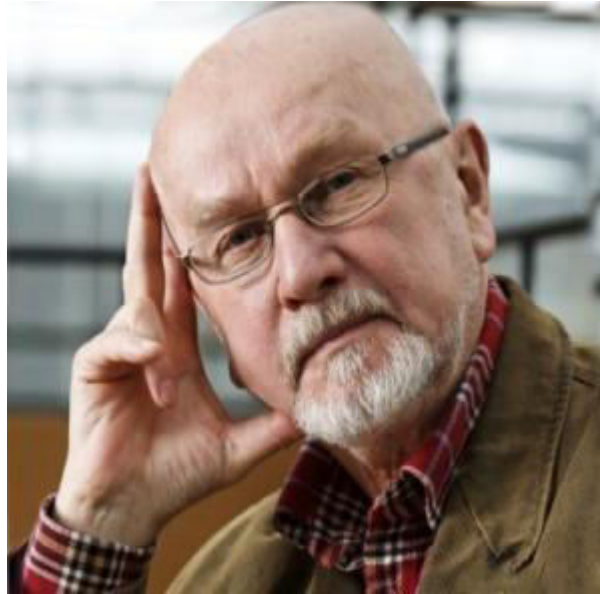


Сергей Сергеевич Зилитинкевич



(13 апреля 1936 г. – 15 февраля 2021 г.)

15 февраля 2021 года на 85-м году ушел из жизни один из выдающихся ученых в области метеорологии и климатологии, профессор Метеорологического института Финляндии (FMI), руководитель исследовательской группы кафедры атмосферных исследований на физическом факультете университета г. Хельсинки, ведущий научный сотрудник института физики атмосферы им. А.М. Обухова РАН, профессор исследовательского центра по окружающей среде и дистанционному зондированию имени Ф. Нансена (NERSC), лауреат престижной премии Всемирной метеорологической организации (ВМО) **Сергей Сергеевич Зилитинкевич**.

В 1959 г., окончив Ленинградский университет по специальности «физика», Сергей Сергеевич поступил в Главную геофизическую обсерваторию им. Воейкова (ГГО). В 1962 г. защитил кандидатскую диссертацию в Ленинградском гидрометеорологическом институте и в 1964 г. возглавил Лабораторию загрязнения воздуха ГГО. В 1966 г. организовал и возглавил Ленинградский филиал Института океанологии им. П.П. Ширшова АН СССР (ИОАН) с основной тематикой – физика планетарных пограничных слоев (ППС), взаимодействие атмосферы и океана, общая циркуляция атмосферы и океана. В 1968 г. защитил в ИОАН докторскую диссертацию на тему «турбулентность и планетарные пограничные слои». В 1972 г. Президиум Академии наук СССР присвоил ему ученое звание профессора геофизики. В 70-е годы руководил работами по физике планетных атмосфер в Советской космической программе ВЕНЕРА и возглавлял Комиссию по взаимодействию атмосферы и океана КАПГ.

В 90-ые годы работал как приглашенный профессор за рубежом: в 1990 г. в Лаборатории RISØ в Дании; в 1991-1997 г. в Институте метеорологии им. Макса Планка, Университете Гамбурга и Институте полярных и морских исследований им. Альфреда Вегенера в Германии.

С 1998 по 2003 г. работал в должности заведующего Кафедрой метеорологии в Университете Упсалы в Швеции (старейшей в мире кафедры метеорологии).

С 2004 г. работал в должности научного директора в Институте атмосферных и земных систем Университета Хельсинки и профессора в Финском метеорологическом институте, руководил серией

проектов, поддержанных высшими Европейскими грантами: ERC-advanced, Marie Curie Chair, гранты программ TEMPUS и Erasmus+ и др.

С 2011 г. работал в России как руководитель российских и российско-европейских проектов, начиная с мегагранта в Нижегородском университете, где руководил созданной им Лабораторией планетарных пограничных слоев, Институте прикладной физики РАН, Московском и Тюменском университетах и Институте географии РАН.

С 2012 г. являлся со-руководителем европейско-российско-китайской программы «Пан-евразийский эксперимент» (PEEX) вместе с ее инициатором, профессором Markku Kulmala, участником которой является и ИВМиМГ СО РАН. Программа представляет собой платформу для выработки научно обоснованного ответа на глобальные вызовы, порожденные загрязнением окружающей среды и изменением климата северной Евразии в контексте современного экономического и социального развития.

С нашим Институтом Сергея Сергеевича связывала долгая история сотрудничества, участие в совместных исследованиях, теплые отношения с сотрудниками ВЦ СО АН СССР (ИВМиМГ СО РАН).

Для нас Сергей Сергеевич навсегда останется образцом советского и российского ученого, гражданина и благородного человека.



Март, 1975, Новосибирск. Участники первой конференции в ВЦ СО АН СССР по динамике атмосферы и океана. Слева направо сидят: Л.Н. Гутман, Р.В. Озмидов, **С.С. Зилитинкевич**, П.С. Линейкин, Г.И. Марчук, А.С. Саркисян, В.П. Кочергин, О.Ф. Васильев; стоят: Ю.А. Иванов, В.И. Кузин, В.П. Дымников, В. А. Сухоруков, А.В. Протасов, Г.С. Ривин, В.И. Климок, И.С. Шапиро, В.Я. Козлов, В.В. Пененко, А.А. Корзадзе, В.А. Щербаков, Ю.Н. Бубнов, Е.А. Цветова.

