

Садыков Ренат Рафаилович,

(Научно-экспериментальный отдел встречных пучков - Сектор №1 теоретической поддержки экспериментов физики высоких энергий, старший научный сотрудник)

Список научных работ

(данные на 15.08.2023)

Публикации в рецензируемых журналах (зарубежные):

1. One-loop corrections to the Drell--Yan processes in SANC (I). The charged current case.

A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, G. Nanava, and R. Sadykov, European Physical Journal C - Particles and Fields , ISSN:1434-6044 , eISSN:1434-6052 , Изд:Springer-Verlag, 46, 2, 407-412, 2006

2. SANCnews: Sector 4f, charged current

A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, G. Nanava, R. Sadykov and W. von Schlippe, European Physical Journal C - Particles and Fields , ISSN:1434-6044 , eISSN:1434-6052 , Изд:Springer-Verlag, 51, 3, 585-591, 2007

3. One-loop corrections to the Drell--Yan processes in SANC (I). The charged current case. (Errata)

A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, G. Nanava, and R. Sadykov, European Physical Journal C - Particles and Fields , ISSN:1434-6044 , eISSN:1434-6052 , Изд:Springer-Verlag, 50, 2, 505-505, 2007

4. One-loop corrections to the Drell--Yan processes in SANC (II). The neutral current case.

A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, G. Nanava, R. Sadykov, European Physical Journal C - Particles and Fields , ISSN:1434-6044 , eISSN:1434-6052 , Изд:Springer-Verlag, 54, 3, 451-460, 2008

5. Standard SANC Modules

A. Andonov, A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, V. Kolesnikov, R. Sadykov, Computer Physics Communications , ISSN:0010-4655 , eISSN:1879-2944 , Изд:Elsevier Science Limited, 181, 2, 305-312, 2010

6. QCD parton showers and NLO EW corrections to Drell-Yan.

P. Richardson, R. Sadykov, A. Sapronov, M. Seymour, P. Skands, Journal of High Energy Physics, ISSN:1126-6708, eISSN:1029-8479, Изд:Springer, 1206, 090, 2012

7. Determination of the strange quark density of the proton from ATLAS measurements of the $W \rightarrow l\nu$ and $Z \rightarrow ll$ cross sections

ATLAS Collaboration, Physical Review Letters, ISSN:0031-9007, eISSN:1079-7114, Изд:American Physical Society, 109, 1, 012001, 2012

8. Measurement of the inclusive $W\pm$ and Z/γ cross sections in the electron and muon decay channels in pp collisions at $s\sqrt{s}=7$ TeV with the ATLAS detector
ATLAS Collaboration, Physical Review D, ISSN:1550-7998, eISSN:1550-2368, Изд:American Physical Society, 85, 7, 072004, 2012
9. QED bremsstrahlung in decays of electroweak bosons
A. B. Arbuzov, R. R. Sadykov, Z. Was, The European Physical Journal C - Particles and Fields, Изд:Springer, 73, 2625, 1-18, 2013
10. Extra lepton pair emission corrections to Drell-Yan processes in PHOTOS and SANC
S. Antropov, A. Arbuzov, R. Sadykov, Z. Was, Acta Physica Polonica B, ISSN:0587-4254, eISSN:1509-5770, Изд:Jagellonian University, 48, 9, 1469-1492, 2017
11. One-loop electroweak radiative corrections to polarized Bhabha scattering
D. Bardin, A. Arbuzov, S. Bondarenko, Ya. Dydyshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, Physical Review D, ISSN:2470-0010, eISSN:2470-0029, Изд:American Physical Society, 98, 013001, 1-7, 2018
12. FCC Physics Opportunities: Future Circular Collider Conceptual Design Report Volume 1
Abada, A., Abbrescia, M., AbdusSalam, S.S. et al., The European Physical Journal C - Particles and Fields, Изд:Springer, 79, 474, 1-161, 2019
13. HE-LHC: The High-Energy Large Hadron Collider Volume : Future Circular Collider Conceptual Design Report Volume 4
Abada, A., Abbrescia, M., AbdusSalam, S.S. et al. [FCC Collaboration], The European Physical Journal Special Topics, ISSN:1951-6355, eISSN:1951-6401, Изд:Springer Berlin Heidelberg, 228, 5, 1109–1382, 2019
14. FCC-hh: The Hadron Collider : Future Circular Collider Conceptual Design Report Volume 3
Abada, A., Abbrescia, M., AbdusSalam, S.S. et al. [FCC Collaboration], The European Physical Journal Special Topics, ISSN:1951-6355, eISSN:1951-6401, Изд:Springer Berlin Heidelberg, 228, 4, 755–1107, 2019
15. One-loop electroweak radiative corrections to polarized $e^+ e^- \rightarrow Z H$
S. Bondarenko, Ya. Dydyshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, and V. Yermolchyk, Physical Review D, Изд:The American Physical Society, 100, 073002, 2019
16. FCC-ee: The Lepton Collider : Future Circular Collider Conceptual Design Report Volume 2
Abada, A., Abbrescia, M., AbdusSalam, S.S. et al. [FCC Collaboration], The European Physical Journal Special Topics, ISSN:1951-6355, eISSN:1951-6401, Изд:Springer Berlin Heidelberg, 228, 2, 261–623, 2019
17. One-loop electroweak radiative corrections to lepton pair production in polarized electron-positron collisions
S. Bondarenko, Ya. Dydyshka, L. Kalinovskaya, R. Sadykov, and V.

