

Keyvan Forooraghi

Work Address

Department of Electrical Engineering

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Education

Chalmers University of Technology Gothenburg, Sweden

PhD in Electrical Engineering, 1991

Chalmers University of Technology Gothenburg, Sweden

Licenciate of Engineering, 1988

Chalmers University of Technology Gothenburg, Sweden

Msc in Electrical Engineering, 1983

Experience

Trabiat Modares University Tehran, Iran

Department of Electrical Engineering

1993 - present

Professor

Chalmers University of Technology Gothenburg, Sweden

Department of Electrical Engineering

Division of Network Theory

1991-1993 Senior Researcher

Chalmers University of Technology Gothenburg, Sweden

School of Electrical Engineering

Division of Network Theory

1983-1991 Research Engineer

Chalmers University of Technology Gothenburg, Sweden

School of Electrical Engineering

Division of Network Theory

1983-1991 Research Engineer

Chalmers University of Technology Gothenburg, Sweden

School of Applied Physics

1983 Research Engineer

Publications

Journal Papers

1. Ali Ghafourzadeh, Keyvan Forooraghi, *Analysis of an inclined semi-circular slot in the narrow wall of a rectangular waveguide*, Progress In Electromagnetics Research, PIER Vol. 90, PP 323-339, 2009
2. Siamak Ebadi, Keyvan Forooraghi, *Green's function derivation of an annular waveguide for application in method of moment analysis of annular waveguide slot antennas*, Progress In Electromagnetics Research, PIER Vol. 89, PP 101-119, 2009
3. H. Dalili Oskouie, K. Forooraghi and M. Hakkak, *Radiation characteristics of a microstrip patch antenna over a periodic defected ground substrate*, Electromagnetics Vol. 29, No. 1, pp 24-30, January 2009
4. Siamak Ebadi, Keyvan Forooraghi, *Comparative study of annular and rectangular waveguides for application in annular waveguide slot antennas*, Journal of Electromagnetic Waves and Applications, Vol.22, No.16, pp 2217-2230, 2008
5. M. Maddahali, H. Dalili Oskouie, K. Forooraghi, *A Compact Branch-Line Coupler Using Defected Ground Structures*, Microwave and Optical Technology letters, Vol. 5, No.2, pp 386-389, February 2008
6. S.A Hosseini, A. Atlasbaf and K. Forooraghi, *Two New Loaded Compact Planar Ultra-*

7. Mahmoudian, K. Forooraghi, *A Novel Planar Leaky wave Antenna For Wireless Application*, Journal of Electromagnetic Waves and Applications, Vol.22, No. 2, pp 313-324, 2008
8. A. Razavi, K. Forooraghi, *Thinned Arrays Using Pattern Search algorithms*, Progress In Electromagnetics Research, PIER Vol. 78, PP 61-71, 2008
9. S.A Hosseini, Z. Atlasbaf and K. Forooraghi, *A New Compact Ultra Wide Band planar Antenna Using Glass As Substrate*, Journal of Electromagnetic Waves and Applications, Vol.1, No. 22, PP 47-59
10. Siamak Ebadi, Keyvan Forooraghi *An Annular Waveguide Slot Antenna* , IEEE Antennas and Wireless propagation Letters , Vol. 6, pp 1-5, December 2007
11. H. Dalili Oskouie, K. Forooraghi and M. Hakkak, *Guided and Leaky Wave Characteristics of Periodic Defected Ground tructures*, Progress In Electromagnetics Research, PIER Vol. 73, PP 15-27, 2007
12. O. Zandi, Z. Atlasbaf , K. Forooraghi, *Flat Multilayer Dielectric Reflector Antennas*, Progress In Electromagnetics Research, PIER Vol. 72, PP 1-19, 2007
13. P. Rezaei, M. Hakkak, and K. Forooraghi *Effect of Magnetic Layer on The Microstrip-Excited Rectangular Dielectric Resonator Antennas Bandwidth*", Journal of Electromagnetic Wave and Applications, Vol.21, No. 7, PP 915-927, 2007
14. P. Rezaei, M. Hakkak, and K. Forooraghi *Design of wide-band Dielectric Resonator Antenna With a Two-Segment Structure*", Progress In Electromagnetics Research, PIER Vol. 66, PP 111-124, 2006
15. R. Dehbashi, Z. Atlasbaf, K. Forooraghi, *A new compact size Microstrip Antenna with Harmonic Rejection* , IEEE Antennas and Wireless propagation Letters , Vol. 5, pp 395-398,

December 2006.