Источник: <https://icmmg.nsc.ru/ru/content/news/15-fevralya-2021-goda-ushel-iz-zhizni-sergey-sergeevich-zilitinkevich-odin-iz-vidnyh>

Sergej S. Zilitinkevich List of Publications

Theses

1. PhD (candidate of sciences): *Turbulent exchange in the atmospheric surface layer under heterogeneous conditions*, Russian State Hydrometeorological University, Russia, 27 December 1962

2. Dr Sci: *Dynamics of the Atmospheric Boundary Layer*. P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences, 27 March 1970

Scientific books (monographs)

3. Zilitinkevich, S.S., 1970: *Dynamics of the Atmospheric Boundary Layer*, Gidrometeoizdat, Leningrad, 292 pp. (in Russian)
4. Druet, C., Kitaigorodskii, S.A., Ozmidov, R.V., and Zilitinkevich, S.S., 1972: *Random Processes in Mechanics of Natural Water Reservoirs*, Wydawnictwo Polskiej Akademii Nauk, Wroclaw, 176 pp. (in Polish)
5. Zilitinkevich, S.S., and Monin, A.S., (Eds.) 1974: *Dynamics of the Atmosphere of Venus*, Nauka, Leningrad, 184 pp. (in Russian)
6. Zilitinkevich, S.S., Monin, A.S., and Chalikov, D.V., 1978: *Air-Sea Interaction*, Wydawnictwo Polskiej Akademii Nauk, Wroclaw, 282 pp. (in Polish)
7. Zilitinkevich, S.S., 1989: *Turbulent Penetrative Convection*, Valgus, Tallinn, 208 pp. (in Russian)
8. Treshnikov, A.F., and Zilitinkevich, S.S., (Eds.) 1990: *Dynamic and Thermal Interaction between the Lakes and the Atmosphere* (authors: S.S. Zilitinkevich, K.D. Kreiman, D.V. Mironov, S.D. Golosov, and A.Yu. Terzhevik), Nauka, Leningrad, 140 pp. (in Russian)
9. Zilitinkevich, S.S., (Ed.) 1991: *Modeling Air-Lake Interaction. Physical Background* (authors: E.E. Ferdorovich, S.D. Golosov, K.D. Kreiman, D.V. Mironov, M.V. Shabalova. A.Yu. Terzhevik, and S.S. Zilitinkevich), Springer Verlag, Berlin, 130 pp.
10. Zilitinkevich, S.S., 1991: *Turbulent Penetrative Convection*, Avebury Technical, Aldershot, 180 pp.
11. Zilitinkevich S.S., 2013: *Atmospheric Turbulence and Planetary Boundary Layers*. Fizmatlit, Moscow, 248 pp. [in Russian: Зилитинкевич С.С., 2013: Атмосферная турбулентность и планетарные пограничные слои. Москва, Физматлит, 248 с., ISBN 978-5-9221-1519-3]
12. WMO Training Book on Chemical Weather/Air Quality Forecasting (S. Zilitinkevich – one of lead authors, co-author of chapter 3.4: “Atmospheric Planetary Boundary Layer and Parameterizations of Boundary-Layer Processes”) WMO, 2020. Reference: https://library.wmo.int/doc_num.php?explnum_id=10439y

Peer-reviewed scientific articles

1962

13. Zilitinkevich, S.S., 1962: Non-steady regime of turbulence in the atmospheric surface layer. *Trudy GGO*, No. 127, 3-13.

1963

14. Zilitinkevich, S.S., 1963: Structure of the atmospheric surface layer in non-stationary conditions. *Meteorologija i Hidrologija*, No. 1, 31-37.
15. Zilitinkevich, S.S., 1963: On space-temporal distribution of meteorological parameters in the surface layer of non-steady air flow. *Trudy GGO i UKRNIGMI*, No.144/40, 133-149.

1964

16. Zilitinkevich, S.S., 1964: Vertical turbulent exchange in the atmospheric surface layer. *Trudy GGO*, No. 150, 21-35.
17. Zilitinkevich, S.S., and Laikhtman, D.L., 1964: Heat and moisture transport in turbulent atmosphere with phase changes of atmospheric water. *Doklady AN SSSR*, **156**, No. 5, 1079-1082.

1965

18. Zilitinkevich, S.S., and Laikhtman, D.L., 1965: Turbulent regime in the atmospheric surface layer. *Izvestija AN SSSR, FAO*, **1**, No. 2, 150-165.
19. Zilitinkevich, S.S., and Laikhtman, D.L., 1965: On turbulence closure for the atmospheric boundary layer. *Trudy GGO*, No. 167, 44-48.
20. Zilitinkevich, S.S., 1965: Bulk characteristics of turbulence in the atmospheric planetary boundary layer. *Trudy GGO*, No. 167, 49-52.
21. Zilitinkevich, S.S., and Laikhtman, D.L., 1965: Turbulent transport in multi-phase media. In: *Heat and Mass Transfer in the Presence of Interaction between Bodies and Fluid Currents*, Nauka i Tekhnika, Minsk, 361-364.

