

CURRICULUM VITAE

Name: Kuniharu Kubodera
Date of Birth: October 28, 1943
Place of Birth: Ichikawa, Chiba, Japan
Nationality: Japanese
Visa Status: Permanent resident of USA
Position: Professor, Department of Physics and Astronomy
University of South Carolina

Education:

1962-1966 Faculty of Science, University of Tokyo, Japan
B. Sci. (Physics Major) 1966.
1966-1970 Graduate School, University of Tokyo, Japan
M. Sci. (Physics) 1968
Ph.D. (Physics) 1970
Thesis Advisor: Prof. A. Arima

Experiences:

1970-1973 Research Fellow, Centre d'Etudes Nucleaires de Saclay,
France (Dr. M. Rho's group)
1973-1980 Research Associate, Physics Department,
University of Tokyo (Prof. A. Arima's group)
1974 (January-October) Postdoctoral Fellow, Physics Department,
University of Pennsylvania
(Profs. A. Amado and H. Primakoff's group)
1977-1978 Visiting Research Scientist,
Argonne National Laboratory (Theory Division)
1978-1980 Visiting Research Scientist,
Swiss Institute for Nuclear Research (Theory Division)
1980-1984 Associate Professor of Physics (tenured)
Sophia University, Tokyo, Japan
1984-1989 Professor of Physics
Sophia University, Tokyo, Japan

1986-1987 Visiting Professor
State University of New York at Stony Brook
(Prof. G.E. Brown's group)

1989-Present Professor, Department of Physics and Astronomy
University of South Carolina

Other Experiences (Lecturer, Visit):

The Johns Hopkins University	1982 (summer) 1983 (spring)
Graduate School, Tohoku University, Japan	1982 (summer)
University of Tokyo, Japan	1984-1986
Graduate School, Hokkaido University, Japan	1986 (summer)
Graduate School, Osaka University, Japan	1988 (summer)
Graduate School, Osaka University, Japan	2003 (summer)

Professional Committees etc.:

1983-1986
Member of the Program Advisory Committee for the Meson Sciences Division of the Institute for High Energy Physics, Japan

1984-1986
Member of the Program Advisory Committee for the Electron Synchrotron Facility, Institute for Nuclear Study, University of Tokyo, Japan.

1985-1986
Member of the Editorial Board of the Journal of the Physical Society of Japan

1988-1989
Member of the Organizing Committee of the XXIII Yamada Conference on Nuclear Weak Process and Nuclear Structure, Osaka, Japan.

1995-1996

Member of the International Advisory Committee for the International Symposium on Non-Nucleonic Degrees of Freedom, Osaka, Japan

1997-1998

Member of the International Advisory Committee for the International Symposium on Hadrons and Nuclei, Tokyo, Japan, December 1998.

2000-2001

Member of the Scientific Advisory Committee for the International Workshop on Neutrino Interactions (NuInt01), KEK, Japan, December 2001.

2005-2006

Member of the International Advisory Committee for the International Conference, Chiral2006, Duke University, North Carolina, September 2006.

2006-2007

Member of the International Advisory Committee for the International Nuclear Physics Conference, Tokyo, Japan, September 2007.

Membership of Academic Organizations:

Physical Society of Japan
American Physical Society

Awards:

1970-1972

The Joliot-Curie Scholarship (French Government Scholarship)

1994-

Fellow of the American Physical Society

2003

The Russell Research Award

Grant Records:

NSF (with Prof. Fred Myhrer)

Title: "Theoretical Studies of Quark Models and Hadronic and Nuclear Dynamics"

Period: May 1990-- May 1993

Total Amount: \$250,690

NSF (with Prof. Fred Myhrer)

Title: "Theoretical Studies of Quark Models and Hadronic and Nuclear Dynamics"

Period: May 1993 -- December 1996

Total Amount: \$358,000

NSF (with Prof. Fred Myhrer)

Title: "Theoretical Studies of Hadronic and Nuclear Dynamics"

Period: May 1996 -- December 1999

Total Amount: \$393,000

NSF (with Prof. Fred Myhrer)

Title: "U.S. - Korea Cooperative Research on Chiral Symmetry and Nuclear Physics"

Period: September 1998 - August 2001

Total Amount: \$28,908

NSF PHY-9900756 (with Prof. Fred Myhrer)

Title: "Theoretical Studies of Hadronic and Nuclear Dynamics"

Period: July 1999 -- June 2002

Total Amount: \$402,057

NSF PHY-0140214 (with Prof. Fred Myhrer]

Title: "Theoretical Studies of Hadronic and Nuclear Dynamics"

Period: May 2002 -- May 2005

Total Amount: \$390,000

NSF (with Prof. Fred Myhrer)

Title: "Theoretical Studies of Hadronic and Nuclear Dynamics"

Period: July 2005 -- June 2008

Total Amount: \$417,000

Supervising graduate students at Sophia University (1980-1989)

Ph.D. students:

Dr. Satoshi Nozawa, Ph.D., March 1985,
currently Professor at Josai University, Japan.

