Curriculum Vitae

(as of August 2024)

Contact Information

Full name	Seungho Choe
Current position	Associate Professor
Mailing address	Dept. of Energy Science & Engineering DGIST, 333 Techno jungang-daero, Hyeonpung-eup, Dalseong-gun, Daegu, 42988, Korea
E-mail	schoe@dgist.ac.kr

Education

1997 Ph.D. in Theoretical Nuclear Physics, Yonsei University, Korea
Thesis Title: *Chiral symmetry and QCD sum rules* / Advisor: Prof. Su Houng Lee

1992 M.Sc. in Theoretical Nuclear Physics, Yonsei University, Korea
Thesis Title: $\langle E^2 \rangle_N$ *and* $\langle B^2 \rangle_N$ *in a proton* (in Korean) / Advisor: Prof. Su Houng Lee

1989 B.Sc. in Physics, Yonsei University, Korea

Positions

2021–present	Associate Professor, Dept. of Energy Science & Engineering, DGIST, Korea
2019–2020	Visiting Professor, Dept. of Physics & Astronomy, University of Pittsburgh, USA
2012–2021	Asst./Assoc. Professor, School of Undergraduate Studies, College of Transdisciplinary Studies, DGIST, Korea
2007–2012	Postdoc, Dept. of Biological Sciences, Univ. of Pittsburgh, USA
2006–2007	Postdoc, Dept. of Mechanical Engineering, Univ. of Michigan, USA
2004–2006	Postdoc, Dept. of Mechanical Engineering, Johns Hopkins Univ., USA
2002–2004	Postdoc, Dept. of Chemistry, Korea Advanced Institute of Science and Technology (KAIST), Korea
1999–2001	Japan Society of the Promotion of Science (JSPS) Postdoctoral Fellow, Dept. of Physics, Hiroshima University, Japan
1999	Korea Science and Engineering Foundation(KOSEF) Intern Research Associate, Dept. of Physics, Yonsei University, Korea
1997–1998	Korea Research Foundation (KRF) Postdoctoral Fellow (visiting postdoc), Centre for the Subatomic Structure of Matter (CSSM), Adelaide University, Australia
1997	Research Associate, Institute of Natural Science, Yonsei University, Korea

Courses Taught

2021	*Quantum Mechanics II,* *Classical Mechanics, Classical Mechanics Lab* @ DGIST, Korea
2020	*Electromagnetism, Electromagnetism Lab* @ DGIST, Korea
2019	*Quantum Mechanics,* *Classical Mechanics, Classical Mechanics Lab* @ DGIST, Korea
2018	*Applications of Quantum Mechanics,* *Electromagnetism, Electromagnetism Lab,* *Microscopic World and Quantum Mechanics,* *Classical Mechanics, Classical Mechanics Lab* @ DGIST, Korea
2017(Winter)	*Microscopic World and Quantum Mechanics* @ DGIST, Korea
2017	*Seminar for Transdisciplinary Studies,* *Electromagnetism Lab,* *Quantum Mechanics and Nanophysics,* *Classical Mechanics, Classical Mechanics Lab* @ DGIST, Korea
2016	*Seminar for Transdisciplinary Studies,* *Microscopic World and Quantum Mechanics,* *Electromagnetism Lab,* *Quantum Mechanics and Nanophysics,* *Classical Mechanics, Classical Mechanics Lab* @ DGIST, Korea
2015	*Seminar for Transdisciplinary Studies,* *Electromagnetism, Electromagnetism Lab,* *Microscopic World and Quantum Mechanics,* *Classical Mechanics Lab* @ DGIST, Korea
2014	*Electromagnetism, Electromagnetism Lab,* *Classical Mechanics, Classical Mechanics Lab* @ DGIST, Korea
1997	*General Physics I & II* @ Yonsei University, Korea (as a lecturer)
1995–1997	*General Physics* @ Bucheon College, Korea (as a lecturer)
1993–1994	*General Physics Lab I & II* @ Yonsei University, Korea (as a teaching assistant)
1990–1992	*General Physics Lab I & II* @ Yonsei University, Korea (as a teaching assistant)

