support once they enroll." The Eminent Force team is identifying the first crop of students, recruited to participate in the program.

## Catching Stars

When heavy equipment manufacturer Caterpillar opened its new plant in the Triad, the company made a special request: Could the Star Catchers please come and sing at the opening ceremony?

The Star Catchers are a pretty special group, made up of students from Forsyth Tech's Compensatory Education program in Stokes County. They have already performed for Gov. Bev Purdue on two occasions. Their presence at the ceremony in November highlighted the relationship between Forsyth Tech and the world's largest seller of construction and mining machinery. The college is collaborating on training programs with Caterpillar, and the prospect of this partnership helped bring the company, along with 500 jobs, to locate its new operations in Winston-Salem. The plant manufactures axles for Caterpillar's giant earth-moving equipment, used in mining operations.

After the ceremony, one Caterpillar official commented: "I thought the talk of the event might be that 32-foot axle, but boy was I wrong ... the Star Catchers stole the show!"



## A Story to Tell

Former Forsyth Tech President Dr. Harley P. Affeldt holds a treasure trove of early stories about Forsyth Tech in his head. No wonder: As one of the college's first employees in 1960, and later serving as president from 1971 to 1981, he is among the few who personally witnessed the college's 50-year transformation from high school vocational program to one of North Carolina's largest and most progressive community colleges.

To preserve these stories, Harley has contributed his memories to the local StoryLine project, which allows people in the Greater Winston-Salem area to interview each other and record their personal recollections. The StoryLine bus, loaded with audio equipment, travels around the region and provides the support to record these interviews.

Harley recorded his memories of making the transition from Industrial Education Center, or IEC, to a modern community college, working with local industries to develop its curriculum and starting the college's Health Technologies programs.

StoryLine shares the best of its offerings on local radio stations, and Harley's story was broadcast the week of Feb. 26 on WFDD 88.5 FM, WSJS 600 AM and WSNC 90.5 FM. It's available to hear online at [www.storylineproject.org/](http://storylineproject.org/).

The story provides a wonderful insight into the college's early history.





## NERV Center

Early in December, a strange-looking vehicle appeared in a parking lot at Forsyth Tech: a large black truck with a giant satellite antenna. Created by Cisco Systems to respond to natural disasters and other large-scale emergencies, the NERV (Network Emergency Response Vehicle) was visiting the campus at the invitation of Debra Taylor, a networking instructor at the college.

The NERV's visit to Forsyth Tech was a natural. The college has an important relationship with Cisco, offering courses that certify students in Cisco technology, and preparing them for high-tech careers and qualifying them to take examinations for various network industry certifications. The visit allowed Forsyth Tech students, as well as schoolchildren and community members from other local colleges, to have a look at its cutting-edge technology.

The NERV vehicle is crammed full of communications technology and is ready to be deployed wherever disaster strikes and communications systems are compromised. Sue-Lynn

Hinson, one of the specially trained NERV staff, explained that during large-scale disasters, there's often a huge problem when various emergency response agencies can't communicate with each other. The NERV vehicle is equipped with an Interoperability and Communications System (IPICS) that allows agencies using different frequency bands and radio protocols to talk to each other.

The \$1.6 million vehicle is always staffed with at least two technicians who are also trained first responders (Hinson herself is a volunteer firefighter).

Cisco has sent NERV vehicles – or smaller, more portable kits – to respond to disasters in Haiti and China, and to help with the effects of the tsunami in Japan. Cisco does not charge for these services.

One enthusiastic observer was Kierre Hickman, a student in Forsyth Tech's Cisco Certified Network Associate program. Kierre was pretty impressed, and said he'd love to work with the NERV vehicle after he graduates from the program in the fall. "I want to take it home with me," he enthused.



## New Job for Job Creator



As Director of Corporate Education at Forsyth Tech for the past four years, Jennifer Coulombe's job has been helping people find work. Now she herself has a new job: Dean of Business and Industry Services in the Economic Workforce & Development (EWD) Division. Jennifer came to Forsyth Tech in 2008 after working for the YMCA and BB&T.

She says she loves the constant variety in her work, but the best thing is seeing her efforts rewarded when people find work. "That's the kind of thing I jump up and down for," she says.



## A Winning Habit

It's becoming something of a tradition at Forsyth Tech: winning awards, that is. The college's marketing efforts have won accolades in previous years from the National Council for Marketing and Public Relations. This year, with a truly phenomenal showing, Tech took home nine Gold Medallion Awards and one Silver, competing against all the southeastern two-year colleges in District 2, which includes the Southeast, Bermuda, the British Virgin Islands and the Bahamas.

The college, in conjunction with its local marketing partner, The Bloom Agency, won gold for its magazine, *Tech Quarterly*; for its series of brochures promoting the college to prospective students; for its eye-catching series of banners and outdoor billboards; for Innovation in Technology with its online recruitment campaign; and for its promotional campaign for Forsyth Tech's 50th anniversary. Forsyth Tech also won Silver for its series of radio spots.



## State of the Union

Forsyth Tech alum Kathy Proctor was back in the news in January. Kathy, you may remember, was the student selected to attend the State of the Union speech by President Obama in 2011. The President mentioned her – and Forsyth Tech – in his speech as an example of the right approach to the trauma of job loss. Kathy's manufacturing job disappeared when the factory where she'd been working shut down. At 55, she was enrolled in a biotech program at the college, and President Obama praised her for taking the initiative to go back and retrain herself.

On the day of this year's speech, CNN found Kathy and interviewed her live during the "CNN Newsroom" broadcast to see how things have worked out for her. The answer: just fine. She spoke about her new job in quality control at a local biotech company, and shared news of her twin daughters, both now enrolled in college themselves. Great example!

## Sign of The Times

They say it's the most valuable real estate in American journalism: Page 1 of the Sunday *New York Times*. But there it was – a story by *Times* reporter Motoko Rich, on state-funded job-training plans, featuring Forsyth Tech's partnership with Caterpillar.

Among others, *The Times* interviewed former Dell employee Dante Durant, who went through the Forsyth Tech training program and recently started his new job at Caterpillar. "Once we got out of there," he told *The Times*, "everybody was prepared to go to work."

Ms. Rich spent two days in the Triad, looking at Forsyth Tech's partnership with Caterpillar and interviewing employees and government officials.



## Leader in the Triad

Each year the Triad's *Business Journal* publishes a list of the region's most influential business leaders, and Forsyth Tech's President, Dr. Gary Green, has made the list yet again.

The reasons? According to the paper, "Under Green's leadership, Forsyth Tech has become a model to schools around the country when it comes to retraining workers. In June, President Obama invited Dr. Green to be part of the announcement that a manufacturing skills certification program piloted at Forsyth Tech would be expanded nationwide."

This represents the eighth consecutive year that Dr. Green has been on the list; his name has appeared every year since *The Business Journal* started compiling the list in 2004.

# “Ladies AND GENTLEMEN, **START YOUR ENGINES!**”




**START YOUR ENGINES**



**I**nside the cavernous, gleaming-new workshop, NASCAR legend Richard Childress stood on the podium and gave the order: “*Ladies and gentlemen, start your engines!*” **FROM BEHIND THE CROWD CAME THE CLASSIC ROAR, ECHOING OFF THE ROOF AND WALLS: BRRRRM-BA!!!!** as Bill Wilder, the founder of Forsyth Tech’s racing program, flipped the toggles and fired up a student-built Sprint Cup race car’s Chevrolet SB-2 engine, and 750 horsepower of internal-combustion happiness briefly challenged the eardrums of the gathered dignitaries.

It was an appropriate send-off. Several hundred were on hand to mark the opening of Forsyth Tech’s new Transportation Technology Center, the state-of-the-art facility that now contains all the college’s automotive programs. A professional racing team would feel at home here – but there’s so much more. And on that day in January, students, faculty and staff members were eager to show it off: the bays filled with shiny Toyotas, the rows of spanking-new Snap-on tool chests, the lifts, the workshops, the paint booths and machine shops, the computer labs and simulators. No one, it seemed, could stop smiling.

And no wonder. Housed for years in a former incinerator next to Forsyth Tech’s main campus on Silas Creek Parkway and at other sites in the Triad, the college’s automotive programs finally have a new home. The new center reflects the changes of the last two decades in transportation technology and its workforce. No longer can self-taught mechanics tinker with cars and trucks and keep them in running order. From minivans to giant semis to race cars, today’s vehicles are complex, computer-controlled systems. It takes smart, educated people to

work on them, and the college is now fully equipped to provide that education.

#### **FIRING IT UP**

It all started with a bond referendum back in 2006. Forsyth County’s voters approved \$15 million to renovate the vacant Pinebrook Shopping Center on the north side of town, and the college engaged the firm CJMW Architecture to perform the transformation.