Dr. Kazuo Tsushima, Ph.D. March 1989, currently
Visiting Research Professor at University of Salamanca, Spain.

Dr. Makoto Takizawa, Ph.D., March 1990,
currently Associate Professor at Showa College of Pharmaceutical
Sciences, Tokyo, Japan.

Dr. Tetsuya Yamaguchi, Ph.D., March 1990,
currently at Toshiba Electric Inc., Japan

Master's degree students:

In addition, I supervised nine graduate students in
completing a M.Sc. thesis in nuclear physics.

Supervising graduate students at my current institute,
University of South Carolina (1989 – date)

Ph.D. students:

Dr. Jose Ruben Morones-Ibarra, Ph. D., May 1998,
currently Professor at Universidad Autonoma de Nuevo-Leon,
Mexico.

Dr. Barbara Szczerbinska, Ph.D. July 2006,
Currently Assistant Professor at Dakota State University,
Madison, SD

Dr. Ivan Danchev, Ph. D. July 2006,
Currently Postdoctoral Fellow at Vanderbilt University,
Nashville, TN

Publications: Kuniharu Kubodera (as of June 2007)

1. "Study of 8^{A}Be in the molecular orbit model,"
Prog. Theor. Phys. 42 (1969) 740, with K. Ikeda.
2. "The Hartree-Fock model of the 6^{A}Li nucleus,"
Prog. Theor. Phys. 44 (1970) 617, with Y. Suzuki.
3. "The structure of 6Li and its Coulomb form factors,"
Compte-Rendu Colloque d'Evian, J. de Physique C5b (1971) 269.
4. "Clustering in light nuclei" ,
Advances in Nuclear Physics, vol. 5, p. 345 (1973), eds., E. Vogt
and M. Baranger, with A. Arima, H. Horiuchi and N. Takigawa.
5. "A finite-momentum transfer test of CVC in the $A=12$ system",
Phys. Lett. 43B (1973) 275, with C. W. Kim.
6. "The second-class current problem in nuclear beta-decay,"
Nucl. Phys. B66 (1973) 253,
with J. Delorme and M. Rho; E. B99 (1975) 545.
7. "Time reversal violation via second-class current?",
Proceedings of the V-th International Conference
on High Energy Physics and Nuclear Structure (Uppsala, 1973) p. 62,
with M. Rho.
8. "Negative-pion capture by ^4He ,"
Phys. Lett. 55B (1975) 380.
9. "Energy-dependent anisotropy of beta-rays and second-class currents,"
Phys. Lett. 58B (1975) 402,
with H. Ohtsubo and Y. Horikawa
10. "Pion-nucleus charge exchange reaction,"
Prog. Theor. Phys. 56 (1976) 986,
with H. Nishimura.
11. "Asymmetry of beta-ray angular distribution in polarized $\{12\}^{\text{A}}\text{B}$
and $\{12\}^{\text{A}}\text{N}$ and second-class current,"
Prog. Theor. Phys. Suppl. 60 (1976) 1,
with M. Morita, M. Nishimura, A. Shimizu and H. Ohtsubo.
12. "A second-class current problem in the $A=8$ nuclear system",
Prog. Theor. Phys. Suppl. 60 (1976) 29.
13. "Second-class current,"
Phys. Rev. Lett. 38 (1977) 321, with J. Delorme and M. Rho.
14. "Feeding of 8^{A}Be via b- and g-decays,"
Prog. Theor. Phys. 57 (1977) 1599, with A. Arima.
15. "Second-class current and nuclei,"
J. Phys. Soc. Jpn. 44 (1977) 465 (Proceedings of the Tokyo
International Conference on Nuclear Structure, 1977),
with J. Delorme and M. Rho.
16. "Axial currents in nuclei,"