1966

22. Zilitinkevich, S.S., 1966: Turbulent exchange in lower layers of the atmosphere. In: *Air-Sea Interaction*, Naukova Dumka, Kiev, 102-115.
23. Zilitinkevich, S.S., and Laikhtman, D.L., 1966: On turbulence closure for boundary layers. In: *Air-Sea Interaction*, Naukova Dumka, Kiev, 126-131.
24. Zilitinkevich, S.S., Laikhtman, D.L., and Tseitin, G.H., 1966: Dynamic turbulence in the atmospheric planetary boundary layer. In: *Air-Sea Interaction*, Naukova Dumka, Kiev, 154-161.
25. Zilitinkevich, S.S., 1966: On processing experimental data from the atmospheric planetary boundary layer. In: *Air-Sea Interaction*, Naukova Dumka, Kiev, 188-192.
26. Zilitinkevich, S.S., 1966: Annihilation of mist through dynamical impact. *Trudy GGO*, No. 187, 217-220.
27. Vager, B.G., and Zilitinkevich, S.S., 1966: A method for calculating the lower boundary of cloud layer from weather-forecast data. *Trudy GGO*, No. 187, 3-12.
28. Zilitinkevich, S.S., 1966: On the effect of stratification of moisture on static stability. *Izvestija AN SSSR, FAO*, **2**, No. 10, 1089-1094.

1967

29. Bobyleva, I.M., Zilitinkevich, S.S., and Laikhtman, D.L., 1967: Turbulent regime in thermally stratified atmospheric planetary boundary layer. In: *Atmospheric Turbulence and Propagation of Radio Waves*, Nauka, Moscow, 179-190.
30. Zilitinkevich, S.S., Laikhtman, D.L., and Monin, A.S., 1967: Dynamics of the boundary layer in the atmosphere. *Izvestija, AN SSSR, FAO*, **3**, No. 3, 297-333.
31. Zilitinkevich, S.S., and Ostroumov, B.V., 1967: Assessment of the wind load on high constructions. *Meteorologija i Gidrologija*, No. 6, 41-49.
32. Zilitinkevich, S.S., 1967: On dynamic and thermal interaction between the atmosphere and the ocean. *Izvestija AN SSSR, FAO*, **3**, No. 10, 1069-1077.
33. Zilitinkevich, S.S., and Chalikov, D.V., 1967: On unified processing of data from profile measurements in the near-water layer of the atmosphere. In: *Problems in Acquisition and Processing the Information on Physical State of the Ocean*, Sevastopol, 210-215.
34. Zilitinkevich, S.S., and Laikhtman, D.L., 1967: Review on H.U. Roll "Physics of the Marine Atmosphere" (1965). *Meteorologija i Gidrologija*, No. 12, 98-99.

1968

35. Zilitinkevich, S.S., and Chalikov, D.V., 1968: On vertical structure of the atmospheric planetary boundary layer in unstable stratification. *Meteorologija i Gidrologija*, No. 2, 8-25.
36. Zilitinkevich, S.S., and Chalikov, D.V., 1968: Determination of universal wind and temperature profiles in the atmospheric surface layer. *Izvestija AN SSSR, FAO*, **4**, No. 3, 294-302.
37. Zilitinkevich, S.S., and Chalikov, D.V., 1968: On calculation of the bottom friction in the ocean. In: *Problems in Theory of Wind- and Density-Driven Currents*, Sevastopol, 110-113.

38. Zilitinkevich, S.S., and Chalikov, D.V., 1968: On the resistance and heat/moisture transfer laws in the interaction between the atmosphere and the underlying surface. *Izvestija AN SSSR, FAO*, **4**, No. 7, 765-772.
39. Vager, B.G., and Zilitinkevich, S.S., 1968: A theoretical model of diurnal variations of meteorological fields. *Meteorologija i Hidrologija*, No. 7, 3-18.
40. Zilitinkevich, S.S., and Chalikov, D.V., 1968: On calculation of turbulent fluxes in the atmospheric surface layer from profile measurements. *Izvestija AN SSSR, FAO*, **4**, No. 9, 915-923.
41. Zilitinkevich, S.S., 1968: General circulation of the atmosphere and the ocean (mathematical models). *Zemlja i Vselennaja*, No. 5, 8-18.

1969

42. Monin, A.S., and Zilitinkevich, S.S., 1969: On description of micro- and meso-scale phenomena in numerical models of the atmosphere. *Tech. Rep. Japan Meteorol. Agency*, No. 67, 1.108-1.121.
43. Zilitinkevich, S.S., 1969: On the computation of the basic parameters of the interaction between the atmosphere and the ocean. *Tellus*, **21**, 17-24.
44. Zilitinkevich, S.S., 1969: Numerical simulation of global air-sea interaction. *Izvestija AN SSSR, FAO*, **5**, No. 11, 1143-1159.

1970

45. Zilitinkevich, S.S., and Kravchenko, D.V., 1970: Problems of air-sea interaction. *Meteorologija i Hidrologija*, No. 6, 111-118.
46. Zilitinkevich, S.S., 1970: Boundary layers in geophysics. *Vestnik AN SSSR*, No. 11, 131-134.