16. R. Dehbashi, H.R Dallili Oskouei, K. Forooraghi, *A Novel Broad Band Radial Stub Resonator Used in Bias T Applications*, Microwave and Optical Technology letters, Vol. 48, No. 9, pp 1766-1780, 9 September 2006
17. A. Rashidian, K. Forooraghi, M.R Tayfeh, *Investigations On Two-Segmented Dielectric Resonator Antennas*, Microwave and Optical Technology letters, Vol. 45, No. 6, pp. 533-537, 20 June 2005.
18. Z. Atlasbaf. K. Forooraghi, *Applying variations of permeability and permittivity in isotropic and anisotropic medias by using hybrid nodes in transmission line matrix method*, Journal of Trabiati Modares University, No.16, pp 23 32, Summer 2004
19. B.A Arand, M. Hakkak, K. Forooraghi, J.R. Mohassel, *Analysis of vertical wire antenna above lossy ground plane using discrete complex image method*, International Journal of Electronics and Communications (AEU), Vol. 57, No. 5, pp 333 - 337, December 2003.
20. B.A Arand, M. Hakkak, K. Forooraghi, J.R. Mohassel, *Analysis aperture antennas above lossy half-space*, Progress electromagnetic Research, PIER, No.44, pp 39-55, December 2003
21. A.A Heidary, K. Forooraghi, M. Hakkak, *Reducing resonant length of side wall inclines slots in a rectangular waveguide*, Microwave and Optical Technology Letters, Vol. 37, No.3, pp 222-226, May 5 2003.
22. B.A Arand, M. Hakkak, K. Forooraghi, J.R. Mohassel, *Analysis of arbitrary wire antenna above imperfect ground using discrete complex image theory*, Amir Kabir Journal, Vol 14, No. A.56, pp 1033-1044, Autumn 2003.
23. Z. Atlasbaf, K. Forooraghi, *Analysis of nearly cylindrical antennas by a combination of TLM and S2DS methods,(in persian)*, Amir Kabir journal, Vol 14, No. 53, pp 163 - 171, winter 2002.

24. K.Forooraghi,P-S Kildal and S. R. Rengarajan *Admittance of an isolated waveguide-fed slot radiating between baffles using a spectrum of two dimensional solutions*, IEEE, Transactions on Antennas and Propagation, Vol.41, No.4, pp 422-428, April 1993

25. K.Forooraghi,P-S Kildal, *Transverse radiation pattern of slotted waveguide arrays radiating between finite height baffles in terms of a spectrum of two dimensional solutions*, IEE Proceedings-H, Microwave Antennas and Propagation, Vol. 140, No. 1, pp 52-58, February 1993

26. K. Forooraghi, *Analysis of self admittance of a longitudinal shunt slot radiating into a parallel plate region*, Microwave and Optical Technology Letters, Vol. 1, No. 8, pp 305-308 October 1988.