Randy Butner, who directs the race car technology program, remembers when he first saw the property. “To be honest,” he says, “I didn’t see how they were going to do it. I said to myself, ‘They’ll never make a premier transportation center out of this.’ ” He wasn’t alone. Some residents in the neighborhood of the abandoned strip mall saw the place as an eyesore and had been campaigning to have it demolished.



The program’s founder, Bill Wilder, rolls the #1 race car into the shop area. Students built the car from the ground up.


**START YOUR ENGINES**


But *David Moore*, the lead design architect who repurposed the building, relished the challenge: "It's not very often you get to take an ugly duckling and turn it into a swan," he reflects.

Nevertheless, it would have been easier to start from scratch. "This kind of transformation is much more difficult than creating something from nothing." It was like putting together a giant puzzle: "The biggest problem was taking this huge building that was really six different buildings, and making it into one unit. We couldn't afford to tear it all down."

**MAKING IT WORK**

Instead, Mr. Moore made the boomerang-shaped structure work for its purpose, leaving the original walls and the

basic shape and using the modular layout to create separate, interconnected spaces for the different programs: Race Car Technology, Automotive Systems Technology, Collision Repair and Refinishing Technology, RV

Maintenance and Repair, and Heavy Equipment. The Heavy Equipment section, at the west end of the building, is the only new construction: There was no space in the original building high enough to accommodate the 13-foot-tall tractor trailers.

*Leonard Kiser*, dean of the college's Engineering Technologies Division, takes a visitor through the finished facility. It's hard to believe the space was once dingy and derelict; the new shops, classrooms and hallways are light-filled, the walls jazzy with eye-popping automotive supergraphics. He points out that students in the automotive courses will now be able to take all their classes here; the center is fully self-contained, with its own bookstore, cashier, administrative offices and computer labs.

As he opens doors to classrooms and workshops, lights flicker on. That's also part of the package: The building is eligible for LEED certification, having met strict standards for energy efficiency and sustainability. The lights are motion-activated.

The rows of Toyotas in the work bays, along with big Snap-on tool chests, highlight the college's partnerships with industry. Each program has an advisory committee, Leonard points out,

composed of people from the relevant industries. "We want them to hire our students," he explains. "They help us form our curriculum. They also help with equipment we couldn't otherwise afford."

The program has grown in credibility. "We used to have to beg, borrow and steal to get people to donate a tool," Leonard remembers. "Now they come to us."

**OFF TO THE RACES**

*Richard Childress*, the 13-time champion NASCAR team owner and former driver, is a case in point. He looks to the college's race car technology program for future employees. "We're very fortunate at RCR [Richard Childress Racing]," he says. "We've hired quite a few people from Forsyth Tech. The training they get saves us a lot of time and effort. We're very proud of them — they're some of our best employees."

Overseeing that training is *Randy Butner*, a lifelong addict of speed and wheels. "I grew up in racing," he says, sitting in his office adjoining a shop floor filled with race cars in various stages of construction. "When I was a kid, we'd race popsicle sticks down the gutter."

Randy gives credit for the racing program to his former boss, Bill Wilder, who started it back in 1999: "Bill's been racing since the Big Dipper was a little spoon."

The program is a natural, Randy asserts, in a state where racing is a \$6 billion-a-year industry. More than that, it's just plain fun, and it attracts students: "We've seen improved enrollment in all the courses from the race car program." Each year he has more applications than he can accept.

No wonder: Randy takes people into the program who don't know how to hold a wrench and turns them into race car technicians in two years. They learn how to build a car from the ground up, then watch it race at local tracks. "Mostly when students come here," Randy observes, "they want the glamour of racing." And indeed graduates from his program have gone on to several of the big teams, including RCR, Hendrick Motorsports and Roush Fenway Racing. But he points out that there are other good career paths open to the program's graduates. Regional businesses specializing in race car parts, for instance, need employees with the kind of training his program provides.

**Leonard Kiser: The Dean.** "We used to have all these programs dispersed in six different locations. Now we've brought it all together — the work spaces, the general courses, the computer labs, our own bookstore and cashier," Leonard enthuses. The new facility allows the programs to come into their own: "We're the fun part of the college."


**START YOUR ENGINES**

**RANDY GIVES CREDIT FOR THE RACING PROGRAM TO HIS FORMER BOSS, BILL WILDER, WHO STARTED IT BACK IN 1999: "BILL'S BEEN RACING SINCE THE BIG DIPPER WAS A LITTLE SPOON."**

**Randy Butner: Program Coordinator, Richard Childress Race Car Technology Program.**

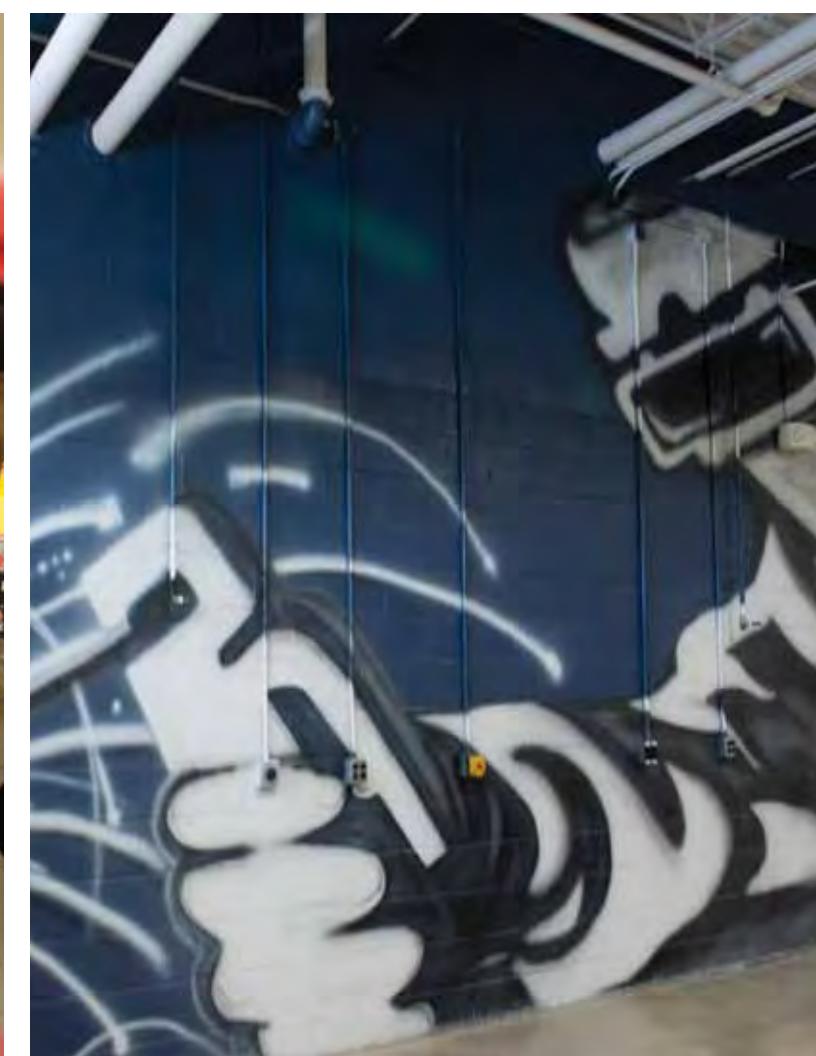
"I'm so proud of this program, I don't know when to stop talking." This engine started life as a 460 cubic-inch Ford model commonly used in trucks and vans. Students modified it, and now it's a 520 cubic-inch drag race engine with a 6-71 supercharger and two 850-cubic-foot-per-minute Holley carburetors.



**David Moore: The Architect.** His first car was a '68 396 Camaro SS. His parents sold it when he went off to college, and he's never gotten over it. He has nothing but respect for the work that's done here; in fact, if he hadn't ended up as an architect, he would have liked to be a Ferrari mechanic. "I wanted to give the feeling that these guys are doing awesome work in an awesome space."



# Richard Childress Car Tech At Forsyth



## START YOUR ENGINES

**“THIS IS WHAT A FIVE-STAR BODY SHOP WOULD HAVE,” MARK EXPLAINS. “AS YOU PULL THE FRAME ON A CAR, YOU CAN WATCH THE COMPUTER SCREEN. THE PRINTOUT WILL SHOW THAT THE CAR HAS BEEN PUT BACK TO FACTORY SPECS.”**

Two brothers who graduated from the program started their own speed shop, Randy boasts; an alum is an instructor at Virginia International Raceway. Another graduate is an official with the new sanctioning body, NASA (National Auto Sport Association), doing technical inspections on race cars.

Now, Randy says, with the facilities and equipment available at the new center, his students will be even better trained. He shows off the Spintron, a large, expensive machine that tests engine parts, and a boring bar, which bores out cylinders in engine blocks. He points out a new Magnaflux machine. “These come from aviation,” he explains. “They’ll detect cracks in a part before it fails.” He’s awaiting delivery of a turret punch press. “That’ll allow us to do all kinds of sheet metal work. This is the kind of equipment you’d find in race shops.”