1971

47. Zilitinkevich, S.S., Monin, A.S., Turikov, V.G., and Chalikov, D.V., 1971: Numerical simulation of the circulation of the Venus atmosphere. *Doklady AN SSSR*, **197**, No. 6, 1291-1294.
48. Zilitinkevich, S.S., 1971: Air-sea interaction. In: *Information on Soviet Research in Meteorology and Atmospheric Physics in 1967-1970*, Moscow, 32-41.
49. Monin, A.S., and Zilitinkevich, S.S., 1971: Parameterization of micro- and meso-scale phenomena in numerical models of the atmosphere. In: *Transactions of 2nd Second Symposium on Numerical Weather Prediction* (Tokyo, 26.11-04.12.1968), Gidrometeoizdat, Leningrad, 77-78.
50. Zilitinkevich, S.S., 1971: Recent Soviet research on air-sea interaction. *Meteorologija i Hidrologija*, No. 8, 108-115.
51. Zilitinkevich, S.S., 1971: Weather governed by the ocean. *Nauka i Tekhnika – v Vestnik APN*, No 30/493-A, 1-5.
52. Zilitinkevich, S.S., 1971: On turbulence and diffusion in free convection. *Izvestija AN SSSR, FAO*, **7**, No. 12, 1263-1269.
53. Chalikov, D.V., Monin, A.S., Turikov, V.G., and Zilitinkevich, S.S., 1971: Numerical experiments on the general circulation of the Venus atmosphere. *Tellus*, **23**, No. 6, 483-488.

1972

54. Zilitinkevich, S.S., and Monin, A.S., 1972: Turbulence in dynamic models of the atmosphere. *Fluid Mechanics – Soviet Research*, **1**, No. 3, 1-27.
55. Bernhardt, K., Deardoff, J.W., Dubov, A.S., Fortak, H. Yaglom, A.M., and Zilitinkevich, S.S., 1972: Turbulent boundary layer. *GARP Publications Series*, No. 8, 69-80.
56. Zilitinkevich, S.S., 1972: Boundary layer in the atmosphere. *GARP Publications Series*, No. 8 (Appendix A), A.1-A.10.
57. Zilitinkevich, S.S., and Vulis, I.L., 1972: Fifth Meeting on Mathematical Modelling of the Oceanic and Atmospheric Circulation. *Izvestija AN SSSR, FAO*, **8**, No. 5, 570-573.

58. Zilitinkevich, S.S., and Monin, A.S., 1972: *Turbulence in Dynamic Models of the Atmosphere*, Nauka, Leningrad, 44 pp.
59. Golitsyn, G.S., and Zilitinkevich, S.S., 1972: Evaluation of bulk characteristics of circulation of planetary atmospheres from different hypotheses on the nature of dissipation. *Izvestija AN SSSR, FAO*, **8**, No. 8, 785-798.
60. Zilitinkevich, S.S., 1972: Asymptotic formulas for the depth of the Ekman boundary layer. *Izvestija AN SSSR, FAO*, **8**, No. 10, 1086-1090.
61. Zilitinkevich, S.S., and Monin, A.S., 1972: A mathematical model of the climate of Venus. *Nauka i Zhizn*. No. 12, 55-57.
62. Zilitinkevich, S.S., 1972: On the determination of the height of the Ekman boundary layer. *Boundary-Layer Meteorol.*, **3**, 141-145.

1973

63. Zilitinkevich, S.S., and Monin, A.S., 1973: On the evaluation of the changes in the Earth climate. *Izvestija AN SSSR, FAO*, **9**, No. 8, 872-875.
64. Zilitinkevich, S.S., 1973: Shear convection. *Boundary-Layer Meteorol.*, **3**, 416-423.

1974

65. Zilitinkevich, S.S., 1974: Estimates of vertical velocities in planetary atmospheres. *Izvestija AN SSSR, FAO*, **10**, No. 4, 411-413.
66. Zilitinkevich, S.S., and Monin, A.S., 1974: Similarity theory for the planetary boundary layer in the atmosphere. *Izvestija AN SSSR, FAO*, **10**, No. 6, 587-599.
67. Yaglom, A.M., Bernhardt, K., Blackadar, A.K., Deardorff, J.W., Zilitinkevich, S.S., Clarke, R., Coantic, M., and Stewart, R., 1974: Report of the Working Group, Symposium on Turbulence in the Atmospheric Boundary Layer. *Izvestija AN SSSR, FAO*, **10**, No. 6, 677-687. (also in: The GARP Programme on Numerical Experimentation, Report No. 5, 1974, 20 pp.)
68. Zilitinkevich, S.S., and Deardorff, J.W., 1974: Similarity theory for the planetary boundary layer of time-dependent height. *J. Atmos. Sci.*, **31**, 1449-1452.
69. Zilitinkevich, S.S., and Monin, A.S., 1974: Similarity theory for the atmospheric boundary layer. *Doklady AN SSSR*, **216**, No. 3, 536-539.
70. Monin, A.S., and Zilitinkevich, S.S., 1974: Similarity theory and resistance laws for the planetary boundary layer. *Boundary-Layer Meteorol.*, **7**, 391-397.
71. Zilitinkevich, S.S., 1974: On the heat flux at the outer boundary of the penetrative-convection layer. *Morskije Gidrofizicheskiye Issledovanija*, No. 3 (66), 136-140.

1975

72. Zilitinkevich, S.S., 1975: Resistance laws and prediction equations for the depth of the planetary boundary layer. *J. Atmos. Sci.*, **32**, 741-752.
73. Zilitinkevich, S.S., 1975: Modelling the benthic planetary boundary layer of the ocean. In: *Numerical Models of Ocean Circulation*. Nat. Acad. Sci., Washington, D.C., 250-251.
74. Zilitinkevich, S.S., 1975: Comments on "A model of the dynamics of the inversion above a convective boundary layer". *J. Atmos. Sci.*, **32**, 991-992.
75. Chalikov, D.V., Monin, A.S., Safray, A.S., Turikov, V.G., and Zilitinkevich, S.S., 1975: Numerical simulation of the general circulation of the Cytherean lower atmosphere. *Icarus*, **26**, 178-208.
76. Zilitinkevich, S.S., and Deardorff, J.W., 1975: Reply (to the comments on "Similarity theory for the planetary boundary layer of time-dependent height"). *J. Atmos. Sci.*, **32**, 840.