Honors and Awards

1999–2001	JSPS Postdoctoral Research Fellow
1999	Korea Science and Engineering Foundation (KOSEF) Research Fellowship
1997–1998	KRF Postdoctoral Research Fellow
1997	Center of Theoretical Physics (Seoul National Univ.) Research Fellowship
1994–1995	Korean Ministry of Education Scholarship
1993–1994	Korean Ministry of Education Scholarship
1987–1989	Korean Air Lines (KAL) Scholarship
1985–1987	Yonsei University Scholarship

Professional Activities

Reviewer	Communications Chemistry; Current Drug Targets Biophysical Journal; The Journal of Chemical Physics
Member	The Korean Physical Society, Korea The Biophysical Society, USA American Associations of Physics Teachers (AAPT), USA

School and University Service

2017-2021	Member, Steering Committee of Supercomputing & Bigdata Center, DGIST, Korea
2018-2019	Chair, School of Undergraduate Studies, DGIST, Korea
2016-2017	Chair, Student Exchange Committee of School of Undergraduate Studies, DGIST, Korea
2016-2017	Member, Curriculum Committee of School of Undergraduate Studies, DGIST, Korea
2015-2016	Member, Steering Committee of Supercomputing & Bigdata Convergence Research Center, DGIST, Korea
2014-2016	Chair, Curriculum Committee of School of Undergraduate Studies, DGIST, Korea
2013-2014	Member, Supercomputer Committee, DGIST, Korea

Conference Presentations

24. **Free energy analyses of cell penetrating peptides using the weighted ensemble method (talk)**
2021 Korean Physical Society(KPS) Fall Meeting (virtual), Oct 2021.

23. **Free energy analyses of cell penetrating peptides using the weighted ensemble method (poster)**
EMBO Workshop "Advances and Challenges in Biomolecular Simulations" (virtual), Oct 2021.

22. **Enhancement of direct membrane penetration of cell-penetrating peptides (CPPs) by polyprolines (poster)**
EMBO Workshop "Designing functional biomolecular assemblies: Beyond biology" (virtual), Sep 2021.

21. **Study of Arg_9 Using Molecular Dynamics (poster)**
2018 Korean Physical Society(KPS) Fall Meeting, Changwon, Korea, October 2018.

20. **Study on Cell-Penetrating Peptides(CPPs) Using Molecular Dynamics Simulations (poster)**
2017 Korean Physical Society(KPS) Fall Meeting, Gyeongju, Korea, October 2017.

19. **Effect of CMAP corrections of CHARMM force field on the elasticity of α-helices (poster)**
2015 Korean Physical Society(KPS) Fall Meeting, Gyeongju, Korea, October 2015.

18. **Understanding substrate unbinding from the sodium-galactose co-transporter vSGLT based on 16 μs of molecular simulation (poster)**
Biophysical Society 56th Annual Meeting, San Diego, California, USA, Feb. 25-29, 2012

17. **Water permeation through the sodium-dependent galactose cotransporter vSGLT (poster)**
Biophysical Society 55th Annual Meeting, Baltimore, Maryland, USA, March 5-9, 2011

16. **Computational approaches to understanding the mechanism of transport in the Na^+/ galactose co-transporter vSGLT (talk)**
Biophysical Society 54nd Annual Meeting, San Francisco, California, USA, Feb. 20-24, 2010

15. **A continuum method for determining membrane protein insertion energies (poster)**
Biophysical Society 52nd Annual Meeting, Long Beach, California, USA, Feb. 2–6, 2008

14. **Computational approaches to understanding conformational changes of the S6 helix of the voltage-gated potassium channel Kv1.2 by single amino acid mutations (poster)**
Department of Biological Sciences: 30^{th} Birthday Celebration, University of Pittsburgh
Pittsburgh, Pennsylvania, USA, Sep. 14–16, 2007

13. **The elasticity of a β-sheet (poster)**
Biophysical Society 50th Annual Meeting, Salt Lake City, Utah, USA, Feb. 18–22, 2006

12. **The elasticity of α-helices (poster)**
Biophysical Society 49th Annual Meeting, Long Beach, California, USA, Feb. 12–16, 2005

11. **Responses of quark condensates to the chemical potential (poster)**
Institute for Nonlinear Sciences and Applied Mathematics (INSAM) Symposium 2001+ :
Prof. Osamu Miyamura Memorial Symposium, Higashi-Hiroshima, Japan, Nov. 16–17, 2001

