

We used the thoughts of *The Industry Standard* editor-in-chief, Jonathan Weber, as our "Ties to a Broader Network" for two reasons. First, he provides interesting insight into a web-based business; the second reason is this is the last print version of *Ties Magazine*. Our next issue (November/December) will be published only on the web. Mr. Weber's reflections on making that transition are germane to our situation. We are confident you will adapt to reading *Ties* online more quickly and more enthusiastically than WebVan users did to ordering groceries online. *Ties* mission is to provide teachers insight into incorporating hands-on design and problem solving into their classrooms. Publishing on the web allows us to reach more teachers. See page seven for details.

While it wasn't intentional, invention and innovation seem to be the theme for most of our articles this month. Jonathan Weber started us out, followed by Ed Sobey, creator of the Kids Inventing Robots program. His robotics summer camp for middle school children drew rave reviews from the participants and their parents. Long-time readers may remember Dr. Sobey's "Idea Factory" article (*Ties*, Nov./Dec. 1996). The West Point Bicentennial Engineering Design Contest is a marvelous way for you to engage your students in design and it certainly is an innovative program. Colonel Stephen Ressler, his brother Colonel Eugene Ressler and Major Steven Schweitzer have created the first entirely web-based engineering design contest. Steve Schwitzer is also the first contributor to our newest feature, the Pro/DESKTOP Tips section. *Ties* introduced you to this extraordinary 3-D design program in our May 2001 issue.

Ever wonder about the design behind the latest crop of running shoes? Rosemarie Connelly provides insight into that process in her piece on technology and sports shoes. Pat Hutchinson created a design brief for Rosemarie's article.

Our final story gives Jim O'Hearn a chance to brag a little. He has a successful and growing middle school television curriculum. Jim thinks television production is an ideal vehicle for students to learn teamwork and responsibility.

While you're thinking about it, please log onto the *Ties Magazine* web site ([www.intrasun.tcnj.edu](http://www.intrasun.tcnj.edu)) and give us your email address. We'll use it to remind you when the next issue of *Ties Magazine* is available on the web.



Ken Maskell  
Editor

a publication of

The College of New Jersey  
 president R. Barbara Gitenstein  
 provost Stephen Briggs

staff

**publisher** Ronald Todd  
**editor-in-chief/design direction** Patricia Hutchinson  
**editor** Kenneth Maskell  
**assistant editors** Kate Hegedus, David Venditto, Nicole Tracey Healy  
**managing editor/circ. mgr.** Katie Connor  
**business manager** Suzanne Murphy  
**LINKS/ties liaison** Keith Finkral  
**Ad Sales** Sandy Wah  
**production/design** Lori Lozinski, Karol Maw  
**consultants** John Hutchinson, Bijan Sepahpour  
**circulation assistant** Anne Marie Hemmert  
**founding publisher** J. Michael Adams

advertising sales

NEW ENG./MID ATL./AL, H, GA, IA, MS, NC, SC, TN

Ken Maskell  
*Ties Magazine*/The College of New Jersey  
 P.O. Box 7718  
 Ewing, NJ 08628-0718  
 tel: 609/771-3332 fax: 609/771-3330

MIDWEST

Mike Shevlin  
 Didier & Broderick Inc.  
 95 Revere Drive, Suite H  
 Northbrook, IL 60062  
 tel: 847/498-4520 fax: 847/498-5911

AZ, CA, CO, ID, MT, NM, NV, OK, TX, UT

Ken Jordan  
 JH&S Representatives  
 26363 Marsala Drive  
 Valencia, CA 91355  
 tel: 661/799-9223 fax: 661/799-9120

editorial office

*Ties Magazine*, The College of New Jersey  
 103 Armstrong Hall  
 P.O. Box 7718  
 Ewing, NJ 08628-0718  
 Phone: (609) 771-3332 • FAX (609) 771-3330  
 Internet: [ties@tcnj.edu](mailto:ties@tcnj.edu)  
<http://www.tcnj.edu/~ties>

advisory board

Gary Bell • Richard Bray • James Buffer • Daniel Davis • Thomas Erekson  
 James Flowers • Clark Greene • Jan Ham • Peter Lowe  
 Linda Markert • Gene Martin • Charles Pinder  
 Margaret Rutherford • Kay Stables • Brenda Wey • Rosanne White

*Ties Magazine* (ISSN 1041-6587) is published by The College of New Jersey four times a year with the following cover dates: Sept.; Nov./Dec.; March/April; May. Executive, editorial and national advertising management offices are located at: The College of New Jersey, 103 Armstrong Hall, P.O. Box 7718, Ewing, NJ 08628-0718. Phone: (609) 771-3332; FAX: (609) 771-3330.

**Subscriptions:** Individuals \$25.00 per year; Canadian and foreign \$45.00 per year. Single copies \$5.50; back issues \$6.50. Agency and bulk group rates available on request.

**POSTMASTER:** Please send address changes, returns and undeliverable copies to *Ties Magazine*, The College of New Jersey, 103 Armstrong Hall, P.O. Box 7718, Ewing, NJ 08628-0718. Printed in U.S.A. September, 2001 issue, Vol. 14, No. 1. All rights reserved.

on the cover



Images: Creative Graphics, Goshen, NY  
 Layout: Lori Lozinski

Looking for  
 an extraordinary  
 design experience  
 for your students?  
 The West Point  
 Engineering  
 Design Contest  
 is it.

contents

Kids Inventing Robots 4

Who knew learning could be such fun? The middle school kids in this robotics summer camp had a great time and learned a lot.



Bridge Building Contest 14

West Point will celebrate its 200th anniversary in November by hosting an extraordinary design contest.



Sports Shoe Technology 22

What makes a running shoe perfect for you? Materials, research and design.



Middle School TV 28

Teamwork, and individual responsibility are the hallmarks of competent TV production crews, whether they are your local network affiliates or your local middle school.



departments

- 1 Ties to Broader Network
- 2 Preview
- 10 Resource Center
- 12 Multimedia Forum
- 13 Multimedia Resources
- 27 TSA Corner
- 34 Literature Showcase
- 35 Scan
- 35 Mail Order Marketplace
- 36 Database