Yermolchyk, Physical Review D, covering particles, fields, gravitation, and cosmology, ISSN:2470-0010, eISSN:2470-0029, Изд:The American Physical Society, 102, 3, 033004, 2020

18. Polarized NLO EW $e^+ e^-$ cross section calculations with ReneSANCe-v1.0.0

R. Sadykov, V. Yermolchyk, Computer Physics Communications, ISSN:0010-4655, eISSN:1879-2944, Изд:Elsevier Science Limited, 256, 107445, 2020

19. Electroweak effects in $e^+e^- \rightarrow ZH$ process

A. Arbuzov, S. Bondarenko, L. Kalinovskaya, R. Sadykov, V. Yermolchyk, Symmetry, ISSN:2073-8994, Изд:MDPI, 13(7), 1256, 1-14, 2021

20. Electroweak Effects in $e^+e^- \rightarrow ZH$ Process

Andrej Arbuzov, , Serge Bondarenko, Lidia Kalinovskaya, Renat Sadykov and Vitaly Yermolchyk, Symmetry, ISSN:2073-8994, Изд:MDPI, 13, 7, 1256, 2021

21. Hadron-hadron collision mode in ReneSANCe-v1.3.0

Serge Bondarenko, Yahor Dydyshka, Lidia Kalinovskaya, Renat Sadykov, Vitaly Yermolchyk, Computer Physics Communications, ISSN:0010-4655, eISSN:1879-2944, Изд:Elsevier, 285, 108646, 2023

22. ReneSANCe event generator for high-precision e^+e^- physics

R. Sadykov, A. Arbuzov, S. Bondarenko, Y. Dydyshka, L. Kalinovskaya, L. Rumyantsev, V. Yermolchyk, Journal of Physics: Conference Series, ISSN:1742-6588, Изд:IOP publishing, 2438, 012152, 1-5, 2023

Публикации в рецензируемых журналах (российские):

1. Implementation of NLO QCD corrections into the framework of computer system SANC

A. Andonov, A. Arbuzov, S. Bondarenko, P. Christova, V. Kolesnikov, R. Sadykov, Physics of Particles and Nuclei Letters , ISSN:1547-4771 , eISSN:1531-8567 , Изд:MAIK Nauka/Interperiodica distributed exclusively by Springer Science+Business Media LLC., 4, 6, 451-460, 2007

2. Inverse bremsstrahlung contributions to Drell-Yan like processes

A.B. Arbuzov, R.R. Sadykov, Journal of Experimental and Theoretical Physics , ISSN:1063-7761 , eISSN:1090-6509 , Изд:MAIK Nauka/Interperiodica, 106, 3, 488-494, 2008

3. NLO QCD corrections to Drell - Yan processes in the SANC framework

A. Andonov, A. Arbuzov, S. Bondarenko, P. Christova, V. Kolesnikov, G. Nanava, R. Sadykov, Ядерная Физика , ISSN:0044-0027 , eISSN:1562-692X / 1063-7788(eng) , Изд:МАИК Наука/Интерпериодика, Pleiades Publishing Inc., 73, 10, 1810 - 1818, 2010