10. **Chemical potential response of pseudoscalar meson masses in the Nambu–Jona-Lasinio model (poster)**
The XIX International Symposium on Lattice Field Theory (Lattice2001)
Berlin, Germany, Aug. 19–24, 2001

9. **$\partial m/\partial\mu$ in the Nambu–Jona-Lasinio model (talk)**
International Symposium on Hadrons and Nuclei, Seoul, Korea, Feb. 20–22, 2001

8. **$\partial m/\partial\mu$ in the Nambu–Jona-Lasinio model (poster)**
The 15th International Conference on Ultra–Relativistic Nucleus–Nucleus Collisions (QM2001)
New York, USA, Jan. 15–20, 2001

7. **Multiquark picture for Λ (1405) and Σ (1620) (talk)**
The 12th Nuclear Physics Summer School – *New Directions in QCD*,
Kyungju, Korea, June 21–25, 1999.

6. **Sign convention of residues in QCD sum rules (talk)**
The 10th Summer School & Symposium on Nuclear Physics –
QCD, Lightcone Physics and Hadron Phenomenology, Seoul, Korea, June 23–28, 1997.

5. **Multiquark states and QCD sum rules (talk)**
YITP International Workshop – *Recent Developments in QCD and Hadron Physics*
Kyoto, Japan, Dec. 16–18, 1996.

4. **QCD sum rules and scalar mesons (talk)**
First Asia Pacific Workshop and Conference on Strong Interactions, Taipei, Taiwan, Aug. 1–31, 1996.

3. **Hadronic molecules and QCD sum rules (poster)**
1996 Korean Physical Society(KPS) Spring Meeting, Soowon, Korea, April 1996.

2. **$g_{KN\Lambda}$ and $g_{KN\Sigma}$ from QCD sum rules (talk)**
1995 Korean Physical Society(KPS) Spring Meeting, Yongin, Korea, April 1995.

1. **QCD sum rules and chiral logarithms (talk)**
International Workshop on Nuclear & Particle Physics – *Chiral Dynamics in Hadrons & Nuclei*
Seoul, Korea, Feb. 6–10, 1995.

Invited Talks

2013 Dept. of Physics, Kyungpook National University, Korea
2011 Dept. of Computational and Systems Biology, Univ. of Pittsburgh
2007 Dept. of Biological Sciences, Univ. of Pittsburgh
2007 Dept. of Physiology & Biophysics, Albert Einstein College of Medicine

Research Grants and Computational Support

2021 - 2023 **DGIST**
Seungho Choe (PI)
(DGIST Start-up fund)

2021 - 2023 **DGIST**
Seungho Choe (PI)
" Modeling and Simulations Study of the Uptake Mechanisms
of Arginine-rich Cell-Penetrating Peptides"(Grant # 21-BRP-12)

2021 - 2022 **KISTI Supercomputing Center**
Seungho Choe (PI)
" Enhancement of direct membrane penetration of cell penetrating peptides
by polyprolines " (Grant # KSC-2021-CRE-0296)

2021 **DGIST Supercomputing Center**
Seungho Choe (PI)
" Enhancement of direct membrane penetration of cell penetrating peptides
by polyprolines "

2011 **Texas Advanced Computing Center**
Michael Grabe (PI), Seungho Choe (Co-PI), and Joshua Adelman (Co-PI)
"Computational approaches to understanding ion channel and transporter function"
(Grant # MCB080011)

2010 **Texas Advanced Computing Center**
Michael Grabe (PI) and Seungho Choe (Co-PI)
"Computational approaches to understanding ion channel and transporter function"
(Grant # MCB080011)

2009 **Pittsburgh Supercomputing Center**
Michael Grabe (PI) and Seungho Choe (Co-PI)
"Computational approaches to understanding ion channel and transporter function"
(Grant # MCB080011)

2008 **Pittsburgh Supercomputing Center**
Michael Grabe (PI) and Seungho Choe (Co-PI)
"Computational approaches to understanding ion channel gating "
(Grant # MCB070078P)

Research Grants and Computational Support (cont'd)

2007–2008 **Pittsburgh Supercomputing Center**
Seungho Choe (PI)
"Computational approaches to understanding conformational changes of the S6 helix of the voltage-gated potassium channel Kv1.2 by single amino acid mutations" (Grant # MCB070048P)