Conference Papers

1. S. Ebadi, K. Forooraghi, Linear and circular polarization agility in annular waveguide slot antennas, Proceedings of IEEE Radio and wireless symposium RWS'09, January 2009, USA
2. S. Ebadi, K. Forooraghi, Polarization agility in annular waveguide slot antenna (AWSA) arrays , 2008 Asia Pacific Microwave Conference, APMC 2008 Hongkong
3. S. Ebadi, K. Forooraghi, Annular waveguide analysis for application in annular waveguide slot antennas (AWSA), Proceedings of 38th European microwave conference, October 2008, Amsterdam, The Netherlands
4. S. Ebadi, K. Forooraghi, Waveguide design considerations in annular waveguide slot antennas, 2008 IEEE International symposium on antennas and propagation, July 2008, San Diego - USA
5. M. Maddah-Ali, K. Forooraghi, and H-D Oskouei, An E-shaped DGS for band-stop filter with high Q-factor , Proceedings of 16 th Iranian Conference on Electrical Engineering ICEE 2008, May 2008 - Tehran - Iran
6. S. Karbasi Valashani, K. Forooraghi, and M.K. Moravvej-Farshi, Resonant properties of plasmonic split-ring nano - antenna using 2D-FDTD, Proceedings of 16 th Iranian Conference on Electrical Engineering ICEE 2008, May 2008 - Tehran - Iran
7. S. Ebadi, K. Forooraghi, A novel algorithm for mutual coupling compensation in infinite array antennas by near field explorations of a single element using FDTD, 2007 Asia Pacific Microwave Conference, December 11 -14, 2007, Bangkok - Thailand
8. E. Ebrahimi, K. Forooraghi, Multiple null synthesis for cylindrical microstrip patch array antenna using least squares method, 2nd European Conference on Antennas and Propagations, Eu Cap 2007, 11-16 November 2007, EICC, Edinburgh - United Kingdom
9. S. Ebadi, K. Forooraghi, Pattern scanning in low side lobe level phased array antennas using pattern search algorithms, European microwave Week 2007, 8-12 October 2007, ICM, Munich International Congress Center, Munich - Germany
10. Pejman Rezaei, Mohammad Hakkak and Keyvan Forooraghi, Influence of a magnetic layer on the rectangular DRA bandwidth, 2007 IEEE Antennas and Propagation Society International Symposium, 10-15 June 2007, Honolulu, Hawaii, USA
11. Pejman Rezaei, Mohammad Hakkak and Keyvan Forooraghi, Gap compensation of a magnetic layer on the rectangular DRA, 2007 IEEE Antennas and Propagation Society International Symposium, 10-15 June 2007, Honolulu, Hawaii, USA
12. Pejman Rezaei, Mohammad Hakkak and Keyvan Forooraghi, Wide-band rectangular dielectric resonator antenna, Proceedings of 15 th Iranian Conference on Electrical Engineering ICEE 2007, May 2007 - Tehran - Iran, pp 17-22
13. Elham Ebrahimi, Keyvan Forooraghi, Multiple nulls synthesis for circular arrays using least

squares method, 2006 7th International Symposium on Antennas, Propagation and EM Theory Proceedings, Oct. 26-29, 2006, Guilin, China

14. Zahra Atlasbaf, Keyvan Forooraghi, A new dual band branch-line coupler using coupled lines, 2006 7th International Symposium on Antennas, Propagation and EM Theory Proceedings, Oct. 26-29, 2006, Guilin, China
15. Arezoo Aliur, Nasrin amiri, Keyvan Forooraghi, Compact and broadband dielectric resonator antenna for WLAN applications, 2006 7th International Symposium on Antennas, Propagation and EM Theory Proceedings, Oct. 26-29, 2006, Guilin, China
16. Pejman Rezaei, Mohammad Hakkak, Keyvan Forooraghi, Multi-band rectangular dielectric resonator antenna with cranc-shape feed line, 2006 7th International Symposium on Antennas, Propagation and EM Theory Proceedings, Oct. 26-29, 2006, Guilin, China
17. N. Amiri, K. Forooraghi, Dual-band and dual-polarized Microstrip array antenna for GSM900/DCS1800 MHZ base stations, 2006 IEEE Antennas and Propagation Society International Symposium, 9-14 July 2006, Albuquerque, USA
18. Pejman Rezaei, Mohammad Hakkak, Keyvan Forooraghi, Dielectric resonator antenna for wireless LAN applications, 2006 IEEE Antennas and Propagation Society International Symposium, 9-14 July 2006, Albuquerque, USA
19. R. Dehbashi, K. Forooraghi, and Z. Atlasbaf, Active integrated antenna based rectenna using a new probe-fed U-slot antenna with harmonic rejection , 2006 IEEE Antennas and Propagation Society International Symposium, 9-14 July 2006, Albuquerque, USA
20. R. Dehbashi, H.D Oskouei and K. Forooraghi, A new compact biasing circuit for active integrated antenna and MMIC applications, 2006 IEEE Antennas and Propagation Society International Symposium, 9-14 July 2006, Albuquerque, USA
21. R. Dehbashi, K. Forooraghi, and Z. Atlasbaf, Dual-fed antenna for wireless power - transmission and data communications , 2006 IEEE Antennas and Propagation Society International Symposium, 9-14 July 2006, Albuquerque, USA
22. R. Dehbashi, H.D Oskouei and K. Forooraghi, A Novel miniaturized broad-band-stop resonator used in rectennas in WIMAX frequency band, 2006 IEEE Antennas and Propagation Society International Symposium, 9-14 July 2006, Albuquerque, USA
23. Z. Atlasbf, K. Forooraghi, A new compact broad band branch-line coupler using coupled lines, IEEE SARNOFE Symposium, Princeton, New Jersey, March 27-28 2006 .
24. R. Dehbashi, K. Forooraghi, Z. Atlasbaf, A harmonic rejecting inset fed U-slot antenna for rectenna applications, IEEE SARNOFE Symposium, Princeton, New Jersey, March 27-28 2006 .
25. R. Dehbashi, Z. Atlasbaf, K. Forooraghi , Analysis of a Novel band-stop resonator by 3D CDTD method, IEEE SARNOFE Symposium, Princeton, New Jersey, March 27-28 2006 .
26. S. Ebadi, N. Amiri, K. Forooraghi, sidelobe level reduction of BTS array antennas using genetic based element positioning, IEEE SARNOFE Symposium, Princeton, New Jersey,