- Phys. Rev. Lett. 40 (1978) 755,
with J. Delorme and M. Rho.
17. "Energy-dependent ft -value and $B(M1)$ in ^8Be ,"
Phys. Lett. 76B (1978) 259, with T. Tomoda.
 18. "Weak interaction and nuclear structure,"
Proceedings of International Spring School on Weak Interactions
and Gauge Theories (Zuoz, Switzerland, 1979) p. 170.
 19. "Coherent photo- η production on deuteron,"
Nucl. Phys. A324 (1979) 234,
with N. Hoshi and H. Hyuga.
 20. "Dibaryon signals in the excitation functions of polarized p-d scattering,"
Phys. Lett. 87B (1979) 169,
with M. P. Locher.
 21. "Interference of dibaryon resonances with Faddeev amplitudes for
elastic p-d scattering,"
J. of Phys. G6 (1980) 171,
with M. P. Locher, F. Myhrer and A. W. Thomas.
 22. "Determination of upper limits to second-class currents,"
Phys. Lett. 90B (1980) 45, with M. Oka.
 23. "Bag model cluster wave functions and dibaryon decay,"
Nucl. Phys. A356 (1981) 269,
with W. Grein and M. Locher.
 24. "Atomic effects on the estimation of ν_e mass from the
beta-spectrum in tritium decay,"
Z. für Physik, C6 (1981) 365, with M. Fukugita.
 25. "Exchange currents for the time component of axial currents;
 $A=2$ nuclear system as a test case,"
Prog. Theor. Phys. 67 (1982) 1240,
with S. Nozawa and Y. Kohyama.
 26. "Double positron-decay, positron emitting K-capture and double
K-capture,"
Phys. Rev. D27 (1983) 2765, with C. W. Kim.
 27. "Higher-order effects in the exchange current in the time component
of axial current,"
Prog. Theor. Phys. 70 (1983) 613,
with Y. Kohyama, H. Nishimura and S. Nozawa.
 28. "Weak processes in the $A=12$ nuclei with finite momentum transfer,"
Prog. Theor. Phys. 70 (1983) 892,
with S. Nozawa and Y. Kohyama.
 29. "Double beta-decay and massive neutrinos,"
Proceedings of the Asian Pacific Physics Conference (Singapore, 1983)
p. 918, with C. W. Kim.
 30. "Pionic effects in hyperon decays,"
Compte-Rendu Troisième Colloque Franco-Japonais sur Physique

- Nucléaire (Dogashima, Japan, 1983) p. 325,
with Y. Kohyama and C. W. Kim.
31. "The $0(+) - 0(-)$ transitions in the $A=16$ system and meson-exchange currents,"
Phys. Lett. 140 B (1984) 11,
with S. Nozawa and Y. Kohyama.
 32. "Mesonic effects in A_0 ; exchange versus core-polarization effects in the $^{16}O(0+) - ^{16}N(0-)$ transitions,"
Proceedings of the International Symposium on Electromagnetic Properties of Atomic Nuclei, (Tokyo, 1983) p. 415,
with S. Nozawa, Y. Kohyama and K. Oikawa.
 33. "Energetic neutrons from muon capture by a heavy nucleus,"
Phys. Lett. 149B (1984) 451,
with T. Fujita.
 34. "Further study of exchange current in axial current,"
Proceedings of the International Symposium on Nuclear Spectroscopy, (Osaka, Japan, 1984) p. 253,
with S. Nozawa and H. Ohtsubo.
 35. "Semi-leptonic decays of baryons in the cloudy bag model,"
Prog. Theor. Phys. 73 (1985) 1278, with Y. Kohyama, K. Oikawa and C. W. Kim.
 36. "Weak-interaction form factors of octet baryons in the cloudy bag model,"
Nucl. Phys. A439 (1985) 695,
with Y. Kohyama, K. Oikawa and C. W. Kim.
 37. "Further study of $^{16}O(0+) - ^{16}N(0-)$ transitions,"
Prog. Theor. Phys. 74 (1985) 926,
with S. Nozawa, H. Ohtsubo and H. Nishimura.
 38. "Comment on neutrinoless double-beta decay between pairs of single-beta emitters,"
Phys. Lett. 168B (1986) 21, with Y. Kohyama and K. Yazaki.
 39. "Exchange currents and configuration-mixing effects in the $^{16}O(0+) - ^{16}N(0-)$ transitions,"
Nucl. Phys. A453 (1986) 645,
with S. Nozawa and H. Ohtsubo.
 40. "On the oscillation of solar $8B$ neutrinos,"
Prog. Theor. Phys. Suppl. 86 (1986) 357,
with M. Koshihara, M. Nakahata and S. Nozawa.
 41. "Exchange currents in the neutrino-deuteron reactions and the solar neutrino problem,"
J. Phys. Soc. Jpn. 55 (1986) 2636,
with S. Nozawa, Y. Kohyama and T. Kaneta.
 42. "Exchange currents and configuration mixing effects in the $^{16}O(0+) - ^{16}N(0-)$ transitions,"
Proceedings of the PANIC Conference, p553 (Heidelberg, 1986),
with S. Nozawa.