4. Update of the MCSANC Monte Carlo Integrator, v.1.20

А.Б.Арбузов, Д.Ю.Бардин, С.Г.Бондаренко, Л.В.Калиновская, В.А.Колесников, Л.А.Румянцев, Р.Р.Садыков, А.А.Сапронов, П.Х.Христова, У.Кляйн, Письма в Журнал экспериментальной и теоретической физики, ISSN:0021-3640, Изд:Издательство, 103, 2, 138-

5. Прецизионное описание процессов на коллайдерах в системе SANC
Д.Ю. Бардин, П.Х. Христова, Л.В. Калиновская, В.А. Колесников, Л.А.
Румянцев, Р.Р. Садыков, А.А. Сапронов, Е.Д. Углов, В.Б. фон Шлиппе,
А.Б. Арбузов, С.Г. Бондаренко, Г. Нанава, А. и др., Физика элементарных
частиц и атомного ядра, ISSN:0367-2026, eISSN:1814-7445, Изд:ОИЯИ,
50, 4, 395–432, 2019

6. Effects of Electroweak Radiative Corrections in Polarized Low-Energy
Electron–Positron Annihilation into Lepton Pairs
A. Arbuzov, S. Bondarenko, Ya. Dydyyshka, L. Kalinovskaya, L. Rumyantsev, R.
Sadykov, V. Yermolchyk, Yu. Yermolchyk, JETP Letters, ISSN:0021-3640,
eISSN:1090-6487, Изд:MAIK Nauka/Interperiodica/Springer, 116, 4, 199–
204, 2022

7. EW One-Loop Corrections to the Longitudinally Polarized Drell–Yan
Scattering. (I) The Neutral Current Case
S. Bondarenko, Ya. Dydyyshka, L. Kalinovskaya, R. Sadykov, V. Yermolchyk,,
Physics of Particles and Nuclei Letters, ISSN:1547-4771, Изд:Pleiades
Publishing, 20, 2, 77-83, 2023

Статьи в научных сборниках и периодических изданиях:

1. Tevatron-for-LHC Report: Top and Electroweak Physics
C.E. Gerber, P. Murat, T.M.P. Tait, D. Wackerlo, A. Arbuzov, et al. [*The
TeV4LHC-Top and Electroweak Working Group*], arXiv:0705.3251v1 [hep-
ph], FERMILAB-CONF-07-052, 1-206, 2008

**Материалы научных мероприятий (международные, приглашенный
доклад):**

1. Workshop TOP2006, , , Португалия
On the electroweak corrections to t ---> b l+ nu/l (gamma) decay, R. Sadykov,
A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, G.
Nanava, 1-9, Proceedings of Science, Proceedings of the TOP 2006:
International Workshop On Top Quark Physics, 1, 036, 1824-8039, 2006

2. ACAT2007, , Амстердам, Голландия
SANC: precision calculations for the SM processes, D. Bardin, L.
Kalinovskaya et al., Proceedings of Science, Proceedings of the XI
International Workshop on Advanced ``Computing and Analysis Techniques
in Physics Research ACAT2007: Amsterdam, the Netherlands'', 23-27 April
2007, PoS(ACAT)077, 2007

3. Physics at TeV Colliders, , Les Houches, France
*Standard Model Handles and Candles Working Group: Tools and Jets
Summary Report*, C. Buttar (ed.), J. D'Hondt (ed.), M. Kramer (ed.), G. Salam
(ed.), M. Wobisch (ed.), N.E. Adam, V. Adler, A. Arbuzov, D. Bardin, U.
Baur, A.A. Bhatti, S. Bondarenko, V. Buge, J.M. Butterworth, M. Cacciari, M.
Campanelli, Q.-H. Cao, C.M. Carloni Calame, P. и др., 1-94, 2007

4. ,ISSN 1824-8039ACAT 2008, Ettore Majorana Foundation and Centre for

Scientific Culture, Эриче, Италия

Radiative corrections to Drell-Yan like processes in SANC, A. Arbuzov, A. Andonov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, V. Kolesnikov, G. Nanava, R. Sadykov, PoS(ACAT08), 2008

5. 17th International workshop on Advanced Computing and Analysis Techniques in physics research (ACAT), UTFSM, Valparaíso (Chile), Вальпараисо, Чили
Computer system SANC: its development and applications, A. Arbuzov, D. Bardin, L. Kalinovskaya, S. Bondarenko, R. Sadykov, A. Sapronov, P. Christova, V. Kolesnikov, T. Riemann, 1-8, IOP Publishing, plenary talk was given by A. Arbuzov Journal of Physics: Conference Series, 762, 012062, 1742-6588, 2016