1999–2001 **Japanese Ministry of Education**
Osamu Miyamura (PI) and Seungho Choe (Co-PI)
"Heavy-light mesons and heavy baryons at finite temperature"

1999–2001 **Japan Society of the Promotion of Science(JSPS): Postdoc. Fellowship**
Seungho Choe (PI)
"Heavy-light mesons and heavy baryons at finite temperature"

1999 **Korea Science and Engineering Foundation(KOSEF)**
Seungho Choe (PI)
"Properties of vector mesons at finite temperature and finite density"

1997–1998 **Korea Research Foundation(KRF): Postdoc. Fellowship**
Seungho Choe (PI)
"Effects of chiral symmetry breaking using QCD sum rules"

Student Co-workers

2011-2012	Ambika Ramesh	undergraduate researcher from Dept. of Biological Sci., Univ. of Pittsburgh
2009	Gregory Weir	rotation graduate student from Dept. of Biological Sci., Univ. of Pittsburgh
2009	Amy Scarbrough	undergraduate researcher from Dept. of Biological Sci., Univ. of Pittsburgh
2008	Gabriel de Forest	undergraduate researcher from Dept. of Computer Sci., Univ. of Pittsburgh
2007	Karen Hecht	rotation graduate student from Dept. of Biological Sci., Univ. of Pittsburgh

Summer Research Programs & Undergraduate Group Research Program(UGRP) Taught

2018 The Possibility and Stability of Our Universe in Supersymmetric Cosmology
2017 From Inflation to the Origin of Structure in Universe
2016 Research for Flexible, Wearable Spintronics Device
2016 Introduction to Computational Biophysics Using VMD & NAMD
2015 Introduction to Computational Biophysics Using VMD & NAMD

Research and Education (R&E) Programs Taught

2019 Gyeongsan Science High School, Daegu, Korea
2019 Daegu Il Science High School, Daegu, Korea
2018 Gyeongsan Science High School, Daegu, Korea
2018 Daegu Science High School, Daegu, Korea
2018 Hyeonpung High School, Daegu, Korea
2017 Posan High School, Daegu, Korea
2017 Hyeonpung High School, Daegu, Korea
2016 Daegu Il Science High School, Daegu, Korea
2016 Gyeongsan Science High School, Daegu, Korea
2016 Hyeonpung High School, Daegu, Korea
2015 Daegu Science High School, Daegu, Korea
2015 Hyeonpung High School, Daegu, Korea
2014 Hyeonpung High School, Daegu, Korea
2013 Janganjeil High School, Pusan, Korea
2013 Hyeonpung High School, Daegu, Korea

Publications

Seungho Choe

Refereed Journals

25. **Free energy analyses of cell-penetrating peptides using the weighted ensemble method**
S. Choe
Accepted for publication in Membranes (2021)

24. **Molecular dynamics studies of interactions between Arg_9(nona-arginine) and a DOPC/DOPG(4:1) membrane**
S. Choe
AIP Advances **10**, 105103 (2020)

23. **CMB Spectral μ-Distortion of Multiple Inflation Scenario**
G. Bae, S, Bae, S. Choe, S.H. Lee, J. Lim, H. Zoe
Phys. Lett. **B782** , 117-123 (2018)

22. **Stochastic steps in secondary active sugar transport**
J.L. Adelman, C. Ghezzi, P. Bisignano, D.D.F. Loo, S. Choe, J. Abramson, J.M. Rosenberg, E.M. Wright, and M. Grabe
Proc. Natl. Acad. Sci. (USA) **113**, E3960-E3966 (2016)

21. **Structural determinants of water permeation through the sodium-galactose transporter vSGLT**
J.L. Adelman, Y. Sheng, S. Choe, J. Abramson, E.M. Wright, J.M. Rosenberg, and M. Grabe
Biophys. J. **106**, 1280-1289 (2014)
$*$ highlighted in **New and Notable**

20. **The mechanism of sodium and substrate release from the binding pocket of vSGLT**
A. Watanabe†, S. Choe†, V. Chaptal, J.M. Rosenberg, E.M. Wright, M. Grabe, and J. Abramson
Nature, **468**, 988-991 (2010)
$*$ †co-first authors