43. "Weak interaction form factors of octet baryons in the volume-type cloudy bag model,"
Phys. Lett. B 186(1987) 255,
with Y. Kohyama, K. Tsushima and K. Oikawa.
44. "Strangeness condensation and "clearing" of the vacuum,"
Phys. Lett. B 192 (1987) 273,
with G. E. Brown and M. Rho.
45. "Strangeness condensation and cooling of neutron stars,"
Phys. Rev. D, 37 (1988) 2042,
with G. E. Brown, D. Page and P. Pizzochero
46. "Chiral-bag model study of the weak interaction form factors and magnetic moments of octet baryons,"
Phys. Lett. B205 (1988) 128,
with K. Tsushima, T. Yamaguchi, M. Takizawa and Y. Kohyama.
47. "Comments on "Feasibility of detecting neutrinoless double beta-decay between pairs of single-beta emitters","
Phys. Rev. C37 (1988) 1778,
with Y. Kohyama and M. Takizawa.
48. "Strangeness and chiral symmetry,"
Nucl. Phys. A479 (1988) 175c,
with G. E. Brown, M. Prakash and M. Rho.
49. "Nambu-Jona-Lasinio model estimation of strangeness content in nucleons,"
Phys. Lett. B208 (1988) 165,
with Y. Kohyama and M. Takizawa.
50. "Neutral current reactions of solar and supernova neutrinos on deuterium,"
Phys. Rev. D38 (1988) 1030,
with J. N. Bahcall and S. Nozawa.
51. "Weak-interaction form factors and magnetic moments of octet baryons ---- Chiral-bag model study,"
Nucl. Phys. A489 (1988) 557,
with K. Tsushima, T. Yamaguchi and Y. Kohyama.
52. "Neutrino reaction cross sections on ^{12}C target,"
Phys. Lett. B212 (1988) 139,
with M. Fukugita and Y. Kohyama.
53. "Shake-up effects in the calibration line used in the INS tritium beta-decay experiment,"
Proceedings of the XVI INS International Symposium on Neutrino Mass and Related Topics, p. 349, ed. by S. Kato and T. Ohshima, (Tokyo, 1988),
with M. Takizawa.
54. "Reaction cross section for "solar-flare neutrinos" with ^{37}Cl and ^{16}O targets,"
Astrophys. J. 337L (1989) 59,

- with M. Fukugita, Y. Kohyama and T. Kuramoto.
55. “ ^{13}C as a solar neutrino detector,”
Phys. Lett. B217 (1989) 186,
with J. Arafune, M. Fukugita and Y. Kohyama.
 56. “Semi-leptonic beta-decay form factors and magnetic moments of octet baryons --- Recoil effects and center-of-mass corrections in cloudy bag model including gluonic effects,”
Nucl. Phys. A500 (1989) 429,
with T. Yamaguchi, K. Tsushima and Y. Kohyama.
 57. “Study of meson flavor mixing in the Nambu-Jona-Lasinio model including instanton effects,”
Prog. Theor. Phys. 82 (1989) 481,
with M. Takizawa, K. Tsushima and Y. Kohyama.
 58. “Chiral-model of weak-interaction form factors and magnetic moments of octet byrons - supplemented by an argument on the spin content of nucleons,”
Proceedings of the XXIII Yamada Conference on Nuclear Weak Process and Nuclear Structure, Osaka, 1989, ed. by M. Morita et al.
[World Scientific, Singapore], p. 408,
with Y. Kohyama, K. Tsushima and T. Yamaguchi.
 59. “Axial charge in nuclear beta decay and muon capture,”
Proceedings of the XXIII Yamada Conference on Nuclear Weak Process and Nuclear Structure, Osaka, 1989, ed. by M. Morita et al.
[World Scientific, Singapore], p. 52,
with K. Koshigiri, H. Ohtsubo and M. Morita.
 60. “Reaction cross sections for $\{\nu\}^{13}\text{C} \rightarrow e^{-}\{\nu\}^{13}\text{N}$ and $\{\nu\}^{13}\text{C} \rightarrow \{\nu\}'^{13}\text{C}^*$ for low energy neutrinos,”
Phys. Rev. C41 (1990) 1359,
with M. Fukugita, Y. Kohyama and T. Kuramoto.
 61. “Study of meson properties and quark condensates in Nambu-Jona-Lasinio model with instanton effects,”
Nucl. Phys. A507 (1990) 611,
with M. Takizawa, K. Tsushima and Y. Kohyama.
 62. “Neutrino induced reaction cross sections at intermediate energies for chlorine and water detectors,”
Nucl. Phys. A512 (1990) 711,
with T. Kuramoto, M. Fukugita and Y. Kohyama.
 63. “Axial-vector matrix elements of the proton in the Nambu-Jona-Lasinio model,”
Phys. Lett. B237 (1990) 242,
with M. Takizawa and T. Kunihiro.
 64. “Weak interaction processes on deuterium: Muon capture and neutrino reactions,”
Phys. Rev. C42 (1990) 1694,