Standard Model Theory for the FCC-ee: The Tera-Z, A. Blondel, J. Gluza, S. Jadach, P. Janot, T. Riemann, A. Akhundov, A. Arbuzov, R. Boels, S. Bondarenko, S. Borowka, C.M. Carloni Calame, I. Dubovsky, Y. Dyydyshka, W. Flieger, A. Freitas, K. Grzanka, T. Hahn, T. Huber, L. Kalinovskaya, R. Lee, P. Marquard, и др., 2018

Материалы научных мероприятий (международные, устный доклад):

1. ,ISSN 1824-8039ACAT 2008, Ettore Majorana Foundation and Centre for Scientific Culture, Эриче, Италия
Radiative corrections to Drell-Yan like processes in SANC, A. Arbuzov, A. Andonov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, V. Kolesnikov, G. Nanava, R. Sadykov, 1-5, Proceedings of Science, ACAT 2008 conference proceedings, ACAT2008, 109, 1824-8039, 2008

2. ,1824 - 8039XII International Workshop on Advanced Computing and Analysis Techniques in Physics Research, CERN and ETTORE MAJORANA FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE, Erice, Italy
Standard SANC Modules, A. Andonov, A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, R. Sadykov, 1-5, Proceedings of Science, ACAT 2008 conference proceedings, ACAT2008, 110, 1824-8039, 2008

3. 15th International Workshop on advanced computing and analysis techniques in physics (ACAT 2013), IHEP, Beijing, Пекин, Китай
SANC system and its applications for LHC, R. Sadykov, A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, V. Kolesnikov, A. Sapronov and E. Uglov, 2014 J. Phys.: Conf. Ser. 523 012043, 2014

Материалы научных мероприятий (международные, секционный доклад):

1. Les Houches 2005 Workshop: Physics at TeV Colliders, Le Laboratoire d'Annecy-le-Vieux de Physique des Particules (LAPP), Les Houches, France
Les Houches Physics at TeV Colliders 2005, Standard Model and Higgs working group: Summary report, C.Buttar, S.Dittmaier, V.Drollinger, S.Frixione, A.Nikitenko, S.Willenbrock S.Abdullin, E.Accomando, D.Acosta, A.Arbuзov, R.D.Ball, A.Ballestrero, P.Bartalini, U.Baur, A.Belhouari, S.Belov, A.Belyaev, D.Benedetti, T.Binoth, S.Bolognesi, S.Bondarenko,

Е.Е.В и др., 2005

2. Loops and Legs in Quantum Field Theory, DESY Zeuthen, Санкт-Гоар, Германия
Electroweak radiative corrections to polarized Bhabha scattering, A. Arbuzov, D. Bardin, S. Bondarenko, Y. Dydyshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, 1-9, SISSA (The International School for Advanced Studies), Proceedings of Science, PoS(LL2018), 010, 1824-8039, 2018
 3. 11th FCC-ee workshop, CERN, Женева, Швейцария
Electron-positron annihilation processes in MCSANcee, A. Arbuzov, S. Bondarenko, Y. Dydyshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, V. Yermolchyk, 217-222, Theory report on the 11th FCC-ee workshop, 2019
 4. 19th International Workshop on Advanced Computing and Analysis Techniques in Physics Research, , Saas Fee, Швейцария
QED and electroweak radiative corrections to polarized Bhabha scattering, A. Arbuzov, S. Bondarenko, Ya. Dydyshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, 1-7, IOP Publishing, Journal of Physics: Conference Series, 1525, 012011, 1742-6596, 2020
 5. 19th International Workshop on Advanced Computing and Analysis Techniques in Physics Research, , Saas Fee, Швейцария
MCSANcee generator with one-loop electroweak corrections for processes with polarized e+e- beams, R. Sadykov, A. Arbuzov, S. Bondarenko, Ya. Dydyshka, L. Kalinovskaya, I. Novikov, V. Yermolchyk, L. Rumyantsev, 1-4, IOP Publishing, Journal of Physics: Conference Series, 1525, 012012, 1742-6596, 2020
- Электронные публикации:**
1. NLO QCD corrections to Drell-Yan processes in the SANC framework
A. Andonov, A. Arbuzov, S. Bondarenko P. Christova, V. Kolesnikov, G. Nanava, R. Sadykov, lanl.arXiv.org, 2009
 2. Double differential Z,W cross sections and their ratios in the electron channels
Aharrouche, M; Arbuzov, A; Bardin, D; Bendel, M; Bondarenko, S; Cooper-Sarkar, A; Ellinghaus, F; Flowerdew, M; Glazov, S; Goeringer, C; Haller, J; Handel, C; Hoerentrup, G; Kalinovskaya, L; Karnevskiy, M; Klein, M; Klein, U; Kluge, T; Koeneke, K; Koenig, S; Kolesnikov, V; Kretzschmar, J; Mahmoud, S; Migas, S; Nikiforov, A; Petschull, D; Placakyte, R; Radescu, V; Sadykov, R; Sapronov, A; Siragusa, G; Tapprogge, S; Vossebeld, J; Wollstadt, S; Wrona, B, ATL-COM-PHYS-2010-325, 2010
 3. SANC system and its applications for LHC
R. Sadykov, A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, V. Kolesnikov, A. Sapronov, E. Uglov, arXiv.org, 2013
 4. SANC system and its applications for LHC
R.Sadykov, A.ArbuZov, D.Bardin, S.Bondarenko, P.Christova, L.Kalinovskaya, V.Kolesnikov, A.Sapronov, E.Uglov, 2013