1976

77. Zilitinkevich, S.S., and Monin, A.S., 1976: On the global air-sea interaction. *Doklady AN SSSR*, **226**, No. 6, 1311-1314.
78. Zilitinkevich, S.S., 1976: Generation of kinetic energy of atmospheric circulation on slowly rotating planets. *Doklady AN SSSR*, **227**, No. 6, 1315-1318.
79. Zilitinkevich, S.S., 1976: Rough estimates of some characteristics of atmospheric circulation on rotating planets. *Doklady AN SSSR*, **228**, No. 1, 62-65.
80. Zilitinkevich, S.S., 1976: On indexes of the Gidrometeoizdat publications. *Meteorologija i Gidrologija*, No. 8, 114-116.
81. Zilitinkevich, S.S., Monin, A.S., Turikov, V.G., and Chalikov, D.V., 1976: Numerical simulation of the coupled circulation of the atmosphere and the ocean. *Doklady AN SSSR*, **230**, No. 3, 556-559.
82. Zilitinkevich, S.S., Kvasov, D.D., and Monin, A.S., 1976: Ocean circulation in the past. *Priroda*, No. 11, 44-50.
83. Zilitinkevich, S.S., 1976: On evaluation of the surface drift current speed and direction. *Doklady AN SSSR*, **231**, No. 6, 1327-1330.

1977

84. Zilitinkevich, S.S., and Monin, A.S., 1977: *Global Interaction between the Atmosphere and the Ocean*, Gidrometeoizdat, Leningrad, 24 pp.
85. Monin, A.S., and Zilitinkevich, S.S., 1977: Scale relations for global air-sea interaction. *J. Atmos. Sci.*, **34**, 1214-1223.

1978

86. Zilitinkevich, S.S., Monin, A.S., and Chalikov, D.V., 1978: Air-sea interaction In: *Physics of the Ocean*. Volume 1: Hydrophysics of the Ocean (ed. by V.M., Kamenkovich and A.S., Monin), Nauka, Moscow, 208-239.
87. Shakura, N.I., Sunyaev, R.A., and Zilitinkevich, S.S., 1978: On the turbulent energy transport in accretion discs. *Astron. Astrophys.*, **62**, 179-187.
88. Zilitinkevich, S.S., 1978: On evaluation of the oceanic surface drift current speed and direction. *Boundary-Layer Meteorol.*, **14**, 29-33.
89. Zilitinkevich, S.S., Chalikov, D.V., and Resnyansky Yu.D., 1978: Theoretical modelling of the upper layer of the ocean. In: *Itogi Nauki i Tekhniki. Mekhanika Zhidkosti i Gaza*, Volume 12, 5-51.
90. Zilitinkevich, S.S., 1978: Review of J.T. Houghton "The Physics of Atmospheres" (1977). *Izvestija AN SSSR, FAO*, **14**, No. 5, 571.

1979

91. Zilitinkevich, S.S., Chalikov, D.V., and Resnyansky, Yu.D., 1979: Modeling the oceanic upper layer. *Oceanologica Acta*, **2**, 219-240.

1987

92. Zilitinkevich, S.S., 1987: Theoretical model of turbulent penetrative convection. *Izvestija AN SSSR, FAO*, **23**, No. 6, 593-610.
93. Zilitinkevich, S.S., and Terzhevnik, A.Yu., 1987: The thermal bar. *Okeanologija*, **27**, No. 5, 732-738.

1988

94. Zilitinkevich, S.S., Kreiman, K.D., and Felzenbaum, A.I., 1988: Turbulence, heat transfer and self-similarity of temperature profile in thermocline. *Doklady AN SSSR*, **300**, No. 5, 1226-1230.
95. Zilitinkevich, S.S., and Kreiman, K.D., 1988: Resistance law for the wind-induced drift after the data from laboratory experiments. *Doklady AN SSSR*, **301**, No. 4, 977-981.

1989

96. Zilitinkevich, S.S., 1989: On analysis of the atmospheric general circulation on Venus. *Kosmicheskije Issledovanija*, **27**, No. 2, 286-291.
97. Zilitinkevich, S.S., 1989: On the theory of super-rotation of the Venus atmosphere. *Kosmicheskije Issledovanija*, **27**, No. 4, 595-603.
98. Zilitinkevich, S.S., 1989: Heat transport by the meridional circulation cell and static stability of the atmosphere on a slowly rotating planet. *Kosmicheskije Issledovanija*, **27**, No. 6, 932-942.
99. Zilitinkevich, S.S., and Terzhevik, A.Yy., 1989: Correction to "The thermal bar". *Okeanologija*, **29**, No. 5, 755-758.
100. Zilitinkevich, S.S., and Mironov, D.V., 1989: Theoretical model of the evolution of thermocline in a freshwater basin. *Izvestija AN SSSR, FAO*, **25**, No. 9, 969-978
101. Zilitinkevich, S.S., 1989: Velocity profiles and resistance laws for the planetary boundary layer in neutral and stable stratification. *Izvestija AN SSSR, FAO*, **25**, No. 11, 1131-1143.
102. Zilitinkevich, S.S., 1989: Velocity profiles, resistance laws and dissipation rate of mean flow kinetic energy in a neutrally and stably stratified planetary boundary layer. *Boundary-Layer Meteorol.*, **46**, 367-387.
103. Zilitinkevich, S.S., 1989: The temperature profile and heat transfer law in a neutrally and stably stratified planetary boundary layer. *Boundary-Layer Meteorol.*, **49**, 1-5.

