

Discovery of 'God particle' has UNC roots

The quest to identify the particle began with a paper written at UNC.

By Samuel Mason
Staff Writer

The discovery from the European Organization for Nuclear Research, or CERN, of a new particle is being hailed as a victory for particle physicists everywhere.

What is less known is that the paper that launched the 50-year quest to identify the particle was written at UNC.

Chris Clemens, chair of the UNC department of physics and

astronomy, said two teams of research scientists simultaneously announced the results of their research in Switzerland, which showed with an extremely high degree of probability the existence and energy of the Higgs boson particle.

This particle, sometimes called the "God particle" to the chagrin of scientists, is widely thought to confirm the presence of a force field predicted by the standard model of particle physics, a theory which attempts to explain how the universe works.

The theory claims there is a universal force field that gives mass to all elementary particles.

"I personally consider it a real

triumph on all fronts," said Bruce Carney, a physics professor and UNC executive vice chancellor and provost.

While CERN's discovery represents the culmination of the search for the elusive Higgs boson, the origin can be traced back to the state.

In May 1966, an academic paper written by then-postdoctoral research associate Peter Higgs — the particle's namesake — was published in the Physical Review, an academic journal, based on some complex mathematics he performed at UNC's Bahnsen Institute of Field Physics.

While Higgs brought the nucleus of this idea over from



Peter Higgs spent the 1965-66 year at UNC, where he wrote the paper that led to the search for the Higgs boson.

Edinburgh, he worked out the kinks at UNC, said Eugen Merzbacher, longtime friend of Higgs and retired physics professor at the University.

"It gave him the leisure to complete the work and to write it up," he said. "He didn't have to teach, so it was very important,"

Carney said the Bahnsen Institute was like Mecca to theoretical physicists of the day.

He said some notable physicists were drawn to the state in 1957 due to the General Relativity Conference — a staple event among physicists.

Higgs was at UNC for the 1965-66 academic year on invitation to study gravitation. While at the University, Merzbacher said Higgs traveled to other universities to present his theory.

He returned to researching mathematical physics at the Tait Institute at the University of Edinburgh after leaving UNC, where his fame continued to grow with the evolution of the standard model of particle physics.

Merzbacher said he would characterize Higgs as polite but

modest, with a good sense of humor.

"I think he has fond memories of Chapel Hill," he said.

Celebration continues regarding success at CERN, but Clemens said there is more science to be done. The energy of the particle, while answering some questions, raises others.

"That'll be the interesting conversation: now that we know this number, why is it that way? Does it have to be that way, or is it just in our universe it happens to be that way, and if it weren't we wouldn't be here to discuss it," Clemens said.

Contact the State & National Editor at state@dailytarheel.com.

JUMPING ROPE TO GLORY



COURTESY OF THE GET TRICKY TEAM

Ted Lehman (left) and Joseph Edney (right), from the Triangle area, perform at a competition with "Get Tricky" team. They will perform at the Olympics.

Two members of the Bouncing Bulldogs team will be performing at the London Olympics this year.

By Chessa DeCain
City Editor

When Joseph Edney first started jumping rope with the Triangle's Bouncing Bulldogs jump rope team, he didn't expect to end up at the Olympics. He was only 8 years old at the time.

But Edney, now a recent graduate of N.C. State University, will have that opportunity.

Edney and Ted Lehman, a fellow Bulldog, will join 11 other jump ropers from around the world in London on Saturday.

The "Get Tricky" team of jump ropers will perform at halftime for basketball games during the Olympics — including some of the final rounds.

Get Tricky has 13 members: four Americans, five Britons, three Belgians and one Brazilian. The team will meet Saturday and have six days to prepare a routine, Edney said.

"Choreography is obviously a challenge because of the distance," he said. "But it's such an experienced group that we shouldn't have any problem putting it all together."

One thing Edney said he hopes to accomplish during the Olympics is to increase the visibility of jump rope as a sport. To help with this, the team has set up a Facebook page that he said they plan to update as they train and perform.

"This is a big opportunity, and we want to try to share it as much as we can," Edney said.

The push for visibility is a big part of the Bouncing Bulldogs' mantra — the team Edney and Lehman grew up on and that Edney is currently an assistant coach for.

Head coach and founder Ray Fredrick Jr. said the promotion of jump rope to new countries is highly important to him.

As well as Edney and Lehman, Fredrick said their team will also be represented at the Olympics through Megan Hodge, a U.S. volleyball player and Bulldog alumnus.

Fredrick said the Bulldogs have performed in 10 different countries around the world.

"We performed at the 2008 Olympics in Beijing," he said. "(In) the U.K., we had a golden opportunity to perform in front of the Buckingham Palace."

Fredrick said they are also the only team to win the USA Jump Rope Nationals consecutively, from 2004 to 2010.

For the last two years, the Bulldogs have competed in the World Jump Rope Championship, an international tournament held in the U.S., rather than the USA Jump Rope Nationals.

"A lot of people wonder why Bouncing Bulldogs chose not to do the national championship for the last two years," Fredrick said.

"We knew in order for the sport to grow globally, we were one of the teams that everybody would look to, so we made that choice."

Shaun Hamilton, World Jump Rope chair, said the tournament just finished its second year and had close to 400 competitors this year.

He said the Bulldogs were one of the top teams both years.

"They took first, second and third in some

"This is a big opportunity, and we want to try to share it as much as we can."

Joseph Edney,
"Get Tricky" jump roper

categories," Hamilton said. "I think they were the only team that did that this year."

In total, the Bouncing Bulldogs took home 207 medals from the World Jump Rope Championship: 81 gold, 48 silver and 40 bronze.

Team manager Charryse Fredrick said they have a Chapel Hill facility in Ram's Plaza.

She said the Bulldogs' competitive team is selected from the jump rope classes they teach.

"The team itself has over 100 members," she said. "We took about 68 to the competition."

She said the team typically has younger kids, since they recruit for it from their classes.

Charryse Fredrick said they teach children as young as 5 to jump rope. The competitive team, she said, usually chooses jumpers ages 7 and up.

"There's no age cap in jump rope," she said. "As long as you're able to do the training, you can pretty much jump to any age."

Charryse Fredrick said the summer camps would begin again and be open for registration July 23.

"I don't believe any of the weeks are full at this point," she said.

Contact the City Editor at city@dailytarheel.com.

New leader selected for institute

Joe DeSimone replaces John Kasarda, who led Kenan Institute for 22 years.

By Elizabeth Johnson
Summer Editor

Joe DeSimone has been a board member for Research Triangle Park, designed nanomedicines that benefit cancer patients and received top national honors in both research and engineering.

He will now add director of the Kenan Institute to his long list of roles and accolades.

DeSimone will replace John Kasarda as the director of the Frank Hawkins Kenan Institute of Private Enterprise. Kasarda, who led the institute for 22 years, stepped down in June.

DeSimone said in recent years it has become a hobby and passion of his to study the role research universities play in driving the economy and creating jobs.

"This is an unbelievable platform through which I can help drive some of these areas and strategies," he said.

DeSimone said at the campus level he hopes to use resources at the institute to bring together all of UNC's entrepreneurial ventures.

He said on a larger scale, he hopes to join forces with other Triangle area universities and Research Triangle Park to make the state more economically competitive on both the national and global levels.

"If you look around the country at what's happening in New York and San Francisco, they're intermingling entrepreneurship and economic development to achieve some really big initiatives," DeSimone said.

"It's an auspicious goal, but I want to drive that agenda and really help the state to be competitive with places like New York and San Francisco."

Jim Dean, dean of the Kenan-Flagler Business School, said the search committee to find Kasarda's replacement looked through at least 100 applications.

He said hiring DeSimone, who has a strong background in chemistry, gives the institute a unique opportunity to link science, business and entrepreneurial ventures in the state and beyond.

"I'm very certain we've come up with the right person for the job," Dean said.

Dean said Kasarda did a tremendous job as director and is responsible for many of the projects the institute has engaged in from Chapel Hill to the Kenan Institute in Asia.

"We're going to miss his leadership, but he certainly deserves to work on his research and try new things."

Kasarda said he will still be involved in work at the institute but he plans to take the year off to focus on his aerotropolis research, which focuses on how airports can help communities develop economically.

DeSimone said he started to shed some of his many roles, such as finishing work with the National Academies in Washington, D.C., in anticipation of this role. However, he said he will continue to maintain an active role in research.

"Research is my great escape, kind of my golf game, it's my connection to the students," DeSimone said.

Contact the University Editor at university@dailytarheel.com.

Construction has little effect on businesses

The 140 West construction downtown is expected to be finished in April 2013.

By Elisabeth McFarland
Staff Writer

Though 140 West Franklin has shut down parts of Franklin Street, its effect on nearby businesses has been minimized as construction continues.

Construction for the 140 West project began in January 2011. The development — which will add 140 condominiums, 337 parking spaces and new retail space to Franklin Street — is expected to finish in April 2013.

An effort by the town to increase parking in downtown Chapel Hill helped businesses, such as West Franklin Street restaurant Lime & Basil, to recoup foot traffic lost by

the construction.

Tuan Le, managing member of Lime & Basil, said his business saw a decrease in sales last year, right after construction began.

"People didn't have a place to park," he said. "It was an inconvenience for customers, so they stopped coming in."

But now, Le said, thanks to additional parking, his business is back to how it was before construction started.

Aveda Institute Chapel Hill, the closest store to the 140 West construction, declined to comment.

Several other restaurants and businesses surrounding the 140 West construction could not be reached for comment.

When the 140 West building project replaced a town-owned parking lot in January 2011, downtown parking became a concern for residents and UNC students.

But Bobby Funk, assistant direc-

tor of the Chapel Hill Downtown Partnership, said since 140 West construction began, the town has added many parking options.

Funk said 140 West was one of the reasons the town added parking, but not the only factor in its decision.

Recently, the Downtown Partnership, which is a nonprofit organization that helps keep downtown thriving, launched a new website for parking. The website, www.franklinstreetparking.com, has an interactive graphic to show residents where and when parking is open to the public.

Aaron Nelson, president and CEO of the Chapel Hill-Carrboro Chamber of Commerce, said there are more public parking options now than when 140 West was a public lot.

He said though there were several complaints before construction began, those complaints have since decreased.

"People are very cooperative and understanding of the construction," he said. "They realize that 140 West is good for that block of Franklin Street."

Nelson said the condos will help bring new customers to the surrounding businesses.

But Layton Judd, CEO and co-founder of 3 Birds Marketing, said downtown Chapel Hill does not have enough parking options for businesses, especially near 140 West.

"There's nothing going on down there," he said.

Judd said the lack of parking makes it difficult for residents to visit parts of Franklin Street that are closer to Carrboro.

"The town, downtown in particular, needs to deal with the issue of parking more than the traffic flow to a few businesses," he said.

Contact the City Editor at city@dailytarheel.com.

inBRIEF

CAMPUS BRIEFS

UNC professors' research to help FEMA develop flooding plans, reduce insurance

UNC professors Philip Berke and Gavin Smith completed research that the Federal Emergency Management Agency will use to help communities develop better flood management through its National Flood Insurance Program.

The research is expected to reduce insurance premiums for residencies by up to 45 percent.

CITY BRIEFS

Locally Grown will have free screening of 'The Dark Knight' and costume contest

Just before the midnight premiere of "The Dark Knight Rises" on Thursday, Chapel Hill's free Locally Grown Music & Movie series will show "The Dark Knight", the 2008 sequel to "Batman Begins".

The event begins at 8 p.m. and will also feature a superhero costume contest with have prizes.

—From staff and wire reports