March 27-28 2006 .

27. R. Dehbashi, K. Forooraghi, Z. Atlasbaf, A novel broad-band band stop resonator with compact size, Asia Pacific Conference on applied Electromagnetic, APACE 2005, 20-21 December 2005, Malaysia
28. N. Amiri, K. Forooraghi, R. Dehbashi, A compact dual polarized aperture coupled stacked patch antenna for GSM900 MHz, Asia Pacific Conference on applied Electromagnetic, APACE 2005, 20-21 December 2005, Malaysia
29. N.V Heydarian, H.R Oskouei, K. Forooraghi, P. Varahram New neural modelings miniature X-band branch line coupler Asia Pacific Conference on applied Electromagnetic, APACE 2005, 20-21 December 2005, Malaysia
30. N. Amiri, K. Forooraghi, A wide band dual polarized aperture coupled patch antenna for DCS 1800 MHZ for wire less communications, Asia Pacific Symposium on EMC, APEMC 2005, 6-7 December 2005, Taipei, Taiwan
31. M. Ghasvand, H.R Oskouei, K. Forooraghi , Broadband proximity coupled microstrip antenna for direct broadcast satellite reception using PBG structures, 2005 Asia-Pacific Microwave Conference, APMC2005, 4-7 December 2005, Suzhou, China
32. M. Ghasvand, H.R Oskouei, K. Forooraghi , Radiation characteristics of a circularly polarized proximity coupled microstrip antenna using PBG structures, International symposium on telecommunications IST2005, 1-12 September 2005, shiraz-Iran
34. S. Ebadi, N. Amiri, K. Forooraghi, A low sidelobe level nonequispaced microstrip array antenna design for BTS application using genetic algorithm, 2005 IEEE International Symposium on Microwave Antenna, Propagation and EMC Technologies for Wireless communications, MAPE2005, August 8 - 12, 2005, Beijing, China
35. S. Ebadi, N. Amiri, K. Forooraghi, Element positioning applied to a low sidelobe level GSM base station array antenna design using genetic algorithm, 2005 IEEE International Symposium on Microwave Antenna, Propagation and EMC Technologies for Wireless communications, MAPE2005, August 8 - 12, 2005, Beijing, China
36. S. Ebadi, K. Forooraghi, S.A. starzadeh, Optimum low sidelobe level phased array antenna design using pattern search algorithm, IEEE APS2005, July 3-8 2005, Washington, U.S.A
37. S. Ebadi, K. Forooraghi, S.A. starzadeh, A comparison between pattern search and genetic algorithms applied to low sidelobe level phased array antenna design, Loughborough Antennas and propagation Conference, LAPC2005, 4-6 April 2005, England
38. M. Ghasvand, K. Forooraghi, Design and analysis of 16X16 Microstrip Antenna for direct broadcast satellite reception, 13 th International Iranian Conference on Electrical and Electronic Engineering, ICEE2005, May 10-12, 2005, Zanjan - Iran
39. M.R. Tayfeh Aligoudarz, K. Forooraghi, A. Rashidian. Wide band miniaturized L-probe fed fractal clover leaf microstrip patch antenna, 13 th International Symposium on Antennas,