- with N. Tataru and Y. Kohyama.
65. "Novel feature of the vector-meson solution in the Nambu-Jona-Lasinio model,"
Phys. Lett. B 261 (1991) 221,
with M. Takizawa and F. Myhrer.
 66. "Axial-charge transition in heavy nuclei and in-medium effective chiral Lagrangians,"
Phys. Rev. Lett. 67 (1991) 3479,
with M. Rho.
 67. "Remarkably large asymmetry in $\bar{p}p \rightarrow p+p-$ and $\bar{p}p \rightarrow K-K+$ reactions,"
SuperLEAR Workshop, Zürich, Inst. Phys. Conf. Series (Eds. C. Amsler and D. Urner) 124 (1992) 303,
with S. Takeuchi and F. Myhrer.
 68. "Strangeness production in relativistic heavy ion collisions,"
Z. Physik A341 (1992) 301 ,
with G. E. Brown and C. M. Ko.
 69. "Astrophysical neutrino reactions on the deuteron,"
Phys. Rev. C 45 (1992) 1988,
with M. Doi.
 70. "Maximum asymmetry phenomena in $\bar{p}p \rightarrow p+p-$ and $\bar{p}p \rightarrow K-K+$ reactions,"
AIP Conference Proc. 243 (1992) 358,
with S. Takeuchi and F. Myhrer.
 71. "A novel mechanism for kaon condensation in neutron star matter,"
Phys. Lett. B, 291 (1992) 355,
with G.E. Brown, M. Rho and V. Thorsson.
 72. "Non-nucleonic degrees of freedom in weak nuclear currents,"
Hyperf. Inter. 78 (1993) 3.
 73. "Kaon condensation in dense nuclear matter",
J. Korean Phys. Soc. 26 (1993) S171.
 74. "Maximum asymmetry phenomena in $\bar{p}p \rightarrow p+p-$ and $\bar{p}p \rightarrow K^-K^+$ reactions,"
Nucl. Phys. A556 (1993) 601,
with S. Takeuchi and F. Myhrer.
 75. "On the large asymmetry in $\bar{p}p \rightarrow \pi^+\pi^-$ and $\bar{p}p \rightarrow K^-K^+$ reactions,"
Proc. Workshop on Future Directions in Particle and Nuclear Physics at Multi-GeV Hadron Facilities, ed. D.F. Geeseman (Brookhaven Nat. Lab. Report BNL-52389, 1993) p. 276,
with F. Myhrer and S. Takeuchi.
 76. "Reexamining s-wave meson condensation in dense matter,"
Phys. Lett. B317 (1993) 269,
with H. Yabu and S. Nakamura.