1990

104. Zilitinkevich, S.S., and Kreiman, K.D., 1990: Theoretical and laboratory investigation of the thermal bar. *Okeanologija*, **30**, No. 5, 750-755.
105. Zilitinkevich, S.S., 1990: The temperature profile and the heat transfer law for the planetary boundary layer in neutral and stable stratification. *Izvestija AN SSSR, FAO*, **26**, No. 3, 313-315.
106. Zilitinkevich, S.S., and Rumyantsev, V.A., 1990: A parameterized model of seasonal temperature changes in lakes. *Environmental Software*, **5**, 12-25.
107. Zilitinkevich, S.S., 1990: A mathematical model of microclimate. *Boundary-Layer Meteorol.*, **52**, 199-202.

1991

108. Emeis, S., and Zilitinkevich, S.S., 1991: Resistance law, effective roughness length, and deviation angle over hilly terrain. *Boundary-Layer Meteorol.*, **55**, 191-198
109. Zilitinkevich, S.S., Fedorovich, E.E., and Shabalova, M.V., 1991: Calculation of the diurnal cycle of the atmospheric planetary boundary layer. *Izvestija AN SSSR, FAO*, **27**, No. 4, 339-352.

1992

110. Zilitinkevich, S.S., Kreiman, K.D., and Terzhevik, A.Yu., 1992: The thermal bar. *J. Fluid Mech.*, **236**, 27-42.
111. Zilitinkevich, S.S., and Mironov, D.V., 1992: Theoretical model of thermocline in a freshwater basin. *J. Phys. Oceanogr.*, **22**, 988-996.
112. Zilitinkevich, S.S., Fedorovich, E., and Mironov, D.V., 1992: Turbulent heat transfer in stratified geophysical flows. In: *Recent Advances in Heat Transfer* (Eds. B. Sunden and A. Zukauskas), Elsevier Science Publishers, Amsterdam, 1123-1139.
113. Zilitinkevich, S.S., Fedorovich, E.E., and Shabalova, M.V., 1992: Numerical model of a non-steady atmospheric planetary boundary layer, based on similarity theory. *Boundary-Layer Meteorol.*, **59**, 387-411.

1993

114. Zilitinkevich, S.S., and Malm, J.G.B., 1993: A theoretical model of thermal bar movement in a circular lake. *Nordic Hydrology*, **24**, 13-30.

1994

115. Zilitinkevich, S.S., 1994: A generalised scaling for convective shear flows. *Boundary-Layer Meteorol.* **70**, 51-78.
116. Malm, J.G.B., and Zilitinkevich, S.S., 1994: Density induced currents and temperature distribution in a convectively mixed lake. *Boundary-Layer Meteorol.* **71**, 219-234.

1995

117. Zilitinkevich, S.S., 1995: Scaling for convective boundary layers. In: *Wind Climate in Cities*, NATO ASI Series, Series E: Applied Sciences - Volume 277, Kluwer Academic Publishers, Dordrecht, 67-79.
118. Zilitinkevich, S., 1995: Convection and heat/mass transfer in atmospheric models. In: *HIRLAM 3 Workshop on Physical Parameterization*, Oslo, 23-24 August 1994, Norrköping, February 1995, 15-17.
119. Zilitinkevich, S.S., 1995: Similarity and scaling for convective boundary layers. In: *Air Pollution Modelling and Its Application X* (Eds. S.-E. Gryning and M.M. Millan), Plenum Press, New York and London, 223-234.
120. Zilitinkevich, S.S., 1995: Non-local turbulent transport: pollution dispersion aspects of coherent structure of convective flows. In: *Air Pollution III - Volume 1. Air Pollution Theory and Simulation* (Eds. H Power, N. Moussiopoulos and C.A. Brebbia). Computational Mechanics Publications, Southampton Boston, 53-60.

1996

121. Zilitinkevich, S., and Mironov, D.V., 1996: A multi-limit formulation for the equilibrium depth of a stably stratified boundary layer. *Boundary-Layer Meteorol.*, **81**, 325-351.

1997

122. Grachev, A.A., Fairall, C.W., and Zilitinkevich, S.S., 1997: Surface-layer scaling for the convection-induced stress regime. *Boundary-Layer Meteorol.*, **83**, 423-439.

1998

123. Zilitinkevich, S., Grachev, A.A., and Hunt, J.C.R., 1998: Non-local vertical transport in the shear-free convective surface layer: new theory and improved parameterization of turbulent fluxes. In: *Air Pollution Modelling and Its Application XII* (Eds. S.-E. Gryning and N. Chaumerliac), Plenum Publishing Corporation, New York, 321-325.
124. Zilitinkevich, S.S, Gryanik V.M., Lykossov, V.N., and Mironov, D.V., 1998: A new concept of the third-order transport in non-local turbulence closures for convective boundary layers. In: *Advances in Turbulence VII*. 391-394.
125. Zilitinkevich, S., Grachev, A.A., and Hunt, J.C.R., 1998: Surface frictional processes and non-local heat/mass transfer in the shear-free convective boundary layer. In: *Buoyant Convection in Geophysical Flows* (Eds. E.J. Plate et al.), Kluwer Academic Publishers, Printed in the Netherlands, 83-113.
126. Zilitinkevich, S., Johansson, P.-E., Mironov, D.V., and Baklanov, A., 1998: A similarity-theory model for wind profile and resistance law in stably stratified planetary boundary layers. *Journal of Wind Engineering and Industrial Aerodynamics* **74-76**, 209-218.