JINA2004, 8-10 November 2004, Nice, France

40. S. Josaghian, K. Forooraghi, Genetic optimization of an aperture coupled microstrip patch antenna, 2004 3:rd International conference on Computational Electromagnetic and Its applications, ICEA2204, November 1-4, 2004 Beijing - China
41. M. Hosseini, K. Forooraghi, An analysis method and application for a simple loaded loop antenna, 10 th international Conference on Mathematical Methods in Electromagnetic Theory, MMET2004, September 14-17, 2004 , Dnepropetrovsk, Ukraine
42. Z. Atlasbaf, K. Forooraghi A new hybrid method to calculate the self admittance of a longitudinal waveguide slot antenna radiating between baffles, The 2004 Joint conference of the 10 th Asia-Pacific Conference on Communications and the 5 th International Symposium on Multi-Dimensional Mobile Communications , APCC2004 and MDMC2004, August 29 - September 1, 2004 Beijing - China.
43. A. Rashidian, K. Forooraghi, M.R. Tayfeh, Optimum design of inserted segments(is) in multi-segments dielectric resonator antennas (MSDRA),2004 4 th International conference on microwave and Millimeter Wave Technology, ICMMT2004, August 18 -21 2004, Beijing - China
44. A. Rashidian, K. Forooraghi, M.R. Tayfeh, Design algorithm of multi-segment dielectric resonator antennas (MSDRAS),2004 4 th International conference on microwave and Millimeter Wave Technology, ICMMT2004, August 18 -21 2004, Beijing - China
45. M.R. Tayfeh, K. Forooraghi, A. Rashidian, Linear uniform self similar fractal arrays, 2004 URSI-EMTS International Symposium on electromagnetic Theory, May 23-27, 2004 Pisa - Italy
46. A.A Heidary, K. Forooraghi, Increasing the equivalent conductance of non resonate edge waveguide slots (In Persian), 12 th iranian Conference on Electrical and Electronic Engineering ICEE2004, May 12 -14, 2004 - Mashhad - Iran
47. H.R Dalliliy Oskouei, K. Forooraghi, Increasing the impedance band width and reducing the back-lobe level of microstrip antennas using photonic band gap structures,(In Persian), 12 th iranian Conference on Electrical and Electronic Engineering ICEE2004, May 12 - 14, 2004 - Mashhad - Iran
48. M Amir Fallah, K. Forooraghi,A new method for virtual modelling of microwave structure in FDTD, Second International Conference of the Iranian Aerospace Society, February 16 -18, 2002, Isfahan - Iran
49. M. Hosseini, K. Forooraghi,Design and Modelling of wide band panel crossed dipoles in FM band, 11 th International Iranian Conference on Electrical and Electronic Engineering, ICEE2003, May 10-12, 2003, Shiraz - - Iran
50. A. Rashidian, K. Forooraghi, M.R. Tayfeh, A new method for calculating the resonant frequency of multi-segment dielectric resonator antennas, The 13 th International Conference "Microwave and telecommunications Technology, CriMiCo2003, 8-12 September