77. "Effective kaon mass in baryonic matter and kaon condensation,"
Phys. Lett. B315 (1993) 17,
with H. Yabu, S. Nakamura and F. Myhrer.
78. "Roles of the instanton in strange multi-quark systems,"
Phys. Lett. B318 (1993) 1,
with S. Takeuchi and S. Nussinov.
79. "Neutrino-nucleus reactions,"
Intern. J. Mod. Phys. E., 3 (1994) 101,
with S. Nozawa.
80. "Meson condensation in dense matter reexamined,"
Phys. Rev. D50 (1994) 3549,
with H. Yabu and F. Myhrer.
81. "Nuclear matrix elements of axial-charge exchange currents derived
in heavy-fermion chiral perturbation theory,"
Nucl. Phys. A 579 (1994) 381,
with T.-S. Park and I.S. Towner.
82. "Heavy-baryon chiral perturbation theory applied to axial-charge
exchange currents,"
Nucl. Phys. A577 (1994) 393c.
83. "Chiral perturbation in dense matter and meson condensation controversy,"
Proceedings of the International Symposium on Frontiers in Nuclear
Structure Physics, p. 340; eds. M. Ishihara et al., RIKEN, Saitama, Japan;
March 1994.
84. "Nuclear responses to electro-weak probes and in-medium chiral
perturbation theory,"
Proceedings of the IV International Symposium on Weak and
Electromagnetic Interactions in Nuclei, p. 298 (eds. H. Ejiri, T. Kishimoto
and T. Sato, 1996);
with F. Myhrer, T. Meissner and R. Morones.
85. "Chiral perturbation approach to the $pp \rightarrow pp\pi^0$ reaction near
threshold,"
Phys. Rev. C 53 (1996) 1519,
with B.Y. Park, F. Myhrer, J.R. Morones and T. Meissner.
86. "Study of $pp \rightarrow pp\pi^0$ reaction in chiral perturbation approach,"
Proceedings of the 14th International Conference on Particles and
Nuclei [Williamsburg, May 1996], eds. C. Carlson and J. Domingo, p. 699,
with B.Y. Park, F. Myhrer, T. Meissner and J. Morones.
87. "Current topics in nuclear chiral perturbation theory,"
Proceedings of the International Symposium on Non-Nucleonic Degrees in
Nucleus [Osaka, Japan, September 1996], eds. T. Minamisono et al.,
(World Scientific, 1997); pp. 200- 210,
with F. Myhrer and Th. Meissner.
88. "Physics possibility with ultra-high intensity proton beams,"
Proceedings of the Workshop on the APT Facility [University of South

- Carolina, April 1996], ed. F.T. Avignone (World Scientific, 1998); pp. 148-159,
with F. Myhrer.
89. "Chiral perturbation theory and the $pp \rightarrow pp\pi^0$ reaction near threshold,"
Phys. Rev. C 56 (1997) 1246-1255,
with T. Sato, T.-S.-H Lee and F. Myhrer.
 90. "Radiative muon capture by a proton in chiral perturbation theory,"
Phys. Lett. B, 416 (1998) 36-42,
with T. Meissner and F. Myhrer.
 91. "Solar fusion rates,"
Rev. Mod. Phys. 78 (1998) 1265,
with Adelberger, Austin, Bahcall, Balantekin, Bertsch, Bogaert, Brown, Buchmann, Cecil, Champagne, de Braeckleer, Duba, Elliot, Freedman, Gai, Goldring, Gould, Gruzinov, Haxton, Heeger, Henley, Johnson, Kamionkowski, Kavanagh, Koonin, Langanke, Motobayashi, Pandharipande, Parker, Robertson, Rolfs, Sawyer, Shaviv, Shoppa, Snover, Swanson, Tribbel, Turck-Chieze and Wilkerson.
 92. "Current issues in the nuclear chiral perturbative approach,"
Proceedings of the Asian Pacific Center for Theoretical Physics Workshop on Astro-Hadron Physics [Seoul, Korea, October 1997]
eds. G. Brown and M. Rho (World Scientific, Singapore, 1999), p. 166.
 93. "Effective field theory for low-energy two-nucleon systems,"
Phys. Rev. C 58 (1998) R637-R6340,
with T.-S. Park, D.-P. Min and M. Rho.
 94. "The solar proton burning process revisited in chiral perturbation theory,"
Astrophys. J. 507 (1998) 443,
with T.-S. Park, D.-P. Min and M. Rho.
 95. "The power of effective field theories in nuclei: the deuteron, NN scattering and electroweak processes,"
Nucl. Phys. A, 646 (1999), 83,
with T.-S. Park, D.-P. Min and M. Rho.
 96. "A next-to-next-to-leading-order $pp \rightarrow pp\pi^0$ transition operator in chiral perturbation theory,"
Phys. Lett. B, 465 (1999) 43,
with V. Dmitrasinovic, F. Myhrer, and T. Sato.
 97. "A next-to-next-to-leading-order $pp \rightarrow pp\pi^0$ transition operator in chiral perturbation theory,"
Nucl. Phys. A 663&664 (2000) 465c,
with V. Dmitrasinovic, F. Myhrer, and T. Sato.
 98. "Chiral symmetry in nuclei,"
Proc. of the KEK-Tanashi International Symposium on Hadrons and Nuclei, (Tokyo, Japan, December 1998),