1999

127. Zilitinkevich, S.S, Gryanik V.M., Lykossov, V.N., and Mironov, D.V., 1999: Third-Order Transport and Nonlocal Turbulence Closures for Convective Boundary Layers. *J. Atmos. Sci.*, **56**, 3463-3477.
128. Mironov, D.V., Gryanik V.M., Lykossov, V.N., and Zilitinkevich, S.S., 1999: Comments on "A new second-order turbulence closure scheme for the planetary boundary layer" by K. Abdella and N. McFarlane. *J. Atmos. Sci.*, **56**, 3478-3481.

2000

129. Zilitinkevich, S., and Calanca, P., 2000: An extended similarity-theory for the stably stratified atmospheric surface layer. *Quart. J. Roy. Meteorol. Soc.*, **126**, 1913-1923.
130. Zilitinkevich, S., 2000: Towards revision of conventional flux-profile relationships for the stably stratified atmospheric surface layer. In: *Air Pollution Modelling and Its Application XIII* (Eds. S.-E. Gryning and E. Batchvarova), Kluwer Academic / Plenum Publishers, New York, etc., 403-407.
131. Zilitinkevich, S., 2000: Non-local turbulence in stably stratified boundary layers. In: *Advances in Turbulence VIII*. (Eds. C. Dopazo et al.), CIMNE, Barcelona 2000, 311-314.
132. Perov, V., and Zilitinkevich, S., 2000: Application of an extended similarity theory for the stably stratified atmospheric surface layer to the HIRLAM, *HIRLAM Newsletter* No. 35, 137-142.

2001

133. Zilitinkevich, S.S., Grachev, A.A., and Fairall, C.W., 2001: Scaling reasoning and field data on the sea-surface roughness lengths for scalars. *J. Atmos. Sci.*, **58**, 320-325.
134. Akylas, E., Tombrou, M., Lalas, D., and Zilitinkevich, S., 2001: Surface fluxes under shear-free convection. *Quart. J. Roy. Met. Soc.*, **127**, 1-15.
135. Perov, V., Zilitinkevich, S., and Ivarsson, K.-I., 2001: Implementation of new parameterisation of the surface turbulent fluxes for stable stratification in the 3-D HIRLAM. *HIRLAM Newsletter*, No. 37, 60-66.
136. Zilitinkevich, S.S., Perov, V.L., and King, J.C., 2001: Calculation of turbulent fluxes in stable stratification in numerical weather prediction. *HIRLAM Newsletter*, No. 37, 83-92.

2002

137. Zilitinkevich, S., Baklanov, A., Rost, J., Smedman, A.-S., Lykosov, V., and Calanca, P., 2002: Diagnostic and prognostic equations for the depth of the stably stratified Ekman boundary layer. *Quart. J. Roy. Met. Soc.*, **128**, 25-46.
138. Zilitinkevich, S., 2002: Third-order transport due to internal waves and non-local turbulence in the stably stratified surface layer. *Quart. J. Roy. Met. Soc.* **128**, 913-925.
139. Soomere T., and Zilitinkevich, S.S., 2002: Supplement to "Third-order transport due to internal waves and non-local turbulence in the stably stratified surface layer". *Quart. J. Roy. Met. Soc.* **128**, 1029-1031.
140. Zilitinkevich, S.S., Perov, V.L., and King, J.C., 2002: Near-surface turbulent fluxes in stable stratification: calculation techniques for use in general circulation models. *Quart. J. Roy. Met. Soc.* **128**, 1571-1587.
141. Zilitinkevich, S.S., and Baklanov, A., 2002: Calculation of the height of stable boundary layers in practical applications. *Boundary-Layer Meteorol.* **105**, 389-409.
142. Zilitinkevich S.S., and Esau, I.N., 2002: On integral measures of the neutral, barotropic planetary boundary layers. *Boundary-Layer Meteorol.* **104**, 371-379.
143. Elperin, T., Kleerorin, N., Rogachevskii, I., and Zilitinkevich, S., 2002: Formation of large-scale semi-organised structures in turbulent convection. *Phys. Rev. E.* **66**, 066305, 1-15.

2003

144. Golitsyn G.S., Granberg I.G., Andronova A.V., Zilitinkevich S.S., Smirnov V. V., Ponomarev V.M., and Yablokov M. Yu., 2003: Observation of boundary layer fine structure in arid regions. *Water, Air and Soil Pollution: Focus* **3**, 245-257.
145. Zilitinkevich S.S. and Esau I.N., 2003: The effect of baroclinicity on the depth of neutral and stable planetary boundary layers. *Quart. J. Roy. Met. Soc.* **129**, 3339-3356.

2005

146. Zilitinkevich S.S., and Esau I.N., 2005: Resistance and heat/mass transfer laws for neutral and stable planetary boundary layers: old theory advanced and re-evaluated. *Quart. J. Roy. Met. Soc.* **131**, 1863-1892.