19. **Water permeation through the sodium-dependent galactose cotransporter vSGLT**
S. Choe, J.M. Rosenberg, J. Abramson, E.M. Wright and M. Grabe
Biophys. J. **99**, L56-L58 (2010)
$*$ featured on the **Journal Cover**

18. **Conformational dynamics of the inner pore helix of voltage-gated potassium channels**
S. Choe and M. Grabe
J. Chem. Phys. **130**, 215103 (1)-(13) (2009)

17. **Molecular dynamics simulation study of a pulmonary surfactant film interacting with a carbonaceous nanoparticle**
S. Choe, R. Chang, J. Jeon, and A. Violi
Biophys. J. **95**, 4102-4114 (2008)

16. **A continuum method for determining membrane protein insertion energies and the problem of charged residues**
S. Choe, K. Hecht, and M. Grabe
J. Gen. Physiol. **131**, 563-573 (2008)
∗ evaluated by **Faculty of 1000 Biology (Factor 4.8 Must Read):**
http://www.f1000biology.com/article/id/1108693

15. **Lyapunov instability of rigid diatomic molecules in three dimensions: A simpler method**
S. Choe and E.K. Lee
Phys. Rev. E **75**, 047701 (1)-(4) (2007)

14. **Bending elasticity of anti-parallel β-sheets**
S. Choe and S.X. Sun
Biophys. J. **92**, 1204-1214 (2007)

13. **The elasticity of α-helices**
S. Choe and S.X. Sun
J. Chem. Phys. **122**, 244912 (1)-(9) (2005)

12. **Spin-3/2 nucleon and Δ baryons in lattice QCD**
J.M. Zanotti, D.B. Leinweber, A.G. Williams, J.B. Zhang, W. Melnitchouk, and S. Choe
Phys. Rev. D **68**, 054506 (1)-(8) (2003)

11. **Quenched charmonium spectrum**
QCD-TARO Collaboration: S. Choe, Ph.de Forcrand, M.Garcia Perez, Y. Liu, A. Nakamura, I-O. Stamatescu, T. Takaishi, and T. Umeda
J. High Energy Physics (JHEP) **0308**, 022 (1)-(20) (2003)

10. **Responses of quark condensates to the chemical potential**
O. Miyamura, S. Choe†, Y. Liu, T. Takaishi, and A. Nakamura
Phys. Rev. D **66**, 077502 (1)-(3) (2002)
∗ †corresponding author

9. **Responses of hadrons to the chemical potential at finite temperature**
QCD-TARO Collaboration: S. Choe, Ph.de Forcrand, M.Garcia Perez, S. Hioki, Y. Liu, H. Matsufuru, O. Miyamura, A. Nakamura, I-O. Stamatescu, T. Takaishi, and T. Umeda
Phys. Rev. D **65**, 054501 (1)-(10) (2002)

8. **Kaon-baryon coupling constants in the QCD sum rule approach**
S. Choe
Phys. Rev. C **62**, 025204 (1)–(5) (2000)

7. **Multiquark picture for Σ(1620)**
S. Choe
Eur. Phys. J. A **7**, 441–448 (2000)

6. **Λ(1405) as a multiquark state**
S. Choe
Eur. Phys. J. A **3**, 65–73 (1998)

5. **f_K/f_π ratio from QCD sum rules**
S. Choe and Su H. Lee
J. Korean Phys. Soc. **32**, 798–804 (1998)

4. **$g_{\pi\Lambda\Sigma}$ and $g_{K\Sigma\Xi}$ from QCD sum rules**
S. Choe
Phys. Rev. C **57**, 2061–2064 (1998)

3. **$g_{KN\Lambda}$ and $g_{KN\Sigma}$ from QCD sum rules**
S. Choe, M.K. Cheoun, and Su H. Lee
Phys. Rev. C **53**, 1363–1367 (1996)

2. **QCD sum rules and chiral logarithms**
Su H. Lee, S. Choe, T.D. Cohen, and D.K. Griegel
Phys. Lett. B **348**, 263–269 (1995)

1. **Twist-4 matrix elements of the nucleon from recent DIS data at CERN and SLAC**
S. Choi, T. Hatsuda, Y. Koike, and Su H. Lee
Phys. Lett. B **312**, 351–357 (1993)