- Nucl. Phys. A 670 (2000) 103c-110c
99. "Effective field theory approach to $n+p \rightarrow d+\{\gamma\}$ at threshold,"
Phys. Lett. B, 472 (2000) 232-242,
with T.-S. Park, D.-P. Min and M. Rho.
 100. "Effective theory approach to two-nucleon systems,"
Proceedings of the First Asian-Pacific Few-Body Conference (APFB99),
Few-Body Systems, Suppl. 12 (2000) 171-176.
 101. "Effective field theory for nuclei: Confronting fundamental questions
in astrophysics",
Proceedings of the International Conference on Few-Body Problems
(Taipei, Taiwan, March, 2000);
Nucl. Phys. A 684 (2001) 101,
with T.-S. Park, D.-P. Min and M. Rho.
 102. "BRST invariant CP^1 model through improved Dirac quantization,"
Mod. Phys. Lett. A 21 (2001) 1361-1376,
with S.-T. Hong, Y.J. Park and F. Myhrer.
 103. "Capture rate and neutron helicity asymmetry for ordinary muon
capture on hydrogen,"
Phys. Rev. C, 63 (2001) 015203,
with S. Ando and F. Myhrer.
 104. "Neutrino reactions on deuteron,"
Phys. Rev. C, 63 (2001) 034617,
with S. Nakamura, T. Sato and V. Gudkov.
 105. "Neutrino-nucleus reaction cross sections,"
Nucl. Phys. B (Proc. Suppl.), 100 (2001) 30.
 106. "Electroweak probes and nuclear effective field theory,"
Proceedings of the International Workshop on Physics
with GeV Electrons and Gamma-Rays, Sendai, Japan, Feb 2001,
eds. T. Tamae et al. (Universal Acad. Press, Inc. - Tokyo), p. 13.
 107. "Muon capture in hydrogen",
PiN NewsLetter, vol. 16 (2002) 198; Proceedings of the IX
International Symposium on Meson-Nucleon Physics – MENU01
(Washington, DC, July 2001),
with S. Ando and F. Myhrer.
 108. "The Solar pp and hep processes in effective field theory",
PiN NewsLetter, vol. 16 (2002) 334; Proceedings of the IX
International Symposium on Meson-Nucleon Physics – MENU01
(Washington, DC, July 2001),
with T.-S. Park, D.-P. Min and M. Rho.
 109. "The pp and hep processes in effective field theory",
Proceedings of the International Nuclear Physics Conference
(Berkeley, California, July 2001): AIP Conference Proceedings,
vol. 61, Issue 1 (2002), pp.980 - 984,
with T.-S. Park, D.-P. Min and M. Rho.

110. "The μ -d capture rate in effective field theory",
Phys. Lett. B, 533 (2002) 25,
with S. Ando, T.-S. Park and F. Myhrer.
111. "Ordinary and radiative muon capture in liquid hydrogen",
Phys. Rev. C 65 (2002) 048501,
with S. Ando and F. Myhrer.
112. "Effective field theory for nuclear dynamics",
invited talk at the International Workshop on Nuclear Many-Body
Problem and Sub-Nucleonic Degrees of Freedom in Nuclei",
Changchun, China, July 2001, to appear in the proceedings.
113. "Neutrino-deuteron reactions at solar neutrino energies",
Nucl. Phys. A 707 (2002) 561,
with S. Nakamura, T. Sato, S. Ando, T.-S. Park, F. Myhrer and
V. Gudkov.
114. "Quark-quark correlations and baryon electroweak observables",
Phys. Rev. D 66 (2002) 057501,
with H. Hogaasen and F. Myhrer.
115. "Neutrino-deuteron reactions at solar neutrino energies",
Proceedings of the XVI-th International Conference in Particles
and Nuclei (Osaka, Japan, September 2002),
Nucl. Phys. A 721 (2003) 549c-552c,
with S. Nakamura, T. Sato, S. Ando, T.-S. Park, F. Myhrer and
V. Gudkov.
116. "Studying nuclear responses to electroweak probes in effective
field theory",
Proceedings of the XXI International Workshop on Nuclear Theory
(Rila Mountain, Bulgaria, Jun 2002), ed. V. Nikolaev,
Heron Press Ltd., pp. 54-64.
117. "Solar neutrino reactions on deuteron in effective field theory",
Phys. Lett. B 555 (2003) 49-56,
with S. Ando, Y.H. Song, T.-S. Park and H. Fearing.
118. "Parameter-free effective field theory calculation for the solar
proton-proton and hep processes",
Phys. Rev. C 67 (2003) 055206-1 - 055206-21,
with T.-S. Park, L.E. Marcucci, R. Schiavilla, M. Viviani, A. Kievsky,
S. Rosati, D.-P. Min and M. Rho.
119. "In-medium meson properties and field transformations",
Phys. Rev. C 68 (2003) 044001,
with S. Kondratyuk and F. Myhrer.
120. "Solar neutrinos, SNO and neutrino-deuteron reactions",
J. Phys. G: Nucl. Phys. 29 (2003) 2597-2613,
with V. Gudkov.
121. "Neutrino-nucleus reactions and effective field theory",
Proceedings of the First Yamada Conference on Neutrinos and