2003, Sevaatopol- Ukraine

51. M. Hosseini, K. Forooraghi, Modelling, synthesis and broad band matching of a panel crossed- dipole antenna for FM broadcasting applications, The 19th Annual Review of Progress in Applied Electromagnetics, ACES2003, March 24 -28 2003, Monterey - California
52. K. Forooraghi, Z. Atlasbaf, Radiation Pattern Calculation of Nearly Cylindrical Antennas Using the Spectrum of Two-Dimensional Solutions Method and the Transmission Line Matrix Method, Proceedings of International Conference on Telecommunication, ICT-2002, Beijing, People Republic of China, June 2002.
53. K. Forooraghi, G.A Jafarabadi, On The Shape of the Received Wave in The Pulsed Radar Altimeter, (In Persian), Proceedings of International Conference on Electrical Engineering, ICEE-2002, Tabriz, Iran, May 2002.
54. K. Forooraghi, A. Mozafari, Reduction of Grating Lobes in an Array of Transverse Slots Using a Parallel Plate Region, Proceedings of International Conference on Electrical Engineering, ICEE-2002, Tabriz, Iran, May 2002.
55. K. Forooraghi, A Heidary, Analysis of Non resonant Tilted Slots in the Narrow wall of a Rectangular Waveguide, (In Persian), Proceedings of International Conference on Electrical Engineering, ICEE-2002, Tabriz, Iran, May 2002 .
56. K. Forooraghi, A. Arjmand, Design and Construction of a Schiffman Phase Shifter (In Persian) , Proceedings of International Conference on Electrical Engineering , ICEE97, Tehran, May 1997
57. A-S Baghaijavid, K. Forooraghi, Synthesis and analysis of a wide band ring hybrid in microstrip, (In Persian), Proceedings of, International Conference on Electrical Engineering, ICEE-97, Tehran, May 1997
58. K. Forooraghi, An overview of the spectrum of two dimensional solution's method for analysis of nearly cylindrical antennas Proceedings of International Conference on Electrical Engineering, ICEE-96, Tehran, May 1996
59. P-S Kildal, A. Kishk and K. Forooraghi, Thick solid blockage-free struts realized by using a hard surface, IEEE AP/S Symposium. Michigan, USA, 1993
60. J. Wettergren, P-S Kildal and K. Forooraghi, Admittance of a longitudinal slot in a finite ground plane, IEEE AP/S Symposium, Michigan, USA, 1993
61. J. Wettergren, P-S Kildal and K. Forooraghi, Progress report on the development of a method for calculations on nearly cylindrical antennas using a spectrum of two-dimensional solutions, Radiovetenskapiga konferensen RVK, Lund, Sweden April 1993
62. K. Forooraghi, P-S Kildal and S. R. Rengarajan Admittance of a longitudinal slot radiating between baffles using a spectrum of two-dimensional solutions, IEEE AP/S Symposium, Chicago, USA, July 1992
63. P-S Kildal, K. Forooraghi and J. Wettergren, Analysis of cylindrical antennas using a spectrum of two-dimensional solutions, COST 223, ESTEC, Holland, 1992

64. P-S Kildal, K. Forooraghi and J. Wettergren, Analysis of waveguide slot antennas with corrugated cylindrical outer structures using a spectrum of two-dimensional solutions, International Symposium on Antennas (JINA), Nice-France Nov 1992
65. P-S Kildal, S. Rengarajan and K. Forooraghi, Analysis of waveguide slot antennas with arbitrary finite outer cross-section using a spectrum of cylindrical waves, IEEE AP/S Symposium, London, Canada, June 1991
66. K. Forooraghi, P-S Kildal , Reduction of second order beams in slotted waveguide arrays using baffles, IEE International Conference on Antennas and Propagation (ICAP 91), York, England, April 1991

Research Projects

1. K.Forooraghi, M. Kahrizi, *Analysis and Design of a Vivaldi Antenna* Trabiati Modares University, 1998
2. K.Forooraghi, M. Hakkak, *Analysis and Design of a travelling wave waveguide slot antenna array* Jahadeh Khodkafayee, 1998
3. K.Forooraghi, *Design and Construction of a wideband microstrip coupler*, Iranian Telecommunication Research Center, 1999

Membership

Institute of Electrical and Electronic Engineers (IEEE), NJ., USA

Teaching

1. Advanced Electromagnetic I Msc and PhD Level
2. Advanced Electromagnetic II Msc and PhD Level
3. Microwave II Msc and PhD Level
4. Antenna II Msc and PhD Level
5. High Frequency Circuit Design Msc and PhD Level
6. Microwave I Bs Level
7. Antenna I Bs Level
8. Special topics on Microstrip Antennas PhD Level
9. Special topics on Phased Array Antennas PhD Level

Supervised Master of science Thesis..... 42 graduates

Supervised PhD Thesis..... 6 graduates

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