Conference Proceedings & Abstracts

20. **Insight into the Mechanism of Water Permeation through the Sodium-Galactose Transporter vSGLT from Long Molecular Dynamics Simulations**
J.L. Adelman, Y. Sheng, S. Choe, J. Abramson, E.M. Wright, and M. Grabe
Biophys. J. **106**, 365a (2014)

19. **Energetics of Urea Permeation through Sodium-Dependent Galactose Cotransporter vSGLT**
P. Pendse, S. Choe, J. Adelman, J. Abramson, E. Wright, J. Rosenberg, and M. Grabe
Biophys. J. **106**, 365a (2014)

18. **Understanding substrate unbinding from the sodium-galactose co-transporter vSGLT based on 16 μs of molecular simulation**
S. Choe, J.L. Adelman, J.M. Rosenberg, E.M. Wright, J. Abramson, and M. Grabe
Biophys. J. **102**, 661 (2012)

17. **Water permeation through the sodium-dependent galactose cotransporter vSGLT**
S. Choe, J.M. Rosenberg, J. Abramson, E.M. Wright, and M. Grabe
Biophys. J. **100**, 248 (2011)

16. **Computational approaches to understanding the mechanism of transport in the Na^+/ galactose co-transporter vSGLT**
S. Choe, J. Rosenberg, E. Wright, J. Abramson, and M. Grabe
Biophys. J. **98**, 434 (2010)

15. **Spin-3/2 baryons in lattice QCD**
J.M. Zanotti, S. Choe, D.B. Leinweber, W. Melnitchouk, A.G. Williams, and J.B. Zhang
Proc. The XX International Symposium on Lattice Field Theory (Lattice2002)
Boston, Massachusetts, June 24–29, 2002; *Nucl. Phys. B (Proc. Suppl.)* **119**, 299-301 (2003)

14. **Chiral condensate at finite chemical potential**
T. Takaishi, S. Choe, Y. Liu, and A. Nakamura
Proc. YITP Workshop – Quantum Field Theory and its applications
Kyoto, Japan, Dec. 19–21, 2001; *Soryushiron Kenkyu* **105**, D88 (2002)

13. **Study on the 2nd responses of hadronic masses to chemical potential at finite temperature**
Y. Liu, S. Choe, A. Nakamura, O. Miyamura, and T. Takaishi
Proc. YITP Workshop – Quantum Field Theory and its applications
Kyoto, Japan, Dec. 19–21, 2001; *Soryushiron Kenkyu* **105**, A53-A56 (2002)

12. **Responses of quark condensates to the chemical potential**
O. Miyamura, S. Choe, and Y. Liu
Proc. Institute for Nonlinear Sciences and Applied Mathematics (INSAM) Symposium 2001+ : Prof. Osamu Miyamura Memorial Symposium
Higashi-Hiroshima, Japan, Nov. 16–17, 2001; 331-336 (2002)

11. **Lattice tool kit in Fortran90**
S. Choe, S. Muroya, A. Nakamura, C. Nonaka, T. Saito, and F. Shoji
Proc. The XIX International Symposium on Lattice Field Theory (Lattice2001)
Berlin, Germany, Aug. 19–24, 2001; *Nucl. Phys. B (Proc. Suppl.)* **106**, 1037-1039 (2002)

10. **Chemical potential response of pseudoscalar meson masses in the NJL model**
O. Miyamura and S. Choe
Proc. The XIX International Symposium on Lattice Field Theory (Lattice2001)
Berlin, Germany, Aug. 19–24, 2001; *Nucl. Phys. B (Proc. Suppl.)* **106**, 474-476 (2002)

9. **Screening mass response to chemical potential at finite temperature**
QCD-TARO Collaboration: S. Choe, Ph.de Forcrand, M.Garcia Perez, S. Hioki, Y. Liu, H. Matsufuru, O. Miyamura, A. Nakamura, I-O. Stamatescu, T. Takaishi, and T. Umeda
Proc. The XIX International Symposium on Lattice Field Theory (Lattice2001)
Berlin, Germany, Aug. 19–24, 2001; *Nucl. Phys. B (Proc. Suppl.)* **106**, 462-464 (2002)