Dark Matter in Nuclear Physics (NDM03), Nara, Japan, June 2003,
On-line publication:

<http://ndm03.phys.sci.osaka-u.ac.jp/proc/index.htm>,

page: Session V, Paper I.

122. "Neutron beta-decay in effective field theory",
Phys. Lett. B 595 (2004) 250-259,
with S. Ando, H.W. Fearing, V. Gudkov, F. Myhrer, S. Nakamura
and T. Sato.
123. "Fixed-point analysis of the low-energy constants in the
pion-nucleon chiral Lagrangian",
Prog. Theor. Phys. 112 (2004) 289-297,
with Y. Kim and F. Myhrer.
124. "The Adler-Weisberger and Goldberger-Miyazawa-Oehme sum
rules as probes of constraints from analyticity and chiral
symmetry in dynamic models for pion-nucleon scattering",
Nucl. Phys. A 736 (2004) 339-350,
with S. Kondratyuk and F. Myhrer,
125. "Astrophysical weak-interaction processes and nuclear effective
field theory",
Proceedings of the KIAS-APCPT International Symposium on
Astro-Hadron Physics (Seoul, Korea, November 2003),
eds. D.K. Hong et al., (World Scientific, 2004): pp. 433-448.
126. "Solar hep process",
Ann. Rev. Nucl. Part. Sci. 54 (2004) 19-37,
with T.-S. Park.
127. "Neutrino magnetic moment contribution to the neutrino-deuteron
reaction",
Phys. Lett. B 602 (2004) 60-66,
with K. Tsuji, T. Sato and F. Myhrer.
128. "Radiative corrections for neutron decay and search for new
physics",
J. Res. Natl. Inst. Stand. Technol. 110 (2005) 315-318,
with V. Gudkov and F. Myhrer.
129. "Ratio of the proton electromagnetic form factors from meson
dressing",
Phys. Rev. C 71 (2005) 028201,
with S. Kondratyuk and F. Myhrer.
130. "Comparison of the extended linear sigma model and chiral
perturbation theory",
Phys. Rev. C 72 (2005) 038201,
with W.P. Alvarez and F. Myhrer.
131. "Neutron-neutron fusion",
Phys. Lett. B, 633 (2006) 253,
with S. Ando.

132. "Use of $V_{\text{low-k}}$ in a chiral-perturbation-theory description of the $pp \rightarrow pp\pi^0$ reaction",
Phys. Rev. C 73 (2006) 025202,,
with Y. Kim, I. Danchev, F. Myhrer and T. Sato.
133. "Neutrino-nucleus reactions in the energy range 1 - 100 MeV",
invited talk at NuInt05 (Fourth International Workshop on
Neutrino-Nucleus Interactions in the Few-GeV Region",
Nucl. Phys. B (Proc. Suppl.), 159 (2006) 21,
with S. Nakamura and T. Sato.
134. "Dynamical model of electroweak pion production in the
resonance region",
Nucl. Phys. B (Proc. Suppl.), 159 (2006) 141,
with T. Sato, B. Szczerbinska and T.-S.H. Lee.
135. "Neutrino-nucleus reactions in the delta resonance region",
Phys. Lett. B, 649 (2007) 132-138,
with B. Szczerbinska, T. Sato and T.S.-H. Lee.
136. "Comparison of the heavy-fermion and Foldy-Wouthuysen formalisms
at third order",
arXiv:0705.2885 [nucl-th], to be published in Phys. Rev. C,
with A. Gardestig and F. Myhrer.
137. "Neutron-neutron fusion",
to appear in the Proc. of the IX Workshop on Nuclear Data Production
and Evaluation", Korean Atomic Energy Research Institute, August 2006.
138. "Two-pion-exchange contributions to $pp \rightarrow pp\pi^0$ reaction",
arXiv:0704.1342 [nucl-th], submitted to Phys. Lett. B,
with Y. Kim, T. Sato and F. Myhrer.