turing line for many years. Daniel L. Meier, vice president of research and development, has worked for the National Renewable Energy Laboratory and has managed R&D for two other companies.

“In the next two to three years, we expect the quality-price balance of our product will put us at grid parity at a dollar per watt,” Baumstark says. That means power from Suniva cells would cost about the same as buying power from an electric company.

**Climate Forecast Applications Network (CFAN)** is using cutting-edge computer models to develop weather and climate forecasts on time scales from days to decades. The three-year-old company caters to clients needing forecast products beyond the traditional five-day forecasts provided by the National Weather Service, such as energy and insurance companies.

CFAN’s capabilities include proprietary extended-range hurricane forecasting. They’ve been providing this service for an energy-sector company for two years. CFAN’s forecasts help that company manage both its energy-production and energy-trading activities in advance of a storm.

Last summer, CFAN correctly informed this energy-sector client that Hurricane Ike would strike Houston directly. What’s more, CFAN did so a week before the storm hit land, several days ahead of other forecasters.

“Our clients took a direct hit on this one,” says Judith Curry, professor and chair of the Georgia Tech School of Earth and Atmospheric Sciences and a CFAN principal. “They used our forecasts for all their storm-related logistics, including evacuation.”

Companies in the retail sector also have a strong stake in accurate hurricane forecasts, she explains. For example, building supply companies want to move plywood and other materials to the correct hurricane target area. Sending it to the wrong spot can mean a financial loss.

Other CFAN clients include the insurance sector, which wants weather models that anticipate storm and flooding risks over the next 10 to 30 years. Insurance companies seek such data, Curry says, because they believe that ongoing climate change will alter future weather patterns.

CFAN’s secret?

“Let’s just say we have a proprietary multi-model statistical dynamical method that includes European weather models,” says Peter J. Webster, a School of Earth and Atmospheric Science professor who is also a CFAN principal. “We give a customized forecast product to each client. They come to us with a particular problem requiring particular forecasting, and we come up with a product just for them.”

Like most Georgia Tech companies, CFAN has its roots in a research project. Webster was developing flood forecasts for the Asian Disaster Preparedness Center, an organization that works to prevent loss of life from storm-related flooding in such vulnerable countries as Bangladesh.

That work brought the team to the attention of Ben Hill, a technology advisor for Georgia Tech Commercialization Services. He told them their research might have the right stuff to be the basis of a new company.

Today CFAN has a scientific staff of eight, income approaching seven figures and good prospects.

The company has also worked with the World Bank, helping the Caribbean adapt to climate change. At issue: finding ways for those regions to deal with rising sea levels, more hurricanes and less rainfall.
Says Curry: “The whole issue of climate services is becoming potentially a growth area as companies, resources managers and agencies grapple with climate variability and change.”

RideCell aims to make existing urban transportation more efficient by making it more accessible.

This young company covers both the private and public sides of the street. It uses technology that’s already in the hands of millions – mobile phones and global positioning system (GPS) chips – to offer on-demand car pooling that’s safe as well as flexible. It can also supply mobile-phone users with the kind of information – including schedules and actual in-route arrival times – that increases the usability of public transit systems like MARTA and localized systems such as Georgia Tech’s Stinger buses.

“Think of it as accessing all modes of transit via your mobile phone, in real time,” says RideCell CEO Dave Kaufman. “We want to make car pooling, van pooling and MARTA much more attractive and reliable options than they are now.”

In today’s Atlanta, he explains, 71 percent of people ride in single-occupancy vehicles, while only 10 percent of 2.5 million commuters car pool. The top reason that people continue using their private vehicles is flexibility. If they need to work late, or leave early to pick up a sick child, they don’t want to be tied to a car pooling schedule.

RideCell’s service, based on technology developed by Stephen L. Dickerson, an emeritus professor in the School of Mechanical Engineering, can make car pooling almost as convenient as that personal car, says company chief technology officer Aarjav Trivedi. A user can input travel time, destination and other preferences into a RideCell-enabled mobile phone, then watch as the system shoots back a range of ride options that offers smoking and even gender-preference choices.