8. **Quenched charmonium near the continuum limit**
QCD-TARO Collaboration: S. Choe, Ph.de Forcrand, M.Garcia Perez, S. Hioki, Y. Liu, H. Matsufuru, O. Miyamura, A. Nakamura, I-O. Stamatescu, T. Takaishi, and T. Umeda
Proc. The XIX International Symposium on Lattice Field Theory (Lattice2001)
Berlin, Germany, Aug. 19–24, 2001; *Nucl. Phys. B (Proc. Suppl.)* **106**, 361-363 (2002)

7. **N^* masses from an anisotropic lattice QCD action**
F.X. Lee, D.B. Leinweber, L. Zhou, J. Zanotti, and S. Choe
Proc. The XIX International Symposium on Lattice Field Theory (Lattice2001)
Berlin, Germany, Aug. 19–24, 2001; *Nucl. Phys. B (Proc. Suppl.)* **106**, 248-250 (2002)

6. **Responses of hadrons to the chemical potential at finite temperature**
QCD-TARO Collaboration: S. Choe, Ph.de Forcrand, M.Garcia Perez, S. Hioki, Y. Liu, H. Matsufuru, O. Miyamura, A. Nakamura, I-O. Stamatescu, T. Takaishi, and T. Umeda
Proc. The 15th International Conference on Ultra-Relativistic Nucleus-Nucleus Collisions (QM 2001)
Long Island, New York, Jan. 15–20, 2001; *Nucl. Phys. A***698**, 395c-399c (2002)

5. **$\partial m/\partial\mu$ in the Nambu–Jona-Lasinio model**
O. Miyamura and S. Choe
Proc. International Symposium on Hadrons and Nuclei
Seoul, Korea, Feb. 20–22, 2001; AIP Conf. Prdd. **594**, 241–248 (2001)

4. **Effect of finite chemical potential**
   QCD-TARO Collaboration: S. Choe, Ph. de Forcrand, S. Hioki, Y. Liu, O. Miyamura, A. Nakamura I.-O. Stamatescu, T. Takaishi, and T. Umeda
   Proc. YITP Workshop – Finite Temperature Quantum Field Theory and its applications
   Kyoto, Japan, Aug. 28–30, 2000; *Soryushiron Kenkyu* **103**, A61-A66 (2001)

3. **Multiquark picture for Λ(1405) and Σ(1620)**
   S. Choe
   Proc. the 12th Nuclear Physics Summer School – New Directions in QCD
   Kyungju, Korea, June 21–25, 1999; AIP Conf. Proc. **494**, 377–380 (1999)

2. **Sign convention of residues in QCD sum rules**
   S. Choe
   Proc. the 10th Summer School & Symposium on Nuclear Physics –
   QCD, Lightcone Physics and Hadron Phenomenology
   Seoul, Korea, June 23–28, 1997; World Scientific Pub. Co., 250–254 (1998)

1. **Multiquark states and QCD sum rules**
   S. Choe
   Proc. YITP International Workshop – Recent Developments in QCD and Hadron Physics
   Kyoto, Japan, Dec. 16–18, 1996; *Soryushiron Kenkyu* **95**, D87–D92 (1997)

Books

7. **Microscopic World and Quantum Mechanics (Introduction): E-book**
   S. Choe
   DGIST Press, Daegu, Korea (2016)

6. **Mathematical Physics: E-book**
   H. Zoe and S. Choe
   DGIST Press, Daegu, Korea (2016)

5. **Microscopic World and Quantum Mechanics: E-book**
   S. Choe
   DGIST Press, Daegu, Korea (2015)

4. **Electricity and Magnetism: Lab Manual**
   K. Lee, S. Choe, and K. Park
   DGIST Press, Daegu, Korea (2014)

3. **Electricity and Magnetism: E-book**
   K. Lee, K. Park and S. Choe
   DGIST Press, Daegu, Korea (2014)

2. **Classical Mechanics: Lab Manual**
   K. Lee, S. Choe, and K. Park
   DGIST Press, Daegu, Korea (2014)

1. **Classical Mechanics: E-book**
   K. Park and S. Choe
   DGIST Press, Daegu, Korea (2014)

Others(University Journals, etc.)

2. **Lattice QCD tool kit in FORTRAN90**
   S. Choe, A. Nakamura, C. Nonaka, and S. Muroya
   Soryushiron Kenkyu **108**, 1-44 (2003)

1. **Probing the valence-like gluon inside a proton using the Pohang Light Source (PLS)**
   S. Choe and C.S. Kim
   unpublished (1994)