147. Zilitinkevich S., Esau I. and Baklanov A., 2005: Atmospheric boundary layers in storms: advanced theory and modelling applications. *Advances in Geosciences*. **2**, 47-49.
148. Zilitinkevich, S.S., Hunt, J.C.R., Grachev, A.A., Esau, I.N., Lalas, D.P., Akylas, E., Tombrou, M., Fairall, C.W., Fernando, H.J.S., Baklanov, A., and Joffre, S.M., 2005: The effect of large eddies on the convective heat/mass transfer over complex terrain: advanced theory and its validation against experimental and LES data. *Croatian Meteorological Journal*, **40**, 20-26.
149. Baklanov, A., Mestayer, P., Clappier, A., Zilitinkevich, S., Joffre, S., Mahura, A. and Nielsen, N.W., 2005: On parameterizations of urban atmosphere sublayer in meteorological models. *Atmospheric Chemistry and Physics Discussion*, **5**, 12119-12176.

2006

150. L'vov V.S., Pomyalov, A., Procaccia I., and Zilitinkevich, S.S., 2006: Phenomenology of wall bounded Newtonian turbulence. *Phys. Rev.*, **E 73**, 016303 1-13.
151. Esau, I.N., and Zilitinkevich, S.S., 2006: Universal dependences between turbulent and mean flow parameters in stably and neutrally stratified planetary boundary layers. *Nonlinear Processes in Geophysics*, **13**, 135-144 (www-nonlin-processes-geophys.net/13/135/2006).
152. Zilitinkevich, S.S., Hunt, J.C.R., Grachev, A.A., Esau, I.N., Lalas, D.P., Akylas, E., Tombrou, M., Fairall, C.W., Fernando, H.J.S., Baklanov, A., and Joffre, S.M., 2006: The influence of large convective eddies on the surface layer turbulence. *Quart. J. Roy. Met. Soc.* **132**, 1423-1456.
153. Elperin T., Kleeorin N., Rogachevskii I. and Zilitinkevich S., 2006: Turbulence and coherent structures in geophysical convection. *Boundary-layer Meteorol.* **119**, 449-472.
154. Zilitinkevich, S., Savijärvi, H., Baklanov, A., Grisogono, B., and Myrberg, K., 2006: Forthcoming meetings on planetary boundary layer theory, modelling and applications. *Boundary-Layer Meteorol.* **119**, 591-593.

2007

155. Zilitinkevich, S., Esau, I. and Baklanov, A., 2007: Further comments on the equilibrium height of neutral and stable planetary boundary layers. *Quart. J. Roy. Met. Soc.* **133**, 265-271.
156. Zilitinkevich, S.S., Elperin, T., Kleeorin, N., and Rogachevskii, I., 2007: Energy- and flux-budget (EFB) turbulence closure model for the stably stratified flows. Part I: Steady-state, homogeneous regimes. *Boundary-Layer Meteorol.* **125**, 167-192.
157. Zilitinkevich, S., and Esau, I., 2007: Similarity theory and calculation of turbulent fluxes at the surface for the stably stratified atmospheric boundary layers. *Boundary-Layer Meteorol.* **125**, 193-205.
158. Goulart, A.G., Moreira, D.M., Vilhena, M.T., Degrazia, G.A., and Zilitinkevich, S.S., 2007: A new model for the CBL growth based on the turbulent kinetic energy equation. *Environ. Fluid Mech.*, **7**, 409-419.
159. Mauritsen, T., Svensson, G., Zilitinkevich, S.S., Esau, I., Enger, L., and Grisogono, B., 2007: A total turbulent energy closure model for neutrally and stably stratified atmospheric boundary layers, *J. Atmos. Sci.*, **64**, 4117-4130.

2008

160. Baklanov, A., Mestayer, P., Clappier, A., Zilitinkevich, S., Joffre, S., Mahura, A., Nielsen, N.W., 2008: Towards improving the simulation of meteorological fields in urban areas through updated/advanced surface fluxes description. *Atmos. Chem. Phys.*, **8**, 523-543.
161. Zilitinkevich, S.S., Elperin, T., Kleeorin, N., Rogachevskii, I., Esau, I., Mauritsen, T., and Miles, M. W., 2008: Turbulence energetics in stably stratified geophysical flows: strong and weak mixing regimes. *Quart. J. Roy. Met. Soc.* **134**, 793-799.
162. Zilitinkevich, S.S., Mammarella, I., Baklanov, A.A., and Joffre, S.M., 2008: The effect of stratification on the aerodynamic roughness length and displacement height. *Boundary-Layer Meteorol.* **129**, 179-190.

2009

163. Zilitinkevich, S.S., and Esau, I.N., 2009: Planetary boundary layer feedbacks in climate system and triggering global warming in the night, in winter and at high latitudes. *Geography, Environment and Sustainability* **1**, No. 2, 20-34.
164. Sofiev M., Sofieva V., Elperin T., Kleeorin N., Rogachevskii I., and Zilitinkevich S.S., 2009: Turbulent diffusion and turbulent thermal diffusion of aerosols in stratified atmospheric flows. *J. Geophys. Res.* **114**, D18209, doi:10.1029/2009JD011765
165. Zilitinkevich, S.S., Elperin, T., Kleeorin, N., L'vov, V., and Rogachevskii, I., 2009: Energy- and flux-budget (EFB) turbulence closