



EMP and HPEM FELLOWS

May 2019

*** Indicates Deceased**

| Name | Date of Election | Citation |
|--------------------------------|-------------------------|--|
| Abdalla, Michael D. | July 7, 2010 | For the development of high power hyperband and mesoband sources. |
| Abercrombie, Stanley D. | May 18, 1988 | For contributions to EMP environmental measurements, beginning in the 1950's. |
| Agee, Forrest Jack | July 13, 2016 | For contributions to protection from EMP environments and the development of HPM sources. |
| Antinone, Robert J. | June 5, 2002 | For the development of HPRF assessment and hardening techniques. |
| Arnesen, Odd Harry | July 13, 2016 | For contributions to the protection of critical technical infrastructures against Intentional EMI threats. |
| Aurand, John | July 23, 2008 | For contributions to high-precision measurements in high-power electromagnetics. |
| Bäckström, Mats | June 5, 2002 | For development of HPM test techniques and facilities. |
| Baker, George H. | July 22, 1992 | For contributions to EMP generation and hardening technology, for development of standards and specifications, and management of R&D programs. |
| Barnes, Paul R. | July 22, 1992 | For contributions to EMP analysis and development of the test and protection methods for commercial power systems. |
| Baum, Carl E. * | May 21, 1986 | As one of the committee of founding fellows. |

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|-------------------------------|-------------------------|--|
| Benford, James N. | June 18, 1998 | For development of HPM sources. |
| Bhattacharya, Amitabha | July 13, 2016 | For contributions to microwave engineering and ground penetrating radars. |
| Bigelow, W. Scott * | July 30, 2014 | For the development of UWB antennas and HPM sources. |
| Bohl, Jürgen | June 5, 2002 | For determining the electromagnetic susceptibility of missile systems. |
| Bombardt, John N. | May 18, 1988 | For contributions to the development of EMP technology for Army systems. |
| Bowen, Leland | July 23, 2008 | For experimental development of ultra-wideband antennas and measurement systems. |
| Butler, Chalmers M. | July 14, 2004 | For fundamental work in integral equation analysis of EMP and field penetration through apertures. |
| Carron, Neal A. | June 5, 2002 | For the development for innovative techniques for the calculation of SGEMP environments. |
| Carter, Nigel J. | June 18, 1998 | For development of innovative hardening and testing techniques for EMP, lightning and HPM. |
| Casey, Kendall F. | May 18, 1988 | For contributions to the understanding of EMP interaction. |
| Castillo, J. Phillip | May 18, 1988 | For contributions to the development of EMP system testing and assessment. |
| Chen, Kenneth C. | June 1, 2000 | For the development of models for calculating the coupling to long cables. |
| Christophe, Florent | July 4, 2012 | For leadership of HPM innovative projects and international working groups. |
| Darrah, John H. | May 18, 1988 | For contributions to the development of EMP technology in the areas of system hardening, simulation and testing. |
| Degauque, Pierre | June 2, 1994 | For contributions to modeling of EM fields radiated by lightning and to analysis of EM field interaction with and protection of systems. |
| Dracott, E. Dennis | May 18, 1988 | For contributions to the understanding of EMP generation culminating in the development of codes for the air burst. |
| Ehlen, Tilo | July 30, 2014 | For contributions to the determination and analysis of HPEM susceptibility of electronic systems. |
| Erkkila, John H. | June 1, 2000 | For the development of codes to calculate high-altitude EMP. |
| Farr, Everett G. | June 1, 2000 | For theoretical design and experimental development of impulse radiating antennas. |

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|-----------------------------------|-------------------------|---|
| Fichte, Lars Ole | July 13, 2016 | For contributions to the simulation of high-power electromagnetic interaction with electric devices and biological tissue, in addition to statistical methods for EMC. |
| Fromme, David | June 1, 2000 | For innovations in electromagnetic lethality experimental techniques on operational systems and development of system effects test beds. |
| Gao, You-Gang | July 7, 2010 | For contributions to the protection of communications systems from the effects of lightning and EMP. |
| Garbe, Heyno | June 5, 2002 | For contributions to the analysis of TEM waveguides. |
| Gardner, Robert L. | June 2, 1994 | For fundamental contributions to the understanding of lightning phenomenology and the properties of multiconductor transmission lines. |
| Gilbert, James L. | July 22, 1992 | For contributions to SREMP and SGEMP calculational methods and UGT analysis and design support. |
| Giles, Joseph C. (Cliff) | May 23, 1990 | For contributions in the development of EMP simulation and instrumentation. |
| Giri, David Venkat | June 2, 1994 | For contributions to EMP simulator design and HPM antenna design. |
| Gonschorek, Karl-Heinz | July 14, 2004 | For contributions to the international standardization of susceptibility tests. |
| Graham, William R. | May 18, 1988 | For contributions in the development of hardening engineering, test and evaluation. |
| Gut, Jacob | June 18, 1998 | For leadership of the Swiss EMP program and development of the EMP concept of general defense. |
| Jang, Tae-Heon | July 13, 2016 | For contributions to the development of test methods for HEMP combination filters. |
| Harrison, Charles W. Jr. * | June 5, 2002 | For contributions in EMP interaction and modeling. |
| Harrison, Michael G. | June 5, 2002 | For contribution to research in EMP and HPM effects on systems. |
| He, Jinliang | July 26, 2018 | For contributions to the understanding and protection of lightning discharges and electromagnetic effects |
| Higgins, Daniel F. | July 22, 1992 | For contributions to SGEMP technology and for the development of user-friendly computer methods for estimating NEMP effects and coupling to systems and system vulnerability. |
| Hoad, Richard | July 23, 2008 | For contributions to the understanding of EMP and HPEM effects and for the development of detection and protection concepts. |

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|---------------------------------|-------------------------|---|
| Hoeft, Luther O. (Bud) * | June 1, 2000 | For developing practical electromagnetic protection technologies. |
| Hubbard, Martin | July 30, 2014 | For the provision of capability advice, the coordination and leadership of research and the facilitation of international cooperation, across the UK's HPEM activities. |
| Hurtig, Tomas | July 26, 2018 | For development of compact HPM generators and contributions to HPM susceptibility testing |
| Hutchins, Robert L. | May 30, 1996 | For contributions to the analysis and design of EMP simulators and their use in system-level testing. |
| Ianoz, Michel | June 2, 1994 | For contributions to EMP and lightning coupling techniques. |
| Jecko, Bernard | June 18, 1998 | For contributions in the field of numerical techniques applicable to EMC, EMP and HPM analysis. |
| Jones, Christopher C. R. | July 7, 2010 | For contributions to the protection of aircraft from EMP and other electromagnetic environments. |
| Jones, Christopher W. | May 23, 1990 | For contributions to EMP environment calculations and system hardening. |
| Junqua, Isabelle | July 30, 2014 | For pioneering power balance approaches in EM topology at high frequencies. |
| Kälin, Armin W. | June 1, 2000 | For his leadership in the Swiss NEMP program, including pulse and CW testing of equipment and protected facilities. |
| Kancleris, Žilvinas | July 30, 2014 | For contributions to the development of resistive sensors for HPM pulse measurement. |
| Karlsson, Torbjörn | July 22, 1992 | For participation in, and technical leadership of the Swedish EMP program since 1974, for pioneering the generalized shield concept, and for extensive publications and conference presentations. |
| Karzas, William J. * | May 21, 1986 | As one of the committee of founding fellows. |
| Kasmi, Chaouki | July 13, 2016 | For contributions to electromagnetic and cyber security of critical services, internet and intranet systems. |
| Kehrer, William S. | June 2, 1994 | For contributions to the development and application of EMP testing capabilities. |
| Kohlberg, Ira * | July 14, 2004 | For fundamental work in the development of the theory of electromagnetic effects and simulation. |
| Kondratiev, Valeri M. | May 30, 1996 | For contributions to the understanding of EMP generation, environments, and coupling to systems. |

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|------------------------------------|-------------------------|---|
| Kouvshinnikov, Vadim M. | May 30, 1996 | For contributions to the understanding of the physics of high-altitude and surface-burst EMP generation, environments, and coupling to systems. |
| Kuprienko, Vassily M. | June 18, 1998 | For contributions to the development of EMP, SGEMP and pulsed field simulators in Russia. |
| Lazarev, Yuri N. | July 13, 2006 | For development of EMP, SGEMP and IEMP calculational techniques. |
| Lee, Kelvin S. H. | May 21, 1986 | As one of the committee of founding fellows. |
| Lehr, Jane M. | July 26, 2018 | For contributions to the development of fast closing pulsed power switches |
| Leuthäuser, Klaus-Dieter | May 30, 1996 | For leadership in Germany and Europe in the calculation of the HEMP environment. |
| Libelo, Louis F. | May 30, 1996 | For contributions to the understanding of electromagnetic interactions and for leadership in HPM. |
| Loborev, Vladimir M. | May 30, 1996 | For leadership of Russian nuclear effects research program and contributions to theoretical and experimental investigations of nuclear weapons effects. |
| Longmire, Conrad, L. | May 21, 1986 | As one of the committee of founding fellows. |
| Lövstrand, Karl G. | June 1, 2000 | Outstanding combination of theoretical and practical knowledge in EMC and EMP testing, particularly of aircraft. |
| Lubell, Jerry I. * | June 1, 2000 | For contributions to military specifications for system HEMP hardening and testing and to aircraft HEMP testing and assessments. |
| MacDiarmid, Ian P. | July 7, 2010 | For contributions to the protection of aircraft from EMP and other electromagnetic environments. |
| Magda, Igor I. | June 18, 1998 | For development of facilities for HPM testing of electronic equipment. |
| Malik, John S. * | May 18, 1988 | For contributions to understanding the roles of nuclear radiation sources and transport in EMP generation. |
| Martin, John C. (Charlie) * | May 18, 1988 | For development of pulse power for EMP simulation. |
| Marin, Lennart O. * | May 21, 1986 | As one of the committee of founding fellows. |
| McLemore, Donald P. | June 5, 2002 | For contributions to commercial and military applications of HPM/UWB technologies. |

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| Meng, Cui | July 13, 2016 | For contributions in computing the HEMP environment and developing HPEM environment standards. |
| Merewether, David E. | May 23, 1990 | For contributions to the application of numerical methods in EMP coupling analysis. |
| Messier, Michael A. | May 30, 1996 | For developing the theory of DEMP, the theory of EMP reflections including frequency-dependent ground parameters, and evaluating the polarization of HEMP waveforms. |
| Miletta, Joseph R. | June 18, 1998 | For contributions to research on EMP effects on components, circuits and systems. |
| Miller, Robert B. (Bruce) | June 5, 2002 | For pioneering the super Reltron HPM source. |
| Mo, Charles T. C. | June 2, 1994 | For unique contributions to the development and application of statistical models of EMP interaction with large complex systems. |
| Morgan, Gene E. * | May 18, 1988 | For development and application of EMP hardening to strategic systems. |
| Morrow-Jones, Jonathan | July 4, 2012 | For contributions to analytical and numerical modeling of HPEM coupling and effects, testing, and data processing. |
| Naff, John T. (Tom) | June 5, 2002 | For development of pulse generators for EMP simulation and HPM generation. |
| Nalborczyk, Jan * | July 30, 2014 | For contributions to advances in HEMP filter design. |
| Nitsch, Daniel | July 13, 2006 | For contributions to the testing and analysis of complex systems to EMP and UWB waveforms. |
| Nitsch, Jürgen B. * | June 18, 1998 | For leadership of the German EMP and HPM programs, and for pioneering contributions to the analysis of nonuniform multiconductor transmission lines. |
| Ochs, Wilhelm | June 5, 2002 | For contributions to EMP and HPM interaction with and effects on electronic systems. |
| Page, William E. | June 18, 1998 | For contributions to EMP environment calculations, system testing and coupling analysis. |
| Pande, D. C. | July 13, 2016 | For leadership of research and facilitation of international cooperation across India's HPEM activities. |
| Parfenov, Yuri V. | May 30, 1996 | For contribution to calculations and experimental methods to study SGEMP effects and simulators for combined effects of EMP and ionizing radiation. |
| Parker, Roberts L. | May 18, 1988 | For contributions to the test and hardening of strategic systems. |

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| Parkes, David M. | June 1, 2000 | For research on fast transient coupling to systems, high power microwaves and ultrawideband radar. |
| Parmantier, Jean P. | June 1, 2000 | For pioneering application of electromagnetic topology with the CRIPTE code for the calculation of electromagnetic response of complex systems. |
| Parra, Nicholas Mora | July 26, 2018 | For contributions to IEMI sources and coupling to communication lines |
| Partridge, Ralph E. | May 18, 1988 | For pioneering contributions to EMP measurement and simulation. |
| Perala, Rodney A. | June 18, 1998 | For contributions to EMP interaction modeling. |
| Petrov, Peter V. | July 13, 2006 | For development of EMP, SGEMP and IEMP calculational techniques. |
| Phelps, Alan D.R. | July 26, 2018 | For research and development of high power microwave sources |
| Prather, William D. | June 18, 1998 | For development of EMP and HPM test techniques and hardening standards. |
| Rachidi, Farhad | July 13, 2006 | For contributions to the coupling of EM fields radiated by lightning. |
| Radasky, William A. | May 18, 1988 | For contributions to understanding EMP generation and computation. |
| Rambousky, Ronald | July 30, 2014 | For contributions to the analysis of open TEM waveguides. |
| Rubinstein, Marcos | July 4, 2012 | For contributions to the understanding of lightning discharges and their electromagnetic effects. |
| Ruffing, Klaus | July 14, 2004 | For leadership in the German HPM susceptibility investigations of defence systems. |
| Rynne, Timothy M. | July 4, 2012 | For contributions to EMP hardening and IEMI lethality. |
| Sabath, Frank | July 13, 2006 | For contributions to the development of high-power impulse-radiating antennas. |
| Sakharov, Konstantin Yu. | July 4, 2012 | For contributions to the development of methods and facilities for EMP/UWB generation including measuring instruments to determine their parameters. |
| Savage, Edward B. | July 13, 2006 | For contributions to the understanding of the susceptibility of electronic equipment to pulsed waveforms. |
| Schaefer, Richard R. | May 23, 1990 | For contributions to the development of EMP hardness assessment methodology. |
| Schamiloglu, Edl | July 13, 2006 | For development of pulse power and high-power microwave tubes. |

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| Schlegel, Gerard K. | May 23, 1990 | For contributions to the development of EMP hardness assessment methodology. |
| Scott, Walter J. | June 5, 2002 | For contributions to EMP simulator testing, and for development of standards and management of R&D programs. |
| Serafin, Dominique J. | May 30, 1996 | For playing a leading role in developing theoretical and experimental programs in France and for contributions to interaction analysis and system testing. |
| Sevat, Peter | June 2, 1994 | For leadership in EMP research in the areas of shielding, assessments, coupling, and semiconductor vulnerability and for design and construction of EMP simulators. |
| Shi Li-Hua | July 7, 2010 | For contributions to EMP measurement and signal processing technology. |
| Shiloh, Joseph | May 30, 1996 | For leadership and contributions to EMP and HPM protection and testing in Israel. |
| Siniy, Leonid L. | July 13, 2006 | For development of EMP measurement techniques. |
| Skipper, Michael C. | July 7, 2010 | For the development of high power hyperband and mesoband sources. |
| Smith, Kenneth | July 23, 2008 | For contributions to EMP environment and system coupling calculations. |
| Smith, Ian D. | June 1, 2000 | For contributions to pulsed EMP simulation and impulse radiating antennas. |
| Smith, Paul | July 14, 2004 | For contributions and leadership in projects modeling short-pulse electromagnetic and ultrawideband radar. |
| Sonnemann, Frank | July 30, 2014 | For contributions to the analysis of electromagnetic effects on electro-explosive devices (EED) with connected firing circuits at pulsed wideband irradiation. |
| Soper, Gordon K. | May 30, 1996 | For contributions to the nuclear hardening of strategic missile systems and to the management of the EMP technology development program. |
| Sower, Gary D. | June 1, 2000 | For development of electromagnetic sensors and EMP simulators. |
| Stahl, Ralph H. * | May 23, 1990 | For contributions to the source-region EMP physics data-base. |
| Sturm, Richard | June 2, 1994 | For leadership of the German EMP program and development of EMP interaction models, testing and protection techniques. |

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| Suhrke, Michael | July 30, 2014 | For contributions to the testing and analysis of electronic systems to HPEM environments. |
| Taylor, Clayborne D. | May 18, 1988 | For pioneering work in numerical methods for EMP interaction and coupling studies. |
| Tarasov, Oleg A. | July 26, 2018 | For contributions to analytical and numerical modeling of NEMP and HPEM coupling and effects, and for theoretical research on the influence of electromagnetic waveforms on antenna-feeder devices and communication and power supply lines |
| ter Haseborg, Jan L. | June 18, 1998 | For development of techniques for the calculation of coupling to shielded multiconductor transmission lines. |
| Tesche, Frederick M. | May 21, 1986 | As one of the committee of founding fellows. |
| Terekhin, Vladimir A. | July 14, 2004 | For developments of EMP calculation and testing techniques. |
| Thottappillil, Rajeev | July 7, 2010 | For contributions to the understanding of the effects of lightning and intentional EMI on electrified railway systems. |
| Tkachenko, Sergey | July 23, 2008 | For theoretical investigations of high-frequency electromagnetic field coupling to transmission lines in different environments. |
| Torres, Robert | July 23, 2008 | For source technology development and effects research. |
| Turkin, Vladimir A. | July 4, 2012 | For contributions to the creation of high-power EMP simulators and UWB sources. |
| Tyo, Scott | July 23, 2008 | For contributions to mesoband and hyperband antenna design and measurements. |
| Vance, Edward F. * | May 21, 1986 | As one of the committee of founding fellows. |
| Uslenghi, Piergeorgio L. E. | June 5, 2002 | For pioneering contributions to nonlinear electromagnetics. |
| van Lint, Victor A. J. | July 14, 2004 | For contributions to the basic theory and insight into the mechanisms of EMP and SGEMP. |
| Vega, Felix | July 30, 2014 | For contributions to the modeling and design of mesoband sources. |
| Vodopyanov, Georgy | July 23, 2008 | For contributions to the investigation of the immunity of radio equipment, electronic systems and components to EMP. |
| Walters, Dolores A. | May 30, 1996 | For box IEMP analysis and code methods development. |

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| Wenaas, Eric P. | July 22, 1992 | For performance and technical management in the areas of SGEMP theory and experiments, as well as microwave interaction and effects on military equipment. |
| Wik, Manuel W. | July 22, 1992 | For contributions to the standardization of EMP environments and hardening procedures for non-military installations, for work with the International Electrotechnical Commission (IEC), and for management of the Swedish EMP program. |
| Wraight, Anthony | July 23, 2008 | For development of predictive methods and contributions to the assessment of system-level EMP and HPEM effects. |
| Xie, Yan-Zhao | July 7, 2010 | For contributions to EMP interaction, modeling and measurement. |
| Yang, F. C. | May 30, 1996 | For development of simple analytical techniques to calculate and understand EM coupling to complex systems. |
| Zdoukhov, Leonid N. | May 30, 1996 | For contributions to EMP coupling to aerial and underground cables, SREMP coupling to antennas and flying vehicles, and computational and experimental methods for combined EMP and ionizing radiation effects. |
| Zwamborn, Adrianus P. M. | July 14, 2004 | For leadership of the EMP and HPM programs of the Netherlands. |