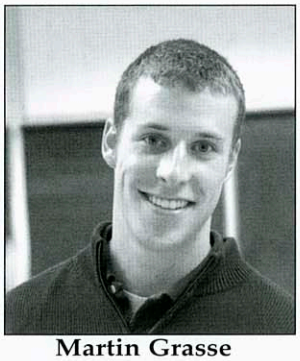

Martin Grasse
Writing Editor

Engineers must lead the charge

In this issue of *Wisconsin Engineer*, we feature several articles that tackle one of the most controversial, most explosive and most interesting issues of our generation: energy.

In the last 50 years, technological development has become an exponential phenomenon. New progress is occurring on a nearly daily basis, in fields ranging from computing to genetics. Driving this ever increasing race to develop is energy, which seems to be making itself more and more scarce.

This summer, the price of gas rose to more than three dollars per gallon. Things were not helped, of course, by the instability of the present situation in the Middle East--the source of most of the world's oil. Politicians have expounded time and again that we need a better solution and that the country needs to end its dependence on foreign oil. However, it seems that little actually changes; we haven't made any realistic commitments or plans to accomplish these goals.

Everyone has read stories about miraculous new technology that is "just around the corner" and is going to solve all our energy problems. I have heard otherwise intelligent people say, "Don't worry, in three years we will have [insert new technology here], and then everything will be fine." One such idea is the conversion to a "hydrogen economy," as described in "It's not easy being green," (p. 7) of this issue. The article points out many of the flaws in a wholesale conversion to hydrogen and explains the folly of relying on the substance to replace oil and resolve our crisis.

Don't get me wrong, researching breakthrough technologies is great. Many of the items that we have come to depend on have been breakthroughs. But as engineers, we know that these technological "miracles" are rare. While breakthroughs are possible, most technologies are developed through careful, methodical research and development work.

Instead of relying on such drastic and far-fetched technological advances to solve the energy crisis we are facing, we need to leverage existing technologies to find a realistic solution. This solution will not be thought up in a political rally and will not arise from an executive boardroom where the motivations are making profits or winning elections. Instead, the solution must come from the front line: the engineers who know how real development occurs.

Many companies are on the right track; hybrid vehicles have taken off in the last few years, and efficient appliances are becoming more and more popular. But we need to do more than just dabble with strategies that hinge on consumer whims.

One organization, known as the Apollo Alliance and featured in this issue's cover story (p. 10), is taking action. The group advocates an investment by the federal government of $300 billion to fuel the development of creative and practical solutions to the energy crisis. If the government is serious about solving the crisis, this is truly the kind of commitment and straightforward approach necessary to make a difference.

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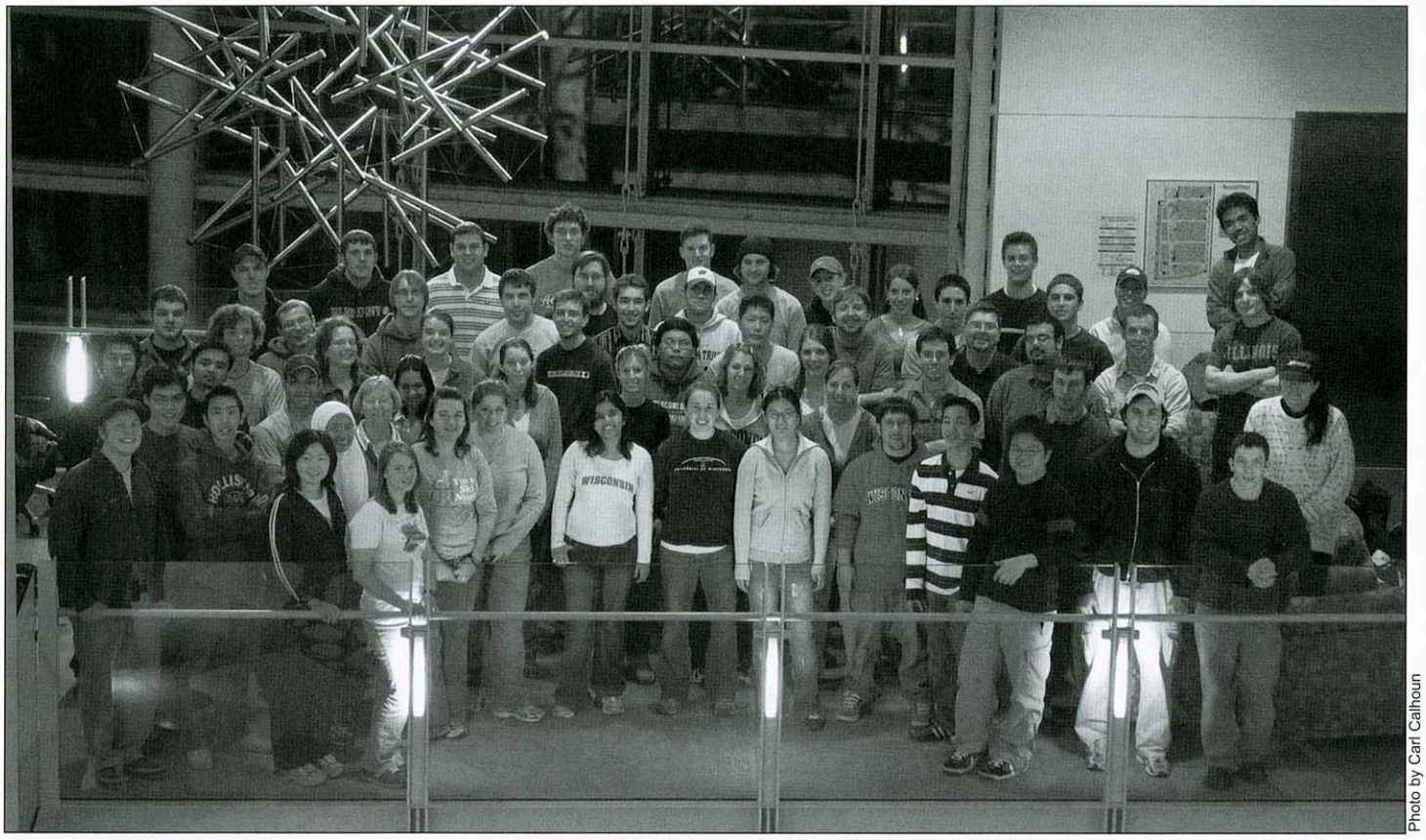

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