5. Impact of QED radiative corrections on Parton Distribution Functions
R. Sadykov, 2014

6. One-loop electroweak radiative corrections to polarized $e+e^- \rightarrow ZH$
S. Bondarenko, Ya. Dydshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, V. Yermolchyk, arXiv:1812.10965 [hep-ph], 2018

7. One-loop electroweak radiative corrections to polarized $e+e^- \rightarrow Z$ process
S. Bondarenko, Ya. Dydshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, V. Yermolchyk, arXiv:2111.11490 [hep-ph], 2021

Препринты:

1. Standard SANC Modules

ATL-COM-PHYS-2008-176, Geneva: CERN, 2008, 15, A. Andonov, A. Arbuzov, D. Bardin, S. Bondarenko, P. Christova, L. Kalinovskaya, V. Kolesnikov, R. Sadykov, CERN, Geneva, 2008

2. Standard Model Handles and Candles Working Group: Tools and Jets
Summary Report

arXiv:0803.0678v1 [hep-ph], 94, C. Buttar (ed.), J. D'Hondt (ed.), M. Kramer (ed.), G. Salam (ed.), M. Wobisch (ed.) et al., 2008

3. Theory report on the 11th FCC-ee workshop

arXiv:1905.05078, 290, A. Blondel, J. Gluza, S. Jadach, P. Janot, T. Riemann, S. Abreu, J.J. Aguilera-Verdugo, A.B. Arbuzov, J. Baglio, S.D. Bakshi, S. Banerjee, C. Bobeth, C. Bogner, S. Bondarenko, S. Borowka, S. Bra?, C.M. Carloni Calame, J. Chakrabortty, M. Chiesa, M. Chrzas и др., arXiv.org (Cornell University), 2019

4. One-loop electroweak radiative corrections to polarized $e+e^- \rightarrow \gamma Z$ process

arXiv:2111.11490 [hep-ph], 16, S. Bondarenko, Ya. Dydshka, L. Kalinovskaya, L. Rumyantsev, R. Sadykov, V. Yermolchyk, 2021

5. EW one-loop corrections to the longitudinally polarized Drell-Yan scattering. (I). The Neutral current case

arXiv:2211.03561, 7, S. Bondarenko, Ya. Dydshka, L. Kalinovskaya, R. Sadykov, V. Yermolchyk, arXiv:2211.03561, 2022

6. Electroweak Effects in Neutral Current Drell-Yan Processes within SANC System

arXiv:2212.05292, 6, A. Arbuzov, S. Bondarenko, Ya. Dydshka, L. Kalinovskaya, R. Sadykov, V. Yermolchyk, Yu. Yermolchyk, arXiv:2212.05292, 2022

7. One-loop radiative corrections to photon-pair production in polarized positron-electron annihilation

arXiv:2211.11467, 17, S. Bondarenko, Ya. Dydshka, L. Kalinovskaya, A. Kampf, L. Rumyantsev, R. Sadykov, V. Yermolchyk, arXiv:2211.11467, 2022