### BODY OF KNOWLEDGE

At the other end of the complex, *Mark Walker* is making similar pronouncements. Mark heads up the college’s Collision Repair and Refinishing Technology program.

“This is a dream,” he says, walking through the light-filled shop and showing off his new equipment, including paint booths, lifts and a laser-aligned frame straightener. “This is what a five-star body shop would have,” he explains. “As you pull the frame on a car, you can watch the computer screen. The printout will show that the car has been put back to factory specs.” The program had budgeted for this machine five years ago, but there was nowhere in the old facility to put it.

Mark started as a kid when his grandmother let him paint her car using her Kirby vacuum cleaner. He hated school but worked in a paint shop in high school and painted Winston-Salem Transit buses. After graduating, he enrolled in Forsyth Tech “and for the first time in my life, I got straight A’s.” Many of his students have similar histories, he says. They arrive in his program, and “I can see it in their eyes. When they first paint something, they’re just so proud.”

His students end up in an amazing array of jobs. Outside of working in auto body shops,



**Mark Walker:** Program Coordinator, Collision Repair and Refinishing.

“I try to give as much knowledge as I can. I’ve got such a deep love for what I do. Now I’ve got everything I need to build and show and teach everything they need to know.” Mark holds an HVLG (high-volume, low-gravity) paint gun. The hood pictured here shows students “basic entry designs” – all these designs were produced on the hood in less than an hour.

Clean lines, eye-popping supergraphics and primary colors form the backdrop for the work that’s done at the new facility, from Collision Repair and Refinishing to the Richard Childress Race Car Technology Program.


**START YOUR ENGINES**

"If it has paint, somebody's got to paint it. I've painted everything from the plaque on the Reynolds building to toilet seats. My students have painted the Dallas Cowboys' trailer."

And beyond painting, they've also gone into insurance, writing estimates or as adjusters. Some graduates are in outside sales for paint companies. Mark likes to emphasize that in a profession viewed as a guy thing, 10 percent of his students are women, some of whom have gone on to own their own body shops. In the old space, Mark remembers, "We had 20 to 25 students in a shop made for 12." Now there are no restrictions. "This space is going to be wonderful. This is a dream come true."

**HEAVY LIFTING**

**Joe Sechrest: Department Chair.** "I think we showed our administration that we were serious; we love what we do and we do it well. They said, 'These guys need more room – let's get 'em some more room.'" Joe is proud of the Snap-on tool chest the company created in blue especially for the college.

"This is state of the art, not just for North Carolina but pretty much for the whole country," Joe claims. "I've been to a lot of community colleges and a lot of training schools, and I've never seen anything that could compare to this."

Those bragging rights extend far beyond the enormous Heavy Equipment workshop. Joe is particularly excited about the college's partnerships with toolmaker Snap-on and with Toyota and its T-TEN training program. "The curriculum all had to be approved by Toyota," he explains. Students who graduate from the program are certified to work in any Toyota dealership. Although there are 40-odd programs across the country, Forsyth Tech's is the only one in the Southeast.

Toyota has donated 16 vehicles to the college. "The beautiful thing about this whole

deal," Joe says, "is that we can train with those Toyotas in the generic program as well." Another teaching tool donated by Toyota is a \$150,000 electronic simulator containing all the wiring for a Camry mounted on a board, from ignition to power doors to brakes. Instructors can mess up the system and challenge students to de-bug it, tracking down the source of the problem.

Joe reminds his visitor that his students will go on to secure jobs: "You can't send your Toyota back to Japan for maintenance," he points out. "You need someone here who's trained and qualified to work on that particular piece of equipment."

Other businesses, some national in scope and some local and regional, are also partnering with the college. Volvo has contributed a big semi tractor and Salem Leasing, a trucking company based in Winston-Salem with branches all over the Southeast, will send over just about anything Joe needs. "These people have been awfully good to me," he says. "We've had a lot of people hired by Salem Leasing over the years. We have to send them good, qualified people."

That was much harder in the program's old quarters. "We were in the oldest building on the campus. We were literally busting out of the walls down there. Now we can have the first-year and second-year students working in the same facility at the same time."



The Heavy Equipment program needed to accommodate the big rigs, including space to jack them up for maintenance and repair.



**"THIS IS STATE OF THE ART,  
NOT JUST FOR NORTH CAROLINA  
BUT PRETTY MUCH FOR THE WHOLE COUNTRY."**

Joe Sechrest



**David Allgood: Program Coordinator, Automotive Systems Technology.**

"There are more jobs out there for technicians than there are people to fill those jobs." The partnerships with Toyota and Snap-on will help the college fill that gap. David shows off a Snap-on diagnostic charging system analyzer, which tests batteries and charging and starting systems.

## START YOUR ENGINES

### FROM CLASSROOM TO SHOP FLOOR

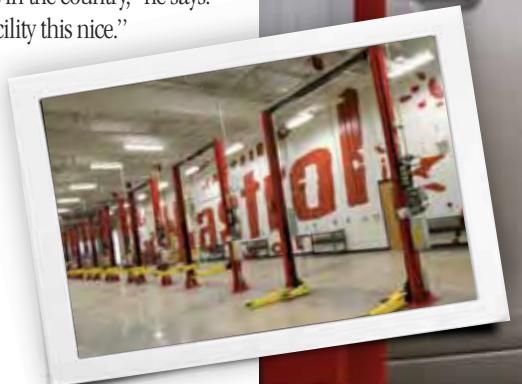
**David Allgood** is the new man in the program. He came to the college after a 23-year career in the Army, running motor pools at bases from Fort Bragg to Germany to Grenada, including a tour in the first Gulf War. He has an impressive combination of practical and theoretical background: He ran his own garage before he started teaching, and has a master's degree in education. He's now the program coordinator for Automotive Systems Technology. "I'm probably the least experienced guy here," he says with characteristic modesty. And like his fellow faculty members, he doesn't talk much about himself, but about the students and the program.

David shows off the high-tech classrooms and talks about his instructors. "This is the only automotive program I know of where all the full-time instructors have four-year degrees. And they're all Toyota-certified. I've got the best group of instructors you can have."

Now those instructors will be able to take students straight from the shop floor into the computer lab. "It's modular training," David explains. "It's self-paced. If they make a mistake, it'll show them where. This way they don't get hurt on a vehicle."

Students don't need an automotive background to start in the program. "You can go from zero to hero here," he boasts. The new facility is going to make that much easier. "This is perfect. I don't know what more we could have gotten," he says. And it's necessary. "Cars aren't really cars anymore – they're really rolling computers."

He has everything he wants. "I've seen most of the programs in the country," he says. "You'll never see a facility this nice."



## START YOUR ENGINES

### A PASSION FOR RACING

On the day of the opening, classes have only been in session for a week, and for the students, the novelty has not worn off. **Nathan Steffe** and **Josh Troutt** are both first-year students in the Race Car Technology Program, and they're eager to talk about their new environment. On the first day of classes in the new facility, Nathan says, he was overwhelmed. "The minute you walk in the door, all you see is race cars."

Nathan describes himself as a "straight-line guy," meaning he's into drag racing; Josh is an "oval-track guy." Nathan, who's from Clemmons, graduated high school at 16 and at 17 is now the program's youngest student. But he knows what he wants: a career in race car welding. He's looked at the market and he knows the jobs are out there.

Josh is thinking along the same lines. "I've been working on race cars since I was 9," he explains. "I've always had that passion." He visited the old Forsyth Tech facility when he was a sophomore in high school and made up his mind to enroll in the racing program when he graduated. "I decided I'm going to get a good degree in welding. I know that is going to be useful to the guys I work with."

"It's amazing," says Nathan. "It's so well thought out, so well planned, so well designed." 

**"I DECIDED I'M GOING TO GET A GOOD DEGREE IN WELDING. I KNOW THAT'S GOING TO BE USEFUL TO THE GUYS I WORK WITH."**

Josh Troutt, Student



In the Richard Childress Race Car Technology Program, students learn skills that will take them into a professional racing program, or into the racing industry's many auxiliary businesses. They start working on real race cars from Day One.

## ANN WATTS

*Director, Stokes County Operations*

The word "passion" comes up a lot when Ann Watts talks. She has a passion for teaching, for her students, for early childhood education, for adult education and for Stokes County. Ann holds two official job titles with Forsyth Tech: Director of Off-Campus Centers and Director of Stokes County Operations. Both of those are big, but not big enough to encompass all of Ann's myriad activities. "I love opening doors for students," she says, summing up her life's work.

It's a little difficult to keep up with the many ways she has opened those doors over 30-odd years in Stokes County. Ann began as a reading specialist at King Elementary in 1979. After two years she married a pharmacist from Walnut Cove, where she taught adult basic skills for the county. "It was almost like a one-room schoolhouse," she remembers. Some adults were learning to read for the first time.

Over the next few years, Ann raised three kids, started the county's first Title I Pre-K program, finished a master's degree, worked with the state of North Carolina to get grants for early childhood education, helped found the Stokes County Partnership for Children, participated in the Early Childhood Leadership Development Program at UNC-Chapel Hill and started teaching early childhood education at Forsyth Tech.

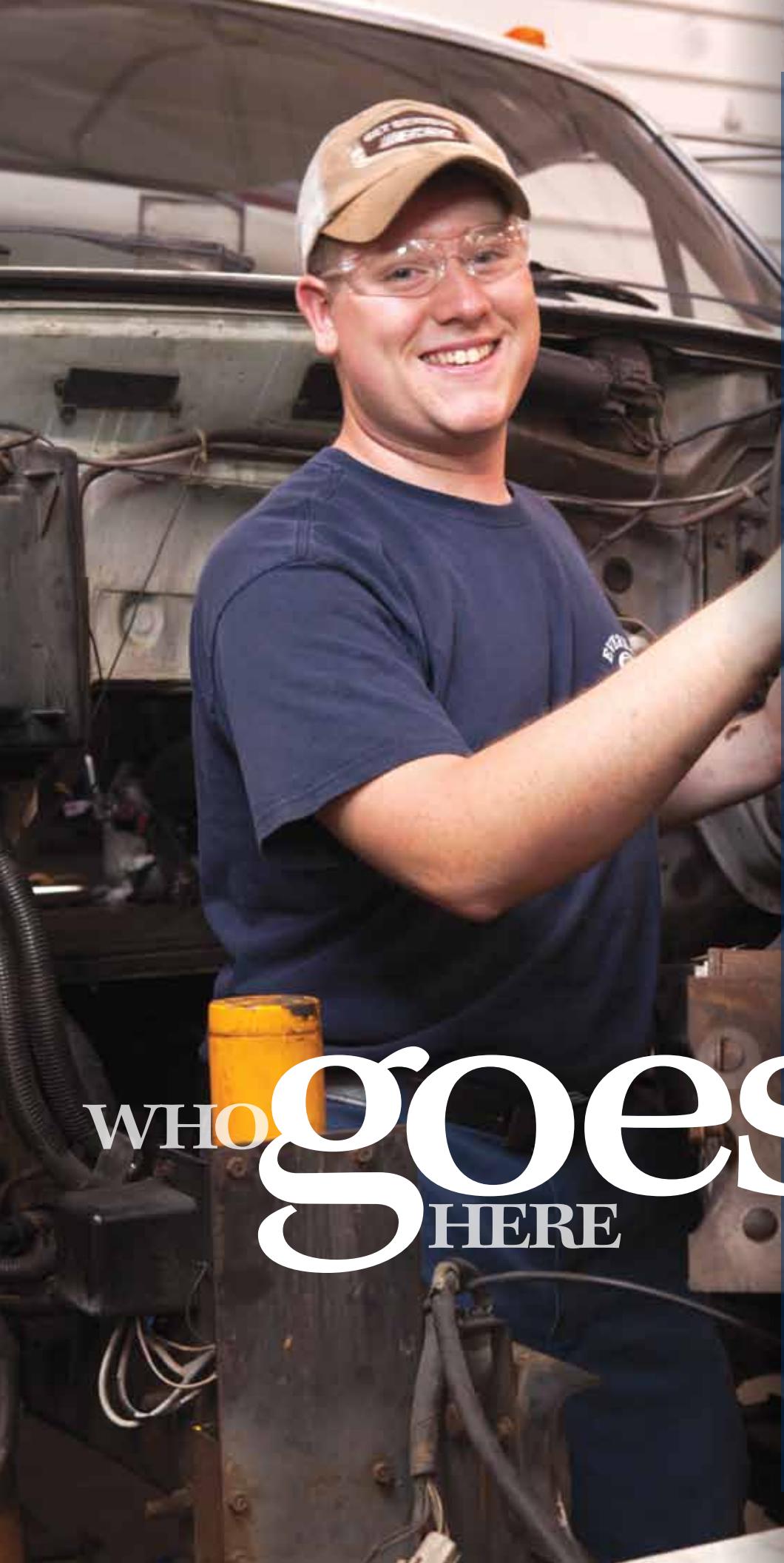
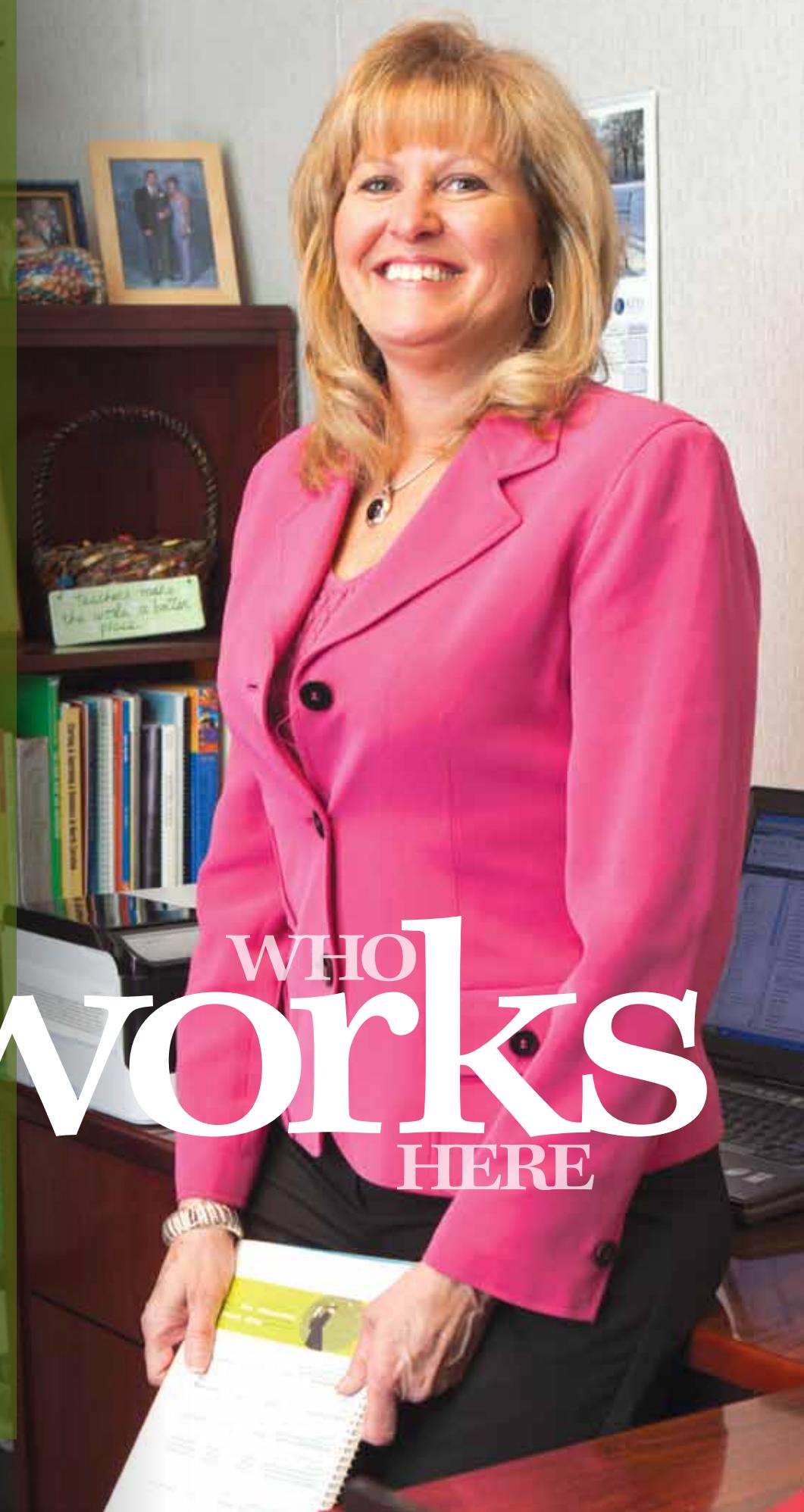
By 1998, Ann was teaching full time at Forsyth Tech, traveling back and forth between Stokes and Forsyth counties. "I put a lot of miles on my car for Forsyth Tech," she notes with a laugh. She served as the college's Early Childhood Program Coordinator until 2006, when she was appointed Director of Operations for Stokes County.

She's hoping to make as many educational opportunities as possible available to her rural community. "I have a passion for Stokes County and a passion for Forsyth Tech. So what I'm doing is a really good fit."

There's that word again.

### *The Great Outdoors*

When Ann's not in her office or on the road for the college, she's out in the woods, hiking the trails near her house, or on the water. "I'm an outdoor person," she says. "I love water sports – water-skiing and boating on Belews Lake. I've been doing that with my family ever since I moved to Walnut Cove 30 years ago." 



## SPENCER EVERHART

*Heavy Equipment and Transport Technology Student*

"Anybody can work on a car," says Spencer Everhart. "But out of all those people, chances are not one is a diesel mechanic."

Spencer grew up with trucks. "My dad and my grandpa had diesel trucks," he remembers. And from an early age, he wanted to learn more about them. "I'd see all those semis going up and down the road, and I'd wonder what it takes to keep them running."

Now he's finding out. As a student in the Heavy Equipment and Transport Technology Program at Forsyth Tech, he's getting the knowledge he has craved since he was a child.

Back in high school, Spencer researched programs that would teach him how to work on the big trucks. "The people I talked to that I respected all came through this program," he declares. He clearly doesn't regret his choice. "It's been a great experience," he says. "I have the best instructors I could have: Joe Sechrest, Allen Doub and Kelly Wolford. They've been able to teach and show me everything I need to know."

What does he see in his future? "I've been thinking about that ever since I've been here," he laughs. He's leaning toward working in a dealership, because there's more variety in the work: "You never know what's going to be coming in the door."

### *Scout's Honor*

Working on trucks isn't Spencer's only skill. His family inherited his great-grandfather's woodworking shop, and Spencer has been working with wood for as long as he can remember. So it made sense, when he decided to try for his Eagle Scout rank, that he would choose a project that called on those skills.

He built a community billboard at Lake Thom-A-Lex, which he joyfully describes: "It's 7 feet tall, with a full up-to-code asphalt shingle roof. It's got open-and-shut plexiglass doors on the front and the back is marine grade plywood. We needed my dad's ¾-ton truck and a 16-foot trailer to deliver it."

Spencer started the project in February of 2011 and finished it in August. He received his Eagle Scout rank in March of this year. 

# Run for the Robots

FORSYTH TECH HOSTS A CACOPHONOUS COMPETITION FOR LOCAL SCHOOLS.

*The bleachers are full of expectant parents. The blood-pumping music booms from the loudspeakers. The teams parade in to wild applause.*

The kids, however, are not sporting basketball shorts. The gym floor, in fact, is covered with protective tarps. In the middle of the floor stands a series of low tables. The competitors – aged from 9 to 14 – are gathered at Forsyth Tech's West Campus for an unusual competition, one that engages their brains rather than their bodies.

At Forsyth Tech's invitation, 24 teams are lined up, ready to take on the Lego Challenge. Together with the Winston-Salem Chamber of Commerce and the Winston-Salem Forsyth County Schools, the college is sponsoring this exercise in teamwork and brainwork, officially titled Robot Run: 2011 Forsyth County Invitational Tournament.

Back in September each elementary or middle school team has received a special Lego kit and a set of problems. With an adult coach, they have used the materials to design, program and build a robot that can solve those problems.

Before the games begin, Forsyth Tech President Dr. Gary Green welcomes the teams and the parents. He loves this idea,



**IT'S IN THE BEST INTEREST OF OUR COMMUNITIES AND OUR COUNTRY TO HAVE KIDS INTERESTED IN SCIENCE AND MATH," MARIE ARGUES. "NO MATTER WHAT JOB THEY GO INTO, TEAMWORK IS GOING TO BE IMPORTANT: HOW TO SHARE IDEAS, WORK COLLABORATIVELY, HOW TO BE SMARTER AS A TEAM THAN AS AN INDIVIDUAL.**

The results of the competition underscore her point. The categories include Gracious Professionalism, Innovation Solution, Inspiration, Teamwork, Strategy and Innovation, Programming, Mechanical Design. And, of course, Robot Performance.

And the winner is . . . well, actually, 11 different teams in as many categories. The real winners? All the participants, along with their schools and their communities.



he says, because he sees the college's future students here: kids who are engaged, having fun while learning to solve real-world problems and working as a team. Dr. Don Martin, Superintendent of Winston-Salem Forsyth County Schools, points out that these kids are not filling out multiple-choice tests. They're thinking for themselves.

And then – *the games begin.*

The din could not be louder if it were a basketball game. Shouts of encouragement echo off the gym walls as kids gather around the tables with their robots, signaling with their remotes to trigger the required actions: picking up objects, delivering them to a target area, retrieving them.

## Beyond the Game

As the teams whoop and the timers blare, Marie Hopper explains the wider importance of the challenge. Ms. Hopper is Regional Director of NC FIRST Robotics, the nonprofit that sponsors these competitions across the state. Businesses support the program, she explains; they see it as a way to nurture the skills they need in their future employees. This cooperation between the college, the business community and the schools is the first of its kind, and will serve as a model for others like it in the state.

# Selling in cyberspace

**Bricks-and-mortar business is so 20th century.**

Once upon a time, Nick Hawks had a desk job.



"I worked for a large nonprofit," he remembers without a lot of enthusiasm. He didn't much like being tied to a desk. He began selling items on eBay part time 15 years ago, and it wasn't long before he was able to quit the desk job.

"That's what eBay gives everybody: freedom," Nick says with a grin. "You can own your own business, be your own boss."

On a Tuesday evening at the Enterprise Center in Winston-Salem, Nick is preparing to initiate his class at Forsyth Tech into the basics of eBay: how to list items on the online auction site, how to choose inventory, where to find it and how to set up an online store.

In the current economy, Nick points out, it's really hard to set up a bricks-and-mortar business. "The banks aren't lending. But eBay has made small business a reality for the average person." With a minimal investment, the site gives sellers access to more than 90 million daily shoppers – and with very little overhead.





Nick's preparation to teach this class was simple: He sold a LOT of stuff on eBay. He's now an officially certified eBay instructor, but he was offering classes even before eBay started that program eight years ago. "I love to be able to help somebody," he says – and the classes are free: "You can't complain about the price."

### Three Steps to Freedom

The class is offered in three sessions. The first teaches the basics of how to list an item and put it up for sale. "Most of my students may have looked on the site before, may have bought items but haven't sold."

In the second session, he gives students resources to find wholesale merchandise. "I show them how to research products. My advice: Sell what you're knowledgeable about, what you like." In a bad economy, he also advises his students to sell items people have to have.

Nick himself sells plumbing supplies. He buys from liquidators at 25 percent of retail, "brand new in the box." (That's BNIB in eBay-speak.) That way, he can still substantially undersell normal retailers. "People buy from me for half what they'd pay at Lowe's," he chuckles. "My philosophy is to always be the cheapest."

In the third class, he shows students how to set up an eBay store.

"The biggest holdback," Nick says, "is that people are afraid they can't do it. So I bring an item with me and I list it right there." He provides handouts with each class to remind students what they've learned.

His students come in all age groups, and these days, Nick observes, he gets quite a few who are already in business, but who may be struggling. "I do see more people who are business owners trying to find a way to stay in business."

That's particularly hard for people who don't live in cities. "It really does help rural communities," Nick argues. "It's really hard to run a bricks-and-mortar business in a small town anymore." It may not be a way to get rich quick, "but eBay is real. There are 1.7 million people making a full-time or part-time living selling on eBay."

With Nick's help, in a couple of weeks there will be a dozen more.



### Selling on eBay

**1. Do your research.** Have fun with it. Go on the site and search the kinds of things you think you'd like to sell. Test your preconceptions: Grandma's brooch may only be worth \$2.00, but that old Hopalong Cassidy bike in the back of the garage could bring you a couple thousand bucks.

**2. Know what you're selling.** Most eBay users are pretty knowledgeable, and if you list something using the wrong terminology, they'll shy away.

**3. Use photos well.** Get comfortable with photographing and uploading photos. Those designer jeans will sell a lot better if they don't look like a gray blob on the site. For clothes, resist the temptation to use yourself, a friend or relative as a model – the result is usually pretty awkward. Include important details such as labels, alternative views, etc.

**4. Go for brand names.** One way people can feel comfortable buying online is by going for known brands – it takes some of the uncertainty away.

**5. Be scrupulously honest.** If what you're offering has some flaws, describe them as completely as possible. Make sure your photos include holes in fabric, or rust on a rocker panel. Much of what sells on eBay is used goods, and eBay users expect that.

**6. Be prompt.** Once a person pays for their purchase, ship it out right away.

**7. Communicate!** Other eBay users will be much more tolerant of delays or other problems if you communicate with them and explain.

**8. Get comfortable with PayPal.** This is the most common form of payment on eBay, and the easiest. It's pretty self-explanatory, but explore the site and get yourself set up before you embark on selling.

**9. Put as much information as possible in the listing title.** People search eBay for the precise thing they want, so if you don't include essential information (like size, brand, model number, etc.), they often won't find your item.

**10. List your item in the right category.** It's amazing how often sellers will have a great item but fail to list it where their buyers will be looking. If you want to sell a pair of cowboy boots, don't list them with the English riding equipment.

### Learn to Speak eBay

Because eBay listings need to be concise, the site has a whole range of abbreviations you'll need to learn. Here's a basic glossary:

**BNIB:** Brand new in the box

**BNWT:** Brand new with tags

**BNWOT:** Brand new without tags

**EUC:** Excellent used condition

**GU:** Gently used

**HTF:** Hard to find

**MIB:** Mint (condition) in box

**MIMB:** Mint in mint box

**MIP:** Mint in package

**MNP:** Mint no package

**NBW:** Never been worn

**NIP:** New in package

**NM:** Near mint

**NOS:** New old stock (vintage item, may be decades old but has never been used)

**NRFB:** Never removed from box

**NWOT:** New without tags

**S/O:** Sold out

**VGC:** Very good condition

In addition, each category has its own set of abbreviations that you'll need to learn, depending on what you're selling. If you're dealing in used books, you'll need to know OOP (out of print), FLB (former library book), IFC (inside front cover), PB and HC (paperback and hard cover). Likewise, if you're into jewelry, you'll need to know MOP (mother of pearl) and GSP (gold sterling plate).



### Feedback on eBay

On eBay, you live and die by feedback. It's the component of the system that makes it relatively safe. After every transaction, both buyer and seller will be asked to rate the transaction. A potential buyer can look at your feedback and see what other buyers have said about you. On every item you list, there will be a number – representing the number of transactions you've completed on eBay – and a percentage, representing the percentage of those transactions that brought positive feedback.

Your goal is to have 100 percent positive feedback, especially when you are starting out. If you only have 10 transactions and 90 percent positive feedback, that's not so good. But if you get to the place where you have 1,000 transactions and 99 percent positive feedback, you might be forgiven, since it's hard to please everyone.

Most sellers have 98 percent positive feedback or better.

### Shipping News

Listing and selling on eBay is relatively easy. The hassle is that you then need to ship out the goods. Buyers can get cranky if you don't do this promptly, and it's an essential component of your feedback.

It's a good idea to invest in a postage scale (or something bigger if you're shipping large items). Then you can easily start an online account with the U.S. Postal Service (go to usps.com), calculate your postage online and print out shipping labels. You can then give the packages to the mail delivery person and you don't have to leave home.

Alternatively, you can establish accounts with UPS or FedEx. You need to be fairly disciplined about setting the price you're going to charge for shipping. Weigh the item and calculate the real cost as accurately as possible. Remember that eBay is an international marketplace, so think about whether you are prepared to ship overseas, which is more complex and time-consuming. Many sellers limit themselves to the lower 48 states.

Some sellers offer free shipping as an enticement. Others will add in the cost of packaging or a "handling" charge for their time. Astute eBay shoppers, however, look closely at these charges and if you charge too much, you may put buyers off.

Calculate the expense and hassle of shipping when you're deciding what to sell. You might find a great deal on overstock refrigerators – but who wants to deal with (or pay for) shipping something that big? You can specify "local pickup only" – as many sellers of large items do – but that limits your market significantly. Maybe better to go with Craigslist.



# Right Turns



*This Forsyth Tech grad went into the truck business nearly 40 years ago. Now he looks to his alma mater – and its new Transportation Technology Center – for his future employees.*

**R**ay Keller makes a pretty good case for a Forsyth Tech education. Growing up in rural Davie County, he had no doubt about where he wanted to go after high school. "Forsyth Tech was where I picked to go," he recalls. "I just wanted to work on trucks."

After graduating in 1969, Ray did a tour with the Army in Vietnam, and then returned to his roots in the Triad. His first foray into the job market took him to Carolina Garage in Winston-Salem, "the best independent Mack [truck] dealership east of the Mississippi," Ray declares.

"I went over there on a Thursday afternoon. I got a call on Thursday night at 7:00, and I went to work on Friday morning."

Now Vice President for Maintenance at Salem Leasing, a transportation company with 42 locations in six southeastern states and in Texas, Ray has spent close to 40 years in the transportation business. "I've done everything that can be done in this company," he asserts.

An unpretentious, congenial guy, he sits in his windowless office above the giant truck bays, surrounded by photos of his son, who's a youth rodeo star. All the photos feature some kind of activity with horses.

## Cleaning Up

Ray's profession has come a long way in those 40 years. "If you go back to the days when I started," he remembers, "the perception of the mechanic was that it was the dirtiest, nastiest, greasiest job you could do. Parents didn't want their kids to do it. Nobody understood how this area was progressing."

"Today a technician has got to be on top of his game. He has got to be literate and technologically savvy." For that reason, Ray laments, it's hard to find people with the proper training. He's excited about Forsyth Tech's new Transportation Technology Center because he sees it as a source for future employees. "There's a shortage of technicians these days," he says. "Our focus is on getting educated people. The technology is changing so fast, the schools have got to be able to keep up. I don't need people who are working on stuff from 10 years ago."

His current employees also need to work hard to stay abreast of the technology. "We've constantly got somebody going to a school somewhere."

And today's work space is clean. "On the floor down there," he says, motioning in the direction of the shops below, "it's a big deal to be clean. I can walk up to a mechanic's toolbox and I can tell what kind of work he does by how orderly it is." Ray escorts his visitor down to the shop floor and opens the enormous hood on a Freightliner semi to show off the gleaming Cummins diesel engine. The tour is not planned; nothing has been tidied up in advance. But the shop floor is close to spotless, as are the innards of the truck.

As the tour progresses, Ray talks about the future. He hopes that Forsyth Tech will begin to draw students from other parts of the country, since his company has operations in many states. He wants the new center to attract "these kids who are out there, who are mechanically minded and who are not getting where they need to be."

"You've got to eat, live and breathe a truck to be successful at this," he insists.

"It's a pride thing."

# It was epic.

**It was a face-off  
between two technologies  
to see which would emerge  
as the Sultan of Small,  
the Titan of Tiny,  
the Master of Minuscule.**

#### *The Challenge:*

To precisely measure nanoparticles with the two best particle sizers on the market.

At one end of the bench in Forsyth Tech's nanotechnology laboratory – and filling the role of Upstart – the Izon qNano, an unassuming-looking black cylinder.

At the other end, the NanoSight LM10, a white contraption that looked something like a microscope, hooked up to a large display screen.

In the qNano's corner: Subhash Kalluri, Sales Scientist for Izon, the small New Zealand company that recently sold its 100th device to Forsyth Tech for its Nanotechnology Program.

In the LM10's corner: Gary Linz, Technical Sales Engineer at NanoSight, the Goliath of the encounter; a UK-based firm that has been manufacturing nano-sizing equipment for 12 years.

The referees: eight students in Forsyth Tech's Nanotechnology Program, mentored by Dr. Kevin Conley, the program's coordinator, spokesman and evangelist.

Kevin's students are being treated to a display of the best the world has to offer in the rarified world of tiny particles. Which machine, they're asking, is better at measuring and counting these unimaginably small objects?



*It was unprecedented.  
It was – well, actually it was fairly quiet*



#### *Why does this matter?*

Forsyth Tech is training its students to participate on the frontiers of this technology, which has applications across the scientific spectrum, from drug delivery and protein chemistry to particle electronics and quality control.

#### *Training for the Future*

The program, according to Kevin, teaches the six pillars of nanotechnology: the three fundamental sciences (biology, chemistry and physics) along with what he calls the Three Es: Engineering, Economics and Ethics. "When our students graduate, they're well prepared for entry-level positions doing research and manufacturing with companies in the Piedmont Triad and across North Carolina," he asserts.

And how tiny are we talking? Kevin offers some help.

"A human hair," he explains, "is 100,000 nanometers wide." (A nanometer is 1 billionth of a meter. A meter is a little longer than a yard.)

"A biological cell," he continues, "is approximately 10,000 nanometers in diameter. Viruses, DNA, nanoelectronic transistors – they're 1,000 to 100 nanometers in diameter. And it is down at this frontier that we all compete today."

As Kevin explains, students in lab coats and blue latex gloves hover. The instruments emit a low-level hum. Each machine is being given a solution to test, with the same nanoparticles. The two machines function differently.

Izon's qNano works by sending a mixture of the particles and a fluid through a nano-sized hole in a plastic membrane. The fluid flows normally, except during "blockade events" when nanoparticles of various sizes impede fluid flow through the pore.

NanoSight's LM10 works by shining a laser through a sample and looking at the thermal vibrations of the particles. "Large particles vibrate a little; small particles vibrate a lot. The Nanosight machine gives you a cool picture to look at," Kevin explains, noting

that unlike the Izon device, it comes with a video display.

But while the NanoSight measures a particle's "hydrodynamic diameter" that includes its interaction with its surrounding solvent, the Izon measures a particle's "natural diameter," which is solvent-independent.

The Izon requires some preparation of the sample; the NanoSight is quicker.

The students peer over each others' shoulders. It becomes obvious, after a while, that conclusions are not going to appear any time soon. There will be no knockout punch, no bell will ring, no victor will stand before this small crowd and claim the title of champ.

After all, this is science. It rarely works that way. Observations are made, notes are taken, colleagues are consulted. And conclusions – well, it's complicated. A couple of weeks after the face-off in the lab, Kevin's students still haven't agreed.



#### *The Conclusions*

Kate Coniglione votes for the Izon device. "In my opinion it was way more accurate – to within 2 to 3 nanometers of the actual particle size," she asserts, while "the NanoSight only got to within 70 nanometers. The Izon is ideal for research; the NanoSight is quicker, easier to use for industrial applications, for quality control."

Eric Norman agrees. He cites NanoSight's motto: Seeing is believing. "With this scale, that's not necessarily true," he argues. "Just because you don't see it doesn't mean it doesn't exist."

"I think our side won," Jessica Enevold says, although she observes that both have their strengths. The NanoSight device is faster, they all agree.

Then there's the price: The NanoSight device costs three times as much as the Izon.

"If I were just starting out, I'd go with the Izon," says Aaron Linder. "This is their first machine and for how old it is, Izon is doing a great job of competing with more established manufacturers." The Izon, he observes, is not as temperamental as the NanoSight.

#### *So who won?*

Kevin has no doubts. "The students," he says. "They got to see the way science is done." 



*Defying the*  
**DARKNESS**

**Amid the horror of the Holocaust, a few brave souls risked their lives to save Jewish children. Two of those teenagers lived to tell their story.**

Hanne Liebmann is neither bitter nor angry. But she does want to tell her story, and on a sunny November morning in the Ardmore Auditorium on the Forsyth Tech campus, the gentle-voiced Holocaust survivor did just that.

Along with her husband Max, Mrs. Liebmann was at the college to pass on her particular piece of 20th-century history. The Liebmans' visit – co-sponsored by the Forsyth Tech Foundation and Wake Forest University Hillel – marked the opening of the exhibit "Hidden Children: The Youngest Survivors of the Holocaust" at the college's library, which also houses the Blynn Collection of Holocaust resources.

The Liebmans' story contains its share of horror – but it is also one of hope. "We were very lucky," Mrs. Liebmann told the gathering of students, faculty and community members. "We found that there are good people in the world."

Mr. Liebmann began by setting the scene: the forced sale of Jewish property to Aryans. The horrors of Kristallnacht (Night of the Broken Glass) when the German Government ordered Nazi Party

### The Holocaust in France: A Timeline

September 1935: Nazi Party Rally

November 9-10, 1938

*Kristallnacht:* Translated roughly as "the Night of the Broken Glass," this short period of extreme violence against Jews is incited and condoned by the German government. Jewish homes and businesses are attacked, and more than 2,600 synagogues are destroyed, some by fire. Triggered by the assassination in Paris of German diplomat Ernst vom Rath by Herschel Grynszpan, a German-born Polish Jew, Kristallnacht is widely seen as the beginning of the "Final Solution" – the attempted eradication of the Jews.

May-June 1940

*German invasion of France:* Paris falls on June 14.

June 1940

*The Appeal of the 18th of June:* After the collapse of the French government and military defeat of the French forces, Marshal Philippe Pétain negotiates cooperation with the Axis powers. Exiled Gen. Charles de Gaulle broadcasts from London via the BBC a speech appealing to French soldiers to join the Allies in fighting the Nazis. The Gurs Transit Camp is established near the Spanish border.

July 1940

*Vichy Government:* Marshal Pétain proclaims the French State (replacing the French Republic), and a vote by the National Assembly grants him extraordinary powers. His government operates in the unoccupied zone of France from the southern city of Vichy. Vichy leaders order French police to collaborate with the Nazis in rounding up Jews and other "undesirables." The Free French, who refuse to collaborate, join the Allied forces to fight against the German occupation and the Vichy government. Many Jews join the Resistance, working secretly to undermine it.

October 1940

*The Statute on Jews:* The Vichy government – voluntarily and with no pressure from Germany – passes legislation defining Jews as an inferior class and depriving them of citizenship.

March 1941

*The General Commission for Jewish Affairs:* This administrative body created by the Vichy government began the process of rounding up and deporting French Jews to concentration camps in Germany.

August 1941

*Internment camp at Drancy:* Originally designed to house 700 people, this camp in a Paris suburb is established by the collaborationist French government to hold Jews before deporting them to the death camps and holds 7,000 at its peak.

members – NOT in uniforms, but in civilian attire – to brutalize Jews and destroy Jewish homes, synagogues and businesses on November 10, 1938. The civilian attire was meant to make the world believe that the murder of a member of the Paris German Embassy was the reason for popular fury.

### A Lucky Break

Then came the deportations. Mrs. Liebmann's story began in the province of Baden, in southwest Germany, where her family was among the only group of German Jews ever to be deported into France – as was the family of Max. The circumstances were harrowing, the trip traumatic and the destination – the Gurs internment camp on the Spanish border – bleak and dehumanizing. It was winter. All the prisoners, including the elderly and small children, slept on wooden barrack floors and subsisted on close-to-starvation diets; many died. But unlike the notorious camps in Germany and Poland, Gurs was run by the Vichy government in France. Although the French collaborated with the Nazis, they allowed humane efforts at Gurs, including access by humanitarian groups such as the Swiss Red Cross, the Quakers and the YMCA. Prisoners were allowed to send and receive mail. In the camp, the young Hanne met her future husband, Max. She was 16; he was 19.

Eventually some of the children in the camp were allowed to leave. Hanne was among a group of seven teenagers sent to a small village just south of Lyon called Le Chambon sur Lignon.

"Le Chambon restored our faith in mankind," Mrs. Liebmann told the audience. The residents of the tiny, poor village were mainly Huguenots, French Protestants who had their own long history of persecution by the Catholic majority. The local pastor exhorted his flock to heed the teachings of their religion and protect the Jews.

Although they had little to eat themselves, the villagers housed and fed the Jewish refugees. When the French police came looking for Jews, the villagers hid them. Hanne was able to visit her mother in the camp one last time, just before she was put on a train and taken away. "She said to me, 'I will not come back. This will be my last train ride.'" Her last vision of her mother was a hand waving a white handkerchief through the slats of the freight car. And then the teenage girl had the heavy duty of returning to her friends at Le Chambon to deliver the news that "We no longer have any parents."

"We had to make our own decisions," Mrs. Liebmann remembered. "I decided I would not be Hitler's next victim. I decided to flee into Switzerland."



**"I decided I would not be Hitler's next victim."**



The exhibition "Hidden Children: The Youngest Survivors of the Holocaust" came to Forsyth Tech in November 2011. During her visit to the college, Hanne Liebmann walked through the exhibition that told the survival stories of the children of Le Chambon, along with many others.



Max and Hanne Liebmann met Guy Blynn, donor of the Blynn Collection.

## A New Life

Meanwhile, Max had his own harrowing journey. He also found his way to Le Chambon, where the residents took on the double risk of sheltering him and then providing him with false identification. "They could have been arrested at any time," Mr. Liebmann recalled. "They risked their safety and that of their families."

Eventually both Max and Hanne found their way to Switzerland, where they were reunited. In that neutral country they received shelter and sustenance. During their five years in Switzerland they married and their daughter was born. Finally, in 1948, they made their way to America where, like so many other survivors of that era, they made new lives for themselves and brought up their daughter.

### Sharing the Story

Now the Liebmans – Max at 90 and Hanne at 87 – devote much of their time to traveling and speaking about their experiences in those dark times. They don't look, act or speak their age. Hanne Liebmann still works at Queensborough Community College's Holocaust Center and her husband at the American Gathering of Jewish Holocaust Survivors and their Descendants. Having told their story on this November morning in Winston-Salem, they listen patiently to questions from a new generation, Mrs. Liebmann leaning from the stage to hear each query.

The couple then adjourns to another building to meet with students in the college's Philosophy Club. In this more intimate classroom setting, the questions fly. The students seem both fascinated and stunned by the Liebmans' optimism and good humor. Again and again, the couple fields the same question, rephrased in various forms: Why are you not filled with hate?

"We are not the kind of people who say, 'Look what happened to me,'" Mrs. Liebmann gently asserts. Partly for their own sake, and partly for the sake of their child, it was important, she says, not to be consumed with the darkness of the past. "If I as a mother bringing up a child would be moaning and groaning all the time, what would I do to my child?" she asks.

The students seize on this. How much did they tell their daughter? How did they communicate to her what happened?

"We never burdened her as a child," Mrs. Liebmann tells them. "It is not fair to do that. All children are entitled to a childhood."

But the time did come when they had to confront the past, with an unexpected question from their daughter. "One day, she asked: 'Why don't I have grandparents?' I answered her simply: 'They were killed in concentration camps.' She never asked again."

And again the question, from a lanky guy with long hair: "How hard is it not to be angry?"

This time it's Max Liebmann who answers: "You hate someone, you know what happens to you? You destroy yourself."

### Resources:

**The Blynn Collection:** [www.forsythtech.edu/discover/special-collections/blynn-holocaust-collection](http://www.forsythtech.edu/discover/special-collections/blynn-holocaust-collection)  
**History of the French Jews:** [www.jewishvirtuallibrary.org/source/vjw/France.html#Holocaust](http://www.jewishvirtuallibrary.org/source/vjw/France.html#Holocaust)

**Memorial to French Holocaust victims in Paris:** [http://en.wikipedia.org/wiki/M%C3%A9morial\\_des\\_Martyrs\\_de\\_la\\_D%C3%A9portation](http://en.wikipedia.org/wiki/M%C3%A9morial_des_Martyrs_de_la_D%C3%A9portation)  
**"Weapons of the Spirit" – Documentary on Le Chambon:** [www.chambon.org/weapons\\_en.htm](http://www.chambon.org/weapons_en.htm)

September 1941

March 1942

July 1942

January 1943

January–February 1943

June 1944

August 1944

**The Comité National Français:** In London, Charles de Gaulle forms the French National Committee as a government in exile.

**The first convoy:** 1,112 Jews are transported from France to concentration camps in Poland and Germany.

**The Vél'd'Hiv Roundup:** French authorities, collaborating with the Germans, round up 13,000 Parisian Jews, including 4,000 children, into a giant bicycle racing stadium and ship them to the death camps. Originally intended to include 25,000 Jews, the plan is partly foiled by French citizens who hide many and help others to escape.

**The Milice (Militia):** The Vichy government creates this paramilitary force to serve as an auxiliary to the occupying German army. The Milice, which eventually has more than 35,000 members, hunts down French resistance fighters and Jews. Its commander, Joseph Darnand, takes an oath of loyalty to Hitler and holds the rank of Sturmbannführer (Major) in the Waffen-SS, the military force of the Third Reich.

**The Casablanca Conference:** This planning session for the Allied European strategy brings together Winston Churchill, President Franklin D. Roosevelt and Free French leaders Charles de Gaulle and Henri Giraud, and calls for the unconditional surrender of the Axis powers and for Allied aid to the Soviet Union.

**Sword Beach:** The Allied invasion of Normandy begins on this stretch of beach with an uprising by Resistance fighters, later joined by reinforcements from the Free French Army and the U.S. Third Army under Gen. George Patton. Gen. de Gaulle leads a victory parade down the Champs Elysées.

**The Liberation of Paris:** Fought over six days, the battle begins with an uprising by Resistance fighters, later joined by reinforcements from the Free French Army and the U.S. Third Army under Gen. George Patton. Gen. de Gaulle leads a victory parade down the Champs Elysées.

## A Unique Collection

Guy Blynn remembers his first reaction when he learned about the course on the Holocaust at Forsyth Tech taught by Dr. James Fortuna. "I got a mailer at my residence many years ago," he recalls. The mailer described the college's adult education offerings – and among them was Jim's class.

"I wondered what this guy with an Italian name was doing, teaching a course on the Holocaust in Winston-Salem, North Carolina. So I decided to take the course." Mr. Blynn was not disappointed. "It was stimulating, informed, well presented," he recalls. But the class did present him with one upsetting moment.

"We were watching a video about the [concentration] camps, when a woman who appeared to be fairly educated and worldly said, 'Do you mean this really happened?'"

Mr. Blynn decided he needed to do something to help bring home the reality of the Holocaust to his community.

Why here? "The 'people's college' was the right place to do it," Mr. Blynn asserts. With Jim, he began gathering materials on the subject. The collection grew until "Ultimately it was decided to build a special room" for the collection. It now contains nearly 400 items, including a special collection of testimonies from Holocaust survivors. The Blynn Collection is the only such resource at a community college in North Carolina, and last fall it was host to the exhibition "Hidden Children: The Youngest Survivors of the Holocaust," on loan from the Holocaust Museum and Study Center in Spring Valley, NY.

Mr. Blynn continues to participate in Jim's class, leading discussions with students. As for his personal connection to the Holocaust, Mr. Blynn declares: "I'm Jewish. It's a communal feeling. The people killed in the Holocaust were Jews. That makes them my family."



## Bringing It All Back Home

From a traumatic childhood, a student's path opens up.

When Melissa Carr entered Forsyth Tech at 42, the first class that attracted her was Humanities 170 – The Holocaust.

"I'd studied Germany's role in World War II as an amateur throughout my life," says Melissa. "I wanted to understand what went so wrong, for a respected country to turn to madness. When I saw the class was available, it was the first one I signed up for."

Melissa had been through some rough times before coming to Forsyth Tech, and she was ready to turn her life around. She plunged into Dr. James Fortuna's class with the zeal of a new convert. Simply doing the required work was not enough.

"On my own, I started looking through the Blynn Collection," Melissa recalls. Her research inspired her to try to organize an event on the Forsyth Tech campus, and with Jim's blessing Melissa spent the summer calling Holocaust museums and collections all over the country. As part of the syllabus for Humanities 170, she had seen the movie "Weapons of the Spirit," which documents the heroism of the small town of Le Chambon. She was particularly drawn to the story of the Jewish children who were protected there because, unlike many Holocaust narratives, it contained hope.

"When people discuss the Holocaust, especially in classes like that, they tend to focus on the horror," Melissa observes. "It becomes almost gratuitous."

### The Right Story

Melissa's research led her to the Holocaust Research Center at Queensborough Community College in New York. She spoke to its director, Dr. Arthur Flug, on the phone, and asked him whether he had any materials on the children of Le Chambon. "He said, 'I've got something better,'" Melissa recalls. That something was Hanne Liebmann, who had been one of those children. He gave Melissa Mrs. Liebmann's phone number. Melissa was reluctant, as a stranger from a faraway state, to call the 87-year-old survivor, but at Dr. Flug's urging she picked up the phone, and was astonished at the openness and warmth she found on the other end of the line.

Over the rest of the summer, things began to fall into place. Melissa found the exhibition, "Hidden Children: The Youngest Survivors of the Holocaust," and arranged to bring it to Forsyth Tech. And working with benefactor Guy Blynn, she arranged to bring Mr. and Mrs. Liebmann down as well, so that they could share their story.

Sitting on the stage in Ardmore Auditorium, Melissa held Hanne Liebmann's hand and listened as she and her husband told their story. But what the audience that day did not hear was another story: the journey that brought Melissa to Forsyth Tech, to this particular course, and to her impassioned interest in the Holocaust.

### Melissa's Journey

Melissa had a difficult childhood herself. She and her sister, as the objects of a bitter custody dispute between her parents, were kidnapped by their father when Melissa was a young child. She lived a life on the run, never staying in one place for more than six months, unable to make friends or become part of a community. "I learned to read by sounding out the words on the billboards, riding up and down I-95," she remembers.

Then when she was 10, her father started a new relationship with a woman, and the girls were no longer wanted. Her father left them in a foster home. Her mother, who had been searching for her daughters from the time they disappeared, found them two years later and brought them to live with her in Kernersville. Melissa finally had a home.

At East Forsyth High School, at the age of 15, Melissa first heard about the Holocaust in a history class. "We had 20 minutes on the subject," she recalls. Not enough. Needing to know more, she talked her mother into taking her to the public library in Winston-Salem to find more books on the subject. It became a lifelong passion.

But the traumatic childhood years had left their mark. Melissa was painfully shy and didn't make many friends. She married young, had three kids, divorced. For many years she lacked direction. Then, in her 40s, she decided to turn her life around, and enrolled at Forsyth Tech. Dr. Fortuna's class began to satisfy her thirst for knowledge.

Melissa's empathy for the victims of the Holocaust isn't hard to figure out. "There was so much in my life that I had no control over," she admits. "I was subject to the whims of authority figures. And there were times when I needed help ... and it didn't work out."

On the stage in the Ardmore Auditorium, Melissa sat next to Hanne Liebmann and held her hand. Two painful stories – and a hopeful ending.



# ForsythTech

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*In Focus*



**Grandfather's Dream.** This 1950 Ford Custom Sedan resides in Jarrod Sams' garage in Lewisville, NC. It originally belonged to Jarrod's great-grandfather. "My grandfather had started to fix the car up before health conditions prevented him from driving it anymore," Jarrod recounts. Now Jarrod continues the work, lovingly bringing the classic car back to its former glory, "to continue his dream of restoring the car back to its original condition."  We're looking for healthcare-themed photos for the next issue of *Tech Quarterly*. Have a favorite? Send it to [TQ@forsythtech.edu](mailto:TQ@forsythtech.edu).