



## contents

Editorial	1
Technology Travel/Tour	2
LM Groups Hold Events	2
LM Fellowship	3
2008–2009 Pewter Coaster	3
LM Members by Region	3
2007 LM Giving Fund	4–8
Tales from the Vault	9–11
Submitting Articles	12
Stopping IEEE Services	12
IEEE Member Services	12
LMC Roster	12
Qualifying for LM Status	12
Have Questions. . .	12

## Activities, Grant Requests, and Collaboration Headline 2008 Life Member Objectives

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As this is my first article for the *IEEE Life Members Newsletter*, I would like to take this opportunity to thank you for your continued support of IEEE activities. The IEEE is an organization that was established by individuals who felt the need to get involved and contribute to society, and I am pleased that you have continued your participation in this great organization.

I would also like to thank Lyle Feisel for his leadership as the IEEE Life Members Committee (LMC) chair in 2006–2007. It is under the leadership of Lyle, and through the generosity of IEEE Life Members (LMs), that the IEEE Life Members Fund increased to over US\$2 million as of 31 December 2007.

As of March 2007, there were over 24,000 LMs around the world. The majority of the LMs are within the United States but I am pleased to report that 212 members from Regions 8–10 were elevated to LM status on 1 January 2008. See the table on page 3 for the LM count by region.

I am also happy to report that 49 LM Groups are active within local IEEE Sections. These groups provide LMs with an opportunity to stay active within the IEEE, network with other IEEE members, and make a contribution to their local community. I had the pleasure of meeting some members of the IEEE Central Texas LM Group at our recent IEEE Life Members Committee meeting and feel that other LM Groups could duplicate their activities.

The IEEE LMC provides leadership in the identification and support of the interests of the LMs, and future LMs, in activi-

ties of the IEEE. The LMC is also responsible for the administration of the LM Fund in support of activities that are of professional concern and interest to LMs. In support of these goals, the LMC is planning the following activities in 2008:

- The 9th Triennial Sections Congress will be held 19–22 September 2008 in Quebec City, Quebec, Canada. It is expected that representatives from over 300 Sections and 1,000 people will be attending this event. The LMC is taking steps to broaden the awareness of the LMC and its programs at the 2008 Sections Congress. In addition to setting up an exhibits table and providing brochures, talks will be given to the Sections Congress delegates, apprising them of how they can make use of LMs as an important resource for the Sections.
- The LMC seeks to serve as a catalyst and provide seed money to units that have an interest in creating programs and projects that will make a lasting impression on electrotechnology and related fields. For the past few years, the LMC has been very successful in increasing the amount of funds contributed to the LM Funds. The primary areas of interest include:
  - ♦ young electrical/computer engineers
  - ♦ potential electrical/computer engineers
  - ♦ IEEE LM activities
  - ♦ mature IEEE Members not yet LMs
  - ♦ history of electrical/computer engineering.

Unfortunately, we have not been as successful in attracting grant requests.



The LMC has agreed to coordinate the submission of grants with a process established by the IEEE Foundation Board of Directors. Under this new process, proposals are submitted online and forwarded to the LMC Grant Review subcommittee for consideration. All proposals submitted online will be reviewed, and final action will be taken by the LMC and/or the IEEE Foundation on all proposals. Grant requests can be submitted online via [www.ieee.org/organizations/foundation/grants.html](http://www.ieee.org/organizations/foundation/grants.html).

The LMC feels that IEEE LMs would be interested in participating in an IEEE-sponsored travel program. The focus of these Life Member Technology Travel/Tours would be an IEEE Historical Milestone or similar attraction that is of interest to IEEE LMs.

The LMC is also interested in collaborating with a new program currently being developed by the IEEE History

Center. The History Center is working on the establishment of the IEEE Global History Network (GHN). Combining IEEE's history resources with the capabilities of the Web for collaboration, the GHN will provide the premier global network of the history of electrotechnology. The site will encourage and enable participation in IEEE's historical mission by promoting collaboration by individuals and organizations worldwide, especially the 365,000 IEEE Members in 160 countries and the organizational units that represent them. The initial launch of the GHN is planned for September 2008 at IEEE Sections Congress. More information on this program will be provided in the next *IEEE Life Members Newsletter*.

Thank you once again for your continued support of IEEE and IEEE activities. If you have any questions or comments, please send me an e-mail at [life-members@ieee.org](mailto:life-members@ieee.org).

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## Technology Travel/Tour Program Under Discussion

The Life Members Committee (LMC) is investigating the possibility of establishing a program of tours built around places and events of interest to IEEE Members. Examples may include visiting the Three Gorges Dam and power project (in the People's Republic of China), touring sites in Newfoundland associated with the history of electronic communications, or visiting various manufacturing installations in

Europe that are central to a particular technology. These tours would also include significant cultural and recreational activities in the area as well as pre- and/or post-tour extensions to nearby attractions. The LMC is currently seeking expressions of interest from several tour agencies to arrange the tour logistics.

If you would be interested in a tour program, we would like to hear from you. Please send a note to [LM-tours@ieee.org](mailto:LM-tours@ieee.org).

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## Life Member Groups Worldwide Hold Over 100 Events

A Life Member (LM) Group is a subunit of an IEEE Section that has been formed at the request of the IEEE Members within the Section. As of March 2008, 49 LM Groups have been formed worldwide. Ultimately, the Members within the Section determine the specific activities of the LM Group. A few LMs may volunteer to organize/coordinate the events but the Members within the Section ultimately determine the success or failure of these events/activities. In 2007, these groups conducted over 100 events.

The IEEE Central Texas Section LM Group has either accomplished or is planning the following activities:

- Initiated an IEEE local industry luncheon to enhance the bonding of IEEE and local industry leaders. Invited key senior leaders to be present and to speak on the benefits of the IEEE-industry relationships

- Commenced an effort to document local technology history within their geographic area
- Considering the establishment of an IEEE Fellows Support Committee that will focus on assisting deserving Section Members in finding references and securing a nomination
- Setting up an e-mail mailing list to stay in touch with their Members
- Discussing the establishment of a Web page
- Planning on conducting four to six meetings with a technical speaker.

Another potential LM Group activity is to nominate a site for an IEEE History Milestone. Please visit [www.ieee.org/web/aboutus/history\\_center/milestones\\_intro.html](http://www.ieee.org/web/aboutus/history_center/milestones_intro.html) for more information on this program. You can also find a complete list of LM Groups on the LM Web page at [www.ieee.org/lmc](http://www.ieee.org/lmc).

**Life Members that have donated US\$50 or more to the Life Members Fund will receive a pin in accordance with their membership grade. Limit one pin per IEEE Member.**

## Life Members Fund to Continue Support of LM Fellowship

The IEEE Life Members Committee (LMC) affirmed its commitment to supporting projects from the IEEE Life Members Fund of the IEEE Foundation that are beneficial to engineering students by extending its support of the IEEE Life Members Graduate Student Fellowship in Electrical Engineering through 2013. Established in 2000 with support from the LMC, this fellowship is bestowed by the IEEE Board of Directors. It is awarded annually to a first-year, full-time graduate student obtaining

his/her master's degree for work in the area of electrical engineering at an engineering school/program of recognized standing worldwide. The award carries a stipend of US\$10,000 per year and is renewable for one additional year, based on demonstrated satisfactory academic performance.

The 2008/2009 recipient of the IEEE Life Members Graduate Student Fellowship in Electrical Engineering is Andrea Pellegrini. Pellegrini is attending the University of Michigan in Ann Arbor

where he is pursuing a master's degree, and subsequently a Ph.D. degree, in computer engineering with a focus on reliable computer architecture. He hopes that his work "will greatly benefit not only the electronics industry, but also society at large."

Additional information regarding the IEEE Life Members Graduate Student Fellowship in Electrical Engineering is available at <http://www.ieee.org/portal/pages/about/awards/sums/lmfellow1.html>.

## 2008/09 LM Pewter Coaster to Commemorate Life Members Fund Support

The IEEE Life Members Committee selected the Panama Canal Electric and Control Installation, 1914, as the IEEE Milestone to be highlighted on its 2008–2009 limited edition pewter coaster. The coaster will be sent as a thank you gift to all donors regardless of IEEE member grade, who donate US\$100 or more to the IEEE Life Members Fund (LMF) from October 2008 to September 2009. One coaster

will be given per donor, per year.

This is the second in a series of coasters depicting various IEEE Milestones. The 2007–2008 coaster depicts the TELSTAR IEEE Milestone, which represents the first transatlantic television signal sent via satellite in 1962. The TELSTAR coaster is being sent to donors in recognition of contributions received through September 2008. A total of six coasters are

planned. The coaster program runs in addition to the IEEE Life Member Pin program, which recognizes IEEE Life Member gifts totaling US\$50+ to the IEEE LMF (one pin per Life Member).

If you make a US\$100 or higher gift today to the IEEE LMF by visiting [www.ieeefoundation.org](http://www.ieeefoundation.org) and clicking on the "Donate Online" button, you will receive the coaster depicting the TELSTAR IEEE Milestone.

## IEEE Life Members as of March 2008

Region	Life Fellow	Life Senior Member	Life Member	Total
1	515	1,207	3,231	4,953
2	344	1,011	2,383	3,738
3	254	972	2,135	3,361
4	158	523	1,198	1,879
5	172	625	1,397	2,194
6	527	1,500	3,892	5,919
7	110	235	539	884
8	178	276	510	964
9	9	73	93	175
10	204	210	348	762
	<b>2,471</b>	<b>6,632</b>	<b>15,726</b>	<b>24,829</b>

# 2007 IEEE Life Members Giving Fund

The IEEE Life Members Committee wishes to acknowledge those IEEE Members and other friends who generously contributed to the IEEE Life Members Fund during the calendar year of 2007. We are privileged to be supported by so many Members that we, unfortunately, cannot list them all. Each and every gift provides the resources the IEEE Life Members Committee needs to support philanthropic activities that encourage students and young electrical engineers to pursue a career in engineering, explore the history of electrical engineering, and represent the interests of IEEE Life Members or similarly mature Members.

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 Carl L. Gruber, LSM  
 Norman R. Gruenberg, LM  
 Stanislaw Grzybowski, Ph.D., LF  
 A.F. Guerrero, LM  
 Earl G. Gunia, LM  
 Ronald G. Gutru, LSM

Hammond H. Haas, LM  
 H.K. Haase, LM  
 Mr. Jerrier A. Haddad, LF  
 Gerald E. Hager, LM  
 Marion Hagler, LF  
 Martin R. Hake, LM  
 Edward L. Hall, LM  
 Charles E. Hamilton, LM  
 Jacob M. Hammer, LF  
 Charles L. Hand, LM  
 James E. Hanna, LM  
 John P. Hanna, LM  
 Bruce J. Hansen, LSM  
 Shya Hao, LM  
 Russell C. Harbaugh, Jr., LM  
 Harold E. Harden, LM  
 John M. Harker, LF  
 David C. Harris, LSM  
 David W. Harris, LM  
 Ernest R. Harris, LSM  
 O.J. Hart, Jr., LSM  
 Roy E. Hart, LSM  
 Charles R. Harvey, LSM  
 Masao Hashiguchi, LM  
 E.B. Hassler, Jr., LM  
 Mack A. Hataway, LM  
 George R. Haus, LM  
 W.T. Hayward, LM  
 Richard L. Healer, LM  
 Francis M. Healy, LM  
 Timothy J. Healy, Ph.D., LSM  
 Carl G. Hellman, LM  
 Denis A. Helm, LM  
 C.O. Hemmi, LSM  
 Peter B. Hendel, LM  
 Charles Henderson, LM  
 A.L. Henrichsen, LM  
 Mogens Henriksen, LSM  
 Andrew Herbert, LM  
 John M. Herman, III, LM  
 Denver W. Herr, LM  
 Otto E. Herrmann, LM  
 Harold L. Hess, LSM  
 Robert N. Hettrick, LM  
 George Hickey, LM  
 John A. Higgins, LF  
 S.F. Higgins, LM  
 Walter T. Higgins, Jr., LM  
 William L. Higgins, LM  
 Hermon H. Hight, LM  
 G. Richard Hilbers, LM  
 R.E. Hildreth, LM  
 Douglas W. Hill, LSM  
 Alex Hills, LF  
 Richard L. Hinchey, LM  
 David Hindin, LM  
 Dr. Narain and Joyce Hingorani, LF  
 Nobu Hirano, LSM  
 Khalaf H. Hirmina, LSM  
 Theodore W. Hissey, Jr., LF  
 L.H. Ho, LM  
 Wallace J. Hoff, LSM  
 Raymond W. Hoffman, LM  
 Harold A. Hogan, LM  
 John L. Hokanson, LM  
 Leander H. Hoke, Jr., LF  
 Dennis L. Holdaway, LM  
 Daniel H. Hollands, LM  
 J.F. Holmes, LM  
 Kazuo Horiuchi, LF  
 Nozomu Hoshimiya, LF  
 Dean D. Howard, LF  
 E. Keith Howell, LSM  
 Jones V. Howell, Jr., LM  
 Robert E. Howell, LM  
 Henry Y. H. Hsu, LM  
 William J. Huck, Jr., LM  
 Edward W. Hudson, LM  
 Kenneth C. Hudson, LM  
 Walter C. Huening, Jr., LF  
 Hagen E. Hultzsich, LM  
 Richard L. Humphrey, LM  
 William J. Hurd, LM  
 John Hus, LSM  
 Roy Hyink, LSM  
 Hirokazu Ihara, LF  
 Toshio Imai, LM  
 Val T. Ipri, Jr., LSM  
 J. David Irwin, Ph.D., LF  
 Charles E. Isbell, LM  
 Katsuyoshi Ito, LM  
 Oyvind H. Iversen, LM  
 Harold L. Ivey, LM  
 Robert W. Jack, LSM  
 Bruce B. Jackson, LM  
 Everett V. Jackson, LM  
 Francis J. Jackson, LSM  
 Israel S. Jacobs, LF  
 J.L. Jacobs, LM  
 James E. Jacobson, LM  
 Leonard Jacobson, LM  
 A. James, Jr., LM  
 #William J. Jameson, Jr., LSM  
 #Cecelia Jankowski, SM  
 Fred R. Jarratt, LM  
 Alexander F. Jaszek, LM  
 Richard J. Jerril, LM  
 William B. Jervis, LM  
 J. Ralph Jöhler, LSM  
 Harold F. John, LSM  
 Ben C. Johnson, LF  
 Donald L. Johnson, LM  
 Donald W. Johnson, LM  
 Edward L. Johnson, LM  
 L.F. Johnson, LM  
 P.I. Johnson, LM  
 Ronald C. Johnson, LM  
 Walter A. Johnson, LF  
 William H. Johnson, LM  
 George I. Johnston, LSM  
 Andrew Jones, LSM  
 Colin M. Jones, LF  
 Lloyd Jones, P.E., LM  
 Merrill C. Jones, LM  
 Russ Jones, LM  
 Luis E. Jordan, LM  
 Samuel A. Jordan, Jr., LSM  
 Erik Jorgensen, LM  
 Joseph Jurlina, LM  
 Thomas Kailath, Sc.D., LF  
 Eugene P. Kaiser, Ph.D., LM  
 Carl R. Kannewurf, Ph.D., LSM  
 Stan M. Karandanis, LM  
 Fred G. Karkalik, LSM  
 Terry T. Katayama, LM  
 Tohru Katayama, LM  
 Robert H. Katyl, LM  
 Stuart W. Katzke, LM  
 Haruo Kawahara, LF  
 Tatsuo Kawasaki, LM  
 Shigeo Kazama, LSM  
 Edward P. Keenan, LM  
 Frederick C. Keller, LM  
 Richard W. Keller, LM  
 R.A. Kelley, LM  
 William R. Kelley, LM  
 W.M. Kelly, LM  
 Feltus Kennedy, LM  
 Michael A. Kennedy, LM  
 Frank F. Kerr, LSM  
 David A. Kettler, Ph.D., LF  
 Yuri Khersonsky, LSM  
 E.B. C. Khu, LM  
 Dallas L. Kibbe, LSM  
 Joseph E. Kidron, LM  
 John W. Kilgore, LM  
 John N. Kim, LM  
 Julian V. King, LSM  
 Russell C. King, LM  
 Richard L. Kirby, LM  
 Joseph E. Kirk, LM  
 Jerzy Kirrander, Ph.D., LM  
 J.A. Kise, LM  
 S.A. Klein, LM  
 Ralph E. Klesius, LM  
 John A. Klobuchar, LF  
 Frank J. Kloht, LSM  
 D.R. Klose, LM  
 Raymond J. Klotz, Jr., LM  
 Willi Kluehe, LSM  
 Dag I. Knudsen, LSM  
 Yoshio Kobayashi, LF  
 Louis J. Kocotas, LM  
 J.I. Koeper, LM  
 J.A. Kong, LF  
 Malcolm K. Kong, LSM  
 John M. Kopper, LF  
 Peter A. Korelich, LM  
 Charles J. Kovarik, LSM  
 Richard A. Kowalski, LSM  
 Taisaku Kozuma, LSM  
 Stanley J. Krajewski, LM  
 Ernest R. Kretzmer, LF  
 John C. Kroon, LSM  
 Carl Kropp, LM  
 Robert J. Krueger, LM  
 Lloyd V. Kubis, LM  
 Masaharu Kubo, LF  
 Ted J. Kucharski, LM  
 Paul A. Kuckein, LM  
 Doris Kuhlmann Wilsdorf, LM  
 Aelred Kurtenbach, Ph.D., LM  
 Luther W. Kurtz, Jr., LSM  
 Capt. Leonard H. Kushner, Ret., LSM  
 Alexander Kusko, LF  
 James W. Kyle, LSM  
 Frank E. La Fetra, LSM  
 John S. Lagarias, LSM  
 Philip M. Lally, LM  
 Edward J. Lancevich, LM  
 Carl Landinger, LSM  
 Raymond H. Lanier, LM  
 Charles L. Larocca, LM  
 Ray S. Larsen, LF  
 Almon E. Larsh, Jr., LSM  
 Martin E. Larson, LM  
 Richard L. Larson, LM  
 Lawrence M. Laskowski, LM  
 George T. Laughlin, II, LSM  
 Louis Laursen, LM  
 G.E. Lavean, LM  
 Leon R. Lease, LM  
 Bernard J. Lechner, LF  
 Benny H. Lee, LM  
 David Lee, LM  
 G.M. Lee, LM  
 Kwang Y. Lee, LM  
 Song P. Lee, LM  
 Y.C. Lee, LM  
 Louis G. Leffler, LM  
 John N. Lemasters, LSM  
 Donald H. Lenhert, LSM  
 Benjamin J. Leon, LF  
 James V. Leonard, LSM  
 M.E. Levi, LM  
 Robert N. Levinn, LM  
 Peter A. Lewis, P.E., LF  
 Richard E. Lewis, LM  
 J.F. Libbe, LM  
 Pierre Liberatore, LM  
 Zvie Liberman, LSM  
 Charles A. Liechti, LF  
 Richard L. Lietzke, LM  
 Robert K. Likuski, LM  
 Mao-Shiu Lin, Ph.D., LSM  
 Wen N. Lin, LM  
 Ernest R. Lindahl, LM  
 M.S. Lindberg, Jr., LM  
 W.J. Lindblad, LSM  
 Allan R. Lingenfelter, LM  
 Alan W. Lingham, LM  
 John C. Linz, LM  
 Louis A. Liporace, LM  
 J. Litus, Jr., LM  
 Chao-Han Liu, LF  
 Manikant D. Lodaya, LM  
 George C. Loehr, LM  
 Charles J. Loeper, LM  
 John J. Lomax, LM  
 L.R. Lombardo, LM  
 Arnold London, LM  
 J.F. Loude, LSM  
 Mark G. Lowenstein, LM  
 John L. Lowrance, LSM  
 Frank E. Lowther, LSM  
 Albert R. Lubarsky, LSM  
 David B. Luber, Ph.D., LM  
 Alfred R. Lucas, LM  
 #Louis A. Luceri, LSM  
 Joseph F. Ludford, LM  
 Edgar J. Luecke, LSM  
 Gerald Luecke, LM  
 Russell E. Lueg, LSM  
 G.J. Luszcak, Jr., LM  
 L.N. Ma, LM  
 George D. MacMunn, LM  
 Walter J. Macomber, LM  
 William Magerkurth, LSM  
 Philip C. Magnusson, LSM  
 Haroun Mahrous, LSM  
 Chao C. Mai, LM  
 John Makhoul, Ph.D., LF  
 R.M. Malbon, LM  
 Charles G. Mallery, LSM  
 Frederick L. Maltby, LSM  
 John A. Mann, LM  
 Roger F. Mann, LSM  
 Roger A. Mao, LM  
 M. Elliott Margolis, LM  
 James T. Marrs, LM  
 J.H. Marshall, III, LSM  
 D.W. Martin, LM  
 Donald L. Martin, LSM  
 Kent R. Martin, LSM

Richard O. Martin, LSM  
 Ronald L. Martin, LM  
 Tom A. Martin, LM  
 E. Masada, LM  
 Daniel J. Masse, LSM  
 Vukota Mastilovic, LSM  
 John Matey, Jr., LM  
 Joseph S. Mathias, LSM  
 Taro Matsuura, LM  
 Randall M. Mattern, LSM  
 Peter T. Mauzey, LSM  
 D. Mc Cormick, LM  
 C.P. Mc Ferrin, LM  
 J.C. Mc Groddy, LF  
 K.J. Mc Namara, Jr., LM  
 Peter McAfee, LM  
 D.R. McAvoy, Jr., LM  
 L. Bruce McClung, LF  
 Berton J. McComb, LM  
 J.W. McConnell, LM  
 Douglas E. McCormac, LM  
 Martin J. McCormick, Jr., LSM  
 Robert M. McCoy, LSM  
 H.J. McCrabb, LM  
 Richard H. McFarland, LF  
 Edward J. McGowan, LSM  
 Edna McGrew, LSM  
 George A. McIntosh, LM  
 John L. McKelvie, LM  
 Richard T. Mckernan, LM  
 John F. McKiernan, LM  
 William M. McMillen, LM  
 A.J. McNerney, LSM  
 Lawrence McPhee, LM  
 Henry E. Meadows, Jr., LF  
 John Meece, LM  
 R.O. Meihofner, LSM  
 Roy W. Meinke, LSM  
 Al M. Meisel, LM  
 David Meltzer, LSM  
 A.H. Mendel, LSM  
 John W. & Lorraine Meredith, LSM  
 George E. Merrill, LM  
 Ralph G. Merrill, LM  
 Paul A. Meschler, LM  
 James R. Meyers, LM  
 Robert E. Michael, LM  
 Dale E. Miller, LM  
 John O. Miller, LM  
 William C. Miller, Jr., LM  
 William G. Milliman, LM  
 William G. Minahan, LM  
 In memory of Charles E.  
 Mindnich, LM  
 Willard C. Minton, LM  
 Douglas B. Miron, LSM  
 Edward F. Mitchell, LM  
 James T. Mitchell, LSM  
 Ted C. Mitchell, LM  
 W.J. Mitchell, Jr., LM  
 Tsuneo Mitsui, LF  
 A. Miyamoto, LM  
 John K. Miyasaki, LM  
 Masachika Miyata, LM  
 Eugene L. Mieczko, LM  
 Robert R. Mohler, LF  
 J.V. Moks, Jr., LM  
 John I. Molinder, LSM  
 William A. Monette, LM  
 Raphael E. Montanari, LM  
 Ben L. Montgomery, LM

Craig R. Moore, LSM  
 Thomas C. Moore, LM  
 James M. Moran, LSM  
 Bernard S. Morgan, LF  
 Lloyd A. Morley, LF  
 C.F. Morris, LM  
 Maynard B. Morris, LSM  
 Charles P. Mortimer, LM  
 Donald E. Morton, LM  
 Robert A. Morton, Jr., LM  
 Sigmund W. Mosko, LSM  
 George E. Moulton, LM  
 John W. Mueller, LSM  
 Rangaswamy Mukundan, LSM  
 R.A. Munroe, LM  
 G.T. Munsterman, LM  
 Hiroshi Murata, LF  
 J. Muroga, LM  
 Edward Murphy, LSM  
 Ralph A. Murphy, LM  
 Syed Murtuza, Ph.D., LM  
 M.P. Musick, LM  
 George J. Myers, LM  
 Akira Nabae, LF  
 Atsushi Nagano, LM  
 Yoshimi Nakano, LM  
 Francis J. Nardi, LSM  
 Howard N. Nelson, LM  
 Raymond J. Nelson, LM  
 Robert E. Nelson, LM  
 Thomas A. Nelson, LSM  
 T. Nemoto, LM  
 Wendell Neugebauer, LM  
 Peter G. Neumann, LF  
 Joseph H. Nevin, LM  
 Robert L. Nevin, LF  
 Mr. Richard S. Nichols, LF  
 Roger A. Nichols, LM  
 Charles W. Niessen, Ph.D., LM  
 Stig L. Nilsson, LF  
 Robert D. Noble, LM  
 Robert E. Noel, LSM  
 Alexander R. Norden, LSM  
 Paul Nordin, LM  
 \*George H. & Iris D. Norris, LM  
 George G. North, LM  
 Paul J. Notarian, LSM  
 Eddie T. Nozawa, LM  
 Samuel L. O'Hanian, LM  
 Carl A. O'Brien, LM  
 William D. O'Brien, Jr., LF  
 Bunichi Oguchi, LF  
 Boris V. Ohman, LM  
 Carl A. Ohsiek, Jr., LM  
 Akira Ohte, LF  
 Aksel Olesen, LM  
 William A. Olsen, LM  
 Carl B. "Bernie" Olson, LSM  
 Ray Olson, LM  
 Osamu Omoto, LSM  
 Orville R. O'Neal, LSM  
 Robert P. Oppenheim, LSM  
 John A. Osborne, LSM  
 Michael Otten, LM  
 James B. Owens, LF  
 Walter Pagels, LSM  
 Mohan Pai, LM  
 Daniel R. Paige, LM  
 Garrett Paine, LM  
 L.D. Palm, LM  
 James A. Palmer, LM

James D. Palmer, LF  
 L.C. Palmer, LSM  
 Richard Pantell, LF  
 Joseph Paolillo, LM  
 Michael S. Parcher, LM  
 Jerald V. Parker, LSM  
 Robert D. Parker, LM  
 Lowell C. Parode, LSM  
 Edward F. Parry, LM  
 David F. Parsons, LM  
 O.D. Parsons, LM  
 Yadollah Parvizi, LSM  
 Anthony W. Pascocello, LM  
 C.B. Patel, LM  
 Richard G. Patrick, LSM  
 John E. Patton, LM  
 Philip F. Paul, LSM  
 Harry R. Paulson, LM  
 Geoffery Payne, LM  
 Kenneth R. Peal, LM  
 John B. Peatman, LF  
 Donald R. Penn, LSM  
 Carl M. Penney, LM  
 Anthony J. Pennington, LSM  
 P.A. Penz, LSM  
 Adrian G. Perotti, LM  
 Elmer M. Petercsak, LM  
 Emanuel P. Peters, LM  
 Gerald J. Peters, LSM  
 Wayne A. Peterson, LSM  
 Oskars Petersons, LF  
 Jack R. Petrak, LSM  
 Paul H. Phillips, LM  
 Robert R. Phillips, LM  
 Edward S. Pierson, LSM  
 James E. Pierson, LM  
 Victor M. Pillich Clavijo, LM  
 Arthur A. Pini, Jr., LM  
 Harry F. Plackemeier, LM  
 Roland Plottel, LM  
 Harold J. Podell, LM  
 Harry E. Poe, LM  
 G.E. Pokorny, LSM  
 Ansis Pommers, LM  
 William L. Porter, LM  
 Edwin L. Post, LSM  
 Alan W. Postlethwaite, LSM  
 Donald R. Potter, LM  
 James G. Potter, LM  
 Ronald E. Pratt, LM  
 John J. Preston, LM  
 John C. Priddy, LM  
 Gary K. Pritchard, LM  
 B.J. Procopio, LM  
 James W. Pryde, LM  
 R. Przysieznik, LM  
 Robert J. Puckett, LM  
 John G. Puente, LF  
 Emerson W. Pugh, LF  
 John R. Ragase, LM  
 Louis Ragni, Jr., LM  
 Orlando F. Raimondo, M  
 Yudh V. Rajput, LSM  
 Robert E. Ralstin, LM  
 G. Ramakrishnan, LSM  
 R. Ramakumar, LF  
 Douglas J. Ramseth, LM  
 Russell K. Raney, LF  
 Stephen R. Rebain, LM  
 Robert H. Rediker, LF  
 Don W. Reid, LM

Donald B. Reid, LM  
 Harold F. Reiher, LM  
 Alan R. Reinber, LM  
 Clyde J. Reinhard, LM  
 William N. Reining, LM  
 William F. Reinke, LM  
 Carl F. Rench, LM  
 Alexander M. Rende, LM  
 Charles E. Rettig, LM  
 Eugene A. Rheingans, LM  
 V.T. Rhyne, LF  
 Chester T. Rice, LSM  
 Hamilton Richards, Jr., LM  
 Robert E. Richards, LM  
 Robert L. Richards, LM  
 Paul Richman, LF  
 G.W. Riegle, LM  
 Anthony L. Rigas, LF  
 Robert N. Riley, LSM  
 Charles L. Rino, LF  
 Jose Rio, LM  
 Stanley V. Rishel, LM  
 Lee W. Ritchey, LM  
 Curtis A. Ritchie, LM  
 John D. Robbins, LSM  
 Joseph E. Robertshaw, LM  
 James C. Robertson, LM  
 James G. Robertson, LSM  
 J. Darrell Robinson, LM  
 J.S. Robinson, LM  
 Martin S. Roden, LSM  
 Richard P. Roemer, LM  
 Albert J. Roesel, LM  
 Heljar B. Rognerud, LM  
 Hans G. Rolfes, LM  
 Salvatore A. Romano, Jr., LSM  
 Vincent S. Rose, LM  
 Aaron E. Rosenberg, LF  
 Ben R. Rosencrants, LM  
 Lawrence Rosenthal, LM  
 John E. Rossi, LM  
 Mr. Herbert H. Roth, LSM  
 Erlind G. Royer, LSM  
 Edward C. Rozelle, LM  
 Arthur K. Rue, LSM  
 Anne Rumfelt, LSM  
 Richard A. Runquist, LM  
 Steven Rupp, LM  
 R.A. Russack, LM  
 Donald W. Russell, LM  
 Graham Russell, LM  
 Charles E. Ryan, Jr., LF  
 Albert L. Ryff, LM  
 Philip B. Saba, LM  
 Sevier Sabin, LM  
 William E. Sabin, LM  
 Howard G. Sachs, LM  
 Leonard Sadauskas, M  
 Tim M. Sagen, LM  
 Mary A. Sager, LSM  
 Akio Saitoh, LM  
 Amir A. Sajanlal, LM  
 Roy Y. Sakamoto, LM  
 Pedro A. Sala, LM  
 Alan B. Salisbury, LSM  
 D.E. Sander, LSM  
 Phillip A. Sandford, LM  
 Hiroaki Sando, LM  
 Jun-Ichi Sano, LM  
 Gurdip S. Saran, LSM  
 Taiji Saruwatari, LM

K.F. Sayano, LM  
Franklin J. Sazama, LM  
S.G. Scaglia, LM  
John F. Scarzello, LM  
A.P. Schachter, LM  
Mervin G. Schaefer, LM  
Martin M. Schaffel, LM  
Herbert Schanker, LM  
Rolf Schaumann, LF  
Robert A. Scheman, LSM  
I. Morton Schindler, LSM  
Frank E. Schink, LF  
Theodore C. Schirmer, LM  
Frank W. Schmechel, LM  
Roland W. Schmitt, LF  
Robert L. Schneider, LM  
Rudolph F. Schreitmueller, LSM  
Ronald B. Schroer, LSM  
Hebert H. Schubarth, LM  
Robert P. Schulte, LM  
Allan J. Schultz, LSM  
Fred M. Schumacher, LM  
Victor K. Schutz, LSM  
Mischa Schwartz, LF  
Perry L. Schwartz, LSM  
Cameron C. Schweitzer, LM  
Felix Schwering, LF  
William Scolnik, LM  
William A. Scott, LM  
William G. Scott, LSM  
David A. Seamans, LSM  
Charles R. Seashore, LM  
Stephen A. Sebo, LF  
Lauren E. Sechriest, LM  
Robert L. Seitz, LSM  
John R. Seiver, LSM  
Douglas R. Semmes, Jr., LM  
J.I. Sendlein, LM  
Ashis K. Sengupta, LM  
Dipak L. Sengupta, LF  
Kenneth D. Senne, LF  
John E. Setaro, LM  
Melvin H. Shadbolt, LSM  
S.A. Shariff, LSM  
Robert T. Shelquist, LM  
Jack E. Shemer, Ph.D., LM  
W.H. Shepard, LM  
Freeman D. Shepherd, Jr., LF  
Lloyd Shepherd, LSM  
Akikazu Shibata, LSM  
Chen-Wen Shou, LM  
William W. Shrader, LF  
Larry Shryock, LM  
Maury J. Shumaker, LSM  
Ludwell A. Sibley, LSM  
John J. Sideravage, LM  
Thomas W. Sigmon, LF  
Peter M. Silverberg, LSM  
Jerome Silverman, LSM  
Dolph Simons, LM  
William A. Sims, LM  
J.M. Sirkoch, LM  
Bernard J. Skehan, LM  
John W. Skooglund, LF  
J.C. Skroski, LM  
Douglas K. Sladen, LM  
James G. Sliney, Jr., LSM  
George A. Smith, Jr., LM  
Gerald S. Smith, LSM

Jeffrey E. Smith, LM  
Michael R. Smith, LM  
Dr. Paul L. Smith, Ph.D., LSM  
Robert B. Smith, LM  
Robert D. Smith, LM  
Robert H. Smith, LM  
Robert T. Smith, LSM  
Thomas D. Smith, LM  
Warren D. Smith, LM  
William H. Smith, LM  
James L. Smytheman, LM  
Ronald C. Snare, LSM  
Robert M. Snuggs, LM  
Charles Sobel, LSM  
Frank G. Soltis, LM  
Robert D. Sommer, LSM  
Joel Spira, LSM  
Cary R. Spitzer, LF  
Carl M. Springer, LM  
George O. St Andre, LM  
Thomas D. Stade, LM  
Joseph J. Stanco, LM  
Bernard A. Stankevich, LM  
Malcolm G. Stearns, LM  
Robert F. Steen, LSM  
Gunter Stein, LF  
Gerhard Steinbrenner, LM  
Odd Steinsto, LM  
H.R. Steisslinger, LM  
H.C. Stephan, LM  
Robert A. Stern, LM  
Laverne E. Stetson, LF  
Raymond Stevens, LSM  
Chester G. Stevenson, LM  
David B. Stewart, LM  
Jack J. Stiffler, LF  
John R. Stock, LM  
George Stoeppel, LM  
Ronald B. Stokes, LM  
William T. Storey, LM  
Robert D. Strattan, LSM  
Albert Strub, LM  
Warren Stubblebine, LM  
Keith H. Sueker, LSM  
Hisanobu Sugano, LM  
Yukiyasu Suguri, LM  
R.L. Sullivan, LF  
Roger K. Sullivan, LSM  
Virginia C. Sulzberger, LF  
Thomas H. Sumida, LM  
David Sun, Ph.D., M  
Arthur E. Sundel, LM  
Richard W. Sutton, M  
Donald Y. Suzuki, LM  
Willis E. Swanson, LM  
D.W. Swift, LSM  
Guy E. Swifte, LM  
John E. Swink, LM  
Monte R. Szendre, M  
Margaret R. Taber, LSM  
Keiji Tachikawa, LF  
W.C. Taft, LM  
Ichiro Tagoshima, LM  
Akira Takahira, LM  
Harry J. Talbot, LM  
\*R.J. Tallent, LM  
Terutaka Tamai, LSM  
Kunimaro Tanaka, LF  
Richard I. Tanaka, LF

Duncan N. Tanner, LM  
Mario B. Tatonetti, LM  
Charles A. Taylor, LM  
John H. Taylor, LM  
M.D. Teems, LM  
Thomas S. Teetor, LM  
John T. Tengdin, LF  
Lewis M. Terma, LF  
James L. Thacker, LM  
Stamatios N. Thanos, LM  
William D. Thayer, LM  
Paul W. Thiede, LM  
David M. Thomas, LM  
C. Nortoft Thomsen, LSM  
D.J. Thomson, Ph.D., LF  
Howard A. Thraillkill, LM  
Robert G. Thurman, LSM  
John L. Tietze, LM  
Emery P. Todd, Jr., LM  
Kiyo Tomiyasu, LF  
Willis J. Tompkins, LF  
John B. Trevor, III, LM  
Timothy N. Trick, Ph.D., LF  
Lojze Trontelj, LM  
Bryan C. Troutman, LM  
James W. Truher, Jr., LSM  
Constantine T. Tsitsera, LM  
G.L. Turner, LM  
Hubbard C. Turner, Jr., LM  
Edward G. Tuttle, LSM  
William A. Tynan, LM  
\*Michiyuki Uenohara, LF  
George R. Ufen, LM  
Malcolm R. Uffelman, LF  
Arthur Uhler, Jr., LF  
Gottfried Ungerboeck, LF  
Lewis E. Unnewehr, LF  
Gerald S. Ustach, LM  
Kiminori Utsunomiya, LM  
Bernhard U. Vainik, LM  
Henry Valles, LM  
B.F. Van Dinter, LM  
Arthur Van Gelder, LSM  
Harry L. Van Trees, LF  
Murali R. Varanasi, LF  
William A. Vaughan, P.E., LM  
Jaime R. Vazquez-Plard, LSM  
Eugene F. Vecchia, LM  
Robert A. Veitch, LF  
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## The Giant White Frog

In 1956, I graduated from the University of Missouri and was recruited by North American Aviation to work at their Downey, California, facility. I was assigned to the telemetry group working on the Navaho missile. One day, we were on the mezzanine above the main floor of the environmental test lab running a vibration test on a telemetry unit. As the vibration test sweep was running, we noticed a small gathering on the main floor. This was a group of packaging engineers who, in conjunction with environmental test personnel, were testing a concept for protecting a fragile electronics unit from damage during shipment. They had suspended a mock-up of an electronic unit in the center of an enclosed shipping crate about a cubic yard in size. The unit was suspended by springs from each of its corners and fastened to each diagonal corner of the square crate. The theory was that these springs would absorb any shock that the unit might encounter during shipping, regardless of the direction of the shock. The unit was instrumented with small passive shock sensors along each axis. These clever little devices employed a steel ball captured by a permanent magnet. The sensors were calibrated so that any shock above a certain “g” level would dislocate the ball, indicating that the “g” level had been exceeded.

After replacing the lid, the crate was hoisted about 15 feet above the concrete floor. Then the group of engineers (who had apparently forgotten about Newton’s laws of motion, conservation of momentum, and inertia) pushed the button releasing the crate. It plunged to the floor, landing neatly

and squarely on its bottom. After approximately a half-second pause, the crate jumped straight up about 8 feet into the air, startling the group of observers. They began to scatter in all directions because the crate came down from the 8-foot jump and continued to hop around the lab in random directions like a giant white frog. It finally settled, still quivering, from the spring-suspended weight in its center. If ever there was a scene begging to be captured by a camcorder or cell phone and placed on the Internet, this was it. Alas, none of these devices or entities existed at that time.

Another incident occurred when a few of my fellow engineers and I were getting a beverage from a Coke machine in the hallway just outside the wide double doors of an environmental test lab. Suddenly the door burst open and a crowd of noisy, soaking-wet engineers and management personnel came running out into the hall followed by a small ankle-deep tidal wave of water. The environmental test lab had just installed a very large test oven and they were testing it by running it up to its maximum temperature. Apparently forgetting some of the thermodynamics they had learned, they threw open the oven doors to allow it to cool. The extremely hot air rose to the ceiling setting off every sprinkler system head in the room.

Some say that engineering work is somewhat boring and stodgy. Sometimes it can be, well, entertaining.

Roger Richesson, LM  
Huntington Beach, CA

## Friends, Romans, Charioteers, Lend Me Your Ears

People have always been impressed by the amazing engineering accomplishments of the ancient Romans, such as their roads, aqueducts, and bridges. A little appreciated aspect of these engineering feats is that they must have been supported from a very early stage in the evolution of the Roman Empire by a comprehensive empire-wide code of standards that was rigidly enforced.

I deduced the existence of such an empire-wide code of standards during a visit to the ruins of an ancient Roman town in Italy. The town had narrow, paved streets flanked on each side by raised sidewalks. At each street intersection there were raised stepping stones so that pedestrians could cross from sidewalk to sidewalk without getting their feet wet when the streets were flooded. Deep ruts, just within the edge of each raised sidewalk, had been worn into the cobblestones on each side of the streets by centuries of passing chariot wheels. It was apparent that in order for a chariot to be capable of passing through the streets from one town to another, it would have been necessary for the width of the streets to be identical in all Roman towns and for the dimensions of the chariots to also have been standardized throughout the empire. Clearly, this would have required a code of standards, a system of regulations, and inspection to ensure that the standards were rigidly

enforced as well as an associated bureaucracy to produce the standards and oversee their enforcement.

The width of the streets between sidewalks had to be accurately maintained everywhere. The height and placement of the stepping stones at intersections would also have been standardized and accurately maintained so that the chariot wheels could pass around them with adequate vertical clearance for the axles, both when traveling straight through the intersection and making turns.

The distance between the chariot wheels and the diameter of the wheels would have had to be standardized so that the chariots would fit between the sidewalks and pass over stepping stones. The width of all bridges would have had to be standardized as well, in conformity with the dimensions established for chariots.

Since the town streets were almost the exact width of only one chariot, it is interesting to conjecture what might have happened when two chariots met head-on while traveling in opposite directions or if the Romans had established a system of one-way streets to avoid such confrontations.

John D. Dorey, LM  
Westmount, Quebec, Canada

## Banging the Large Drum Slowly

In January 1953, I reported for work at Remington-Rand Univac in St. Paul, Minnesota. I had been interviewed for a job at Engineering Research Associates (ERA) several months earlier while still in the Navy but prior to reporting for work the company became Remington-Rand.

I worked on a project for the Navy that included recording on large drums as a means of delaying analog signals. The surface of a drum was coated with a magnetic oxide that could be magnetized with a noncontact boundary displacement recording head. The drum surface was precise and concentric so that the heads could be placed within 1 mil of the surface. The drum was driven at a rather slow constant speed so that the transport time from recording head to pickup head was seconds and adjustable by changing the distance of the pick up on the track. A large drum with approximately ten tracks processed signals from ten hydrophones using this phasing method to turn the hydrophone array into a beamed listening system. When I recently Googled "boundary displacement recording," it returned an article about ERA and boundary displacement recording that was in *Modern Mechanix* in January 1953.

Another project in 1954 included the ore car weighing system installed at the Great Northern Railroad iron ore docks at Allouez, Wisconsin. A strain gauge track-scale weighed the slowly moving ore cars to obtain their gross weight. The analog gross weight was digitized and used with the ore car tare weight that was held in a digital memory bank and accessed by an operator entering the ore car number visually as the car passed. The system subtracted the tare weight from the gross to get the net weight of the ore in the car. A flexowriter then

## Life Is a Highway

In a recent "Tales From the Vault," Ed Cowen recounted an anecdote about Dr. Roys, who was chairman of the electrical engineering department at the University of Massachusetts.

I was an instructor in the department from September 1953 to June 1955. Dr. Roys was generally thought of as a stern, no-nonsense sort of person. Some time after I left, I heard that he had a heart attack while conducting a class. He had some time to think while he was in the hospital and had long had a desire to have a motorcycle. So when he recovered, he bought a motorcycle and used to ride it between his home and the university.

David W. Knudsen, LSM  
Gray, ME

typed up the whole transaction to be used in billing for the transported iron ore.

Two things were memorable about this system; First, the tare weight digital memory system for the empty weight of 10,000 ore cars consisted of two six-foot relay rack cabinets full of cross-bar relays. Today a thumb drive or I.C. would do the job. Second, the calculations were done by a mechanical adding machine automated by keyboard solenoids. Today a microprocessor would do that and more!

William Merton Nellis, LM  
St. Paul, MN

## What's Past Is Present

In the June 1955 issue (vol. 43, number 6) of the *Proceedings of the Institute of Radio Engineers*, I coauthored a paper on X-ray emission from thyratrons while working at the Evans Signal Lab at Fort Monmouth, New Jersey. In August 2007, I received a call regarding the results of this study from a lawyer in Chicago, who represented a major U.S. military industrial manufacturer. The manufacturer produced a weapons system in the 1960s that is still in the field today and uses the same model tube referenced in the 1955 study. A lawsuit is currently underway by soldiers claiming that cancer resulted from the emanated thyratron X rays while utilizing the system. What is amazing was my ability to recapture the study details in August 2007 of work conducted more than a half-century before.

Bernard Reich, LF,  
Ocean, NJ

## A Heart to Heart Talk

In June of 1955, I was a newly graduated electrical engineer from the Johns Hopkins University McCoy College Division (the night school division). During my night school degree work, I had accumulated seven years of work experience as a medical electronics technician in the Johns Hopkins School of Medicine. That experience created a desire in me to pursue a career in medical electronics (later known as biomedical engineering). Toward that end I was fortunate that summer to find a job in the instrument section at the National Institutes of Health (NIH) in Bethesda, Maryland. The instrument section (later to be named Biomedical Instrument Engineering and Development Branch) was responsible for maintaining the variety of research instruments in the then seven institutes of the NIH as well as designing and fabricating cus-

tom instruments to support researchers' needs.

One of the researchers I did a lot of work with was Dr. Stanley Sarnoff, head of a cardiology research division in the National Heart Institute. Sarnoff was working on the development of an artificial heart valve. One day I was in his lab modifying some of his research equipment when he wandered in and proceeded to chat. He commented, "You know I never have understood all this electronic stuff. Now my brother, he does understand that stuff."

It was a few days before the light bulb went on and I realized that he was talking about David Sarnoff, president of RCA—Radio Corporation of America!

George I. Johnston, LM  
Portland, OR

## Pulse of the 1960s

I was quite intrigued to read Fred Kelley's account, "Cleanliness Is Next to Aggravation," in the December 2007 issue of the *IEEE Life Members Newsletter*. The article spoke to a problem encountered during the development of a pulse rebalanced pendulous accelerometer at Honeywell used in the Atlas-Centaur program.

This prompted recall of one of the few "a ha" experiences in my engineering career. It dealt with that same accelerometer when I was a design specialist working at General Dynamics/Astronautics in San Diego on the Centaur program in 1964.

A poorly understood phenomenon was encountered in the pulse rebalance loop electronics. Intuitively, one would expect an accelerometer mounted with its sensitive axis perpendicular to the earth's gravitational field vector to exhibit a pulse first in one direction and then the other. But such was not the case. Instead, testing showed several forms of limit cycle: a string of two to four pulses in one direction, then two to four in the other. The number of pulses characterizing the limit cycle would change: The 2-2 form would become 3-3 or even 4-4 during the course of a run, for example. Since each pulse represented a small increment in velocity, this limit cycle characteristic of several pulses in one direction followed by several in the other might compromise guidance accuracy. Why could the form of limit cycle change for a fixed set of gain and filter parameters?

I was asked to investigate the problem and recommend solutions. I took the analytical portion of the task and called upon another engineer, Chuck Prosser, to do the heavy lifting of modeling, wiring up, and running a time-scaled analog computer simulation of the accelerometer and its pulse rebalance loop electronics.

Chuck's simulation was able to duplicate what hardware testing had shown, and we were under time constraints to explain why. At one

## Another Hole in the Lead

In the mid 1970s I worked on experimental communication satellites LES 8 and LES 9. With satellite work, reliability is everything, and we tested all the electronic components every way we could think, including a test for integrated circuits not properly hermetically sealed. We found a few, and then we found that some of the ICs we had already tested were leaky when we tested them again. Many of our integrated circuits were already soldered onto printed circuit boards, and now we couldn't trust them.

A California company had a test for leaky integrated circuits. First the PC boards were placed in a pressurized container containing radioactive krypton-85 gas dissolved in a highly volatile liquid. The pressure forced the radioactive liquid into any leaky ICs. Then the board could be scanned with a gamma radiation detector to find any ICs that had sucked in the liquid. The fiberglass PC boards also absorbed some liquid, so in order to distinguish between gamma rays from the PC board and gamma rays from an integrated circuit, the gamma ray detector was placed behind a sheet of lead with a small hole drilled through it. When the circuit board was moved so that one of the integrated circuits was positioned just beneath the hole, only gamma

rays from that integrated circuit were supposed to reach the detector.

Experiments showed that some background radiation from the PC board's fiberglass was getting through the lead sheet and masking the signal from the components. Using a thicker sheet of lead was no help because the deeper hole attenuated the radiation we wanted to detect.

I recognized that there was an analogy with a phased array antenna pattern. The hole in the lead was like an antenna aperture. We were getting radiation through the equivalent of sidelobes. To suppress sidelobes, antenna designers used a low-sidelobe weighting pattern across the antenna aperture. The equivalent for our setup was to change the shape of the hole in the lead from a cylindrical shape to a cone. By doing that we were able to increase the signal-to-noise ratio by about 8 dB and then we could easily detect the leaky integrated circuits. We found a few—if we hadn't found them, they would have failed in space.

LES 8 and LES 9 still operate as they were designed because we made an antenna weighting pattern out of a hole in a sheet of lead.

Charlie Rader, LF  
Chatham, MA

point, impatient management suggested calling in outside consultants. The conventional textbook methods of nonlinear control systems limit cycle analysis weren't adequate. I spent several evenings wrestling with the problem. The upshot was the invention of an analytical technique in which the several discrete possibilities (2-2, 3-3, 4-4, etc.) for the nonsinusoidal waveform driving the nonlinearity were explicit. Then the loop parameters for which each

form could exist could be defined. The parameter ranges overlapped. This explained the phenomenon and its influencing variables, and helped define the best gain and filter parameters.

Chuck's simulation work verified these results and significantly extended them to include various forms of acceleration input.

Bob Ringland, LM  
Del Mar, CA

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We welcome articles for this newsletter. In particular, we seek articles about projects that are initiated at the Section and Region level by Life Members as well as “Tales from the Vault,” which should focus on novel or interesting technical issues. The suggested length for “Tales from the Vault” submissions is 500 words.

Acronyms should be completely identified once. Reference dates (years) also should be included. Editing, including for length, may occur. If you wish to discuss a story idea before hand, you may contact Craig Causer, managing editor, by e-mail at [lm-newsletter@ieee.org](mailto:lm-newsletter@ieee.org). The deadline to submit an article for possible inclusion in the next issue is 10 October 2008. Please include your Life grade, town, state, country, phone number, member number, and/or an e-mail address with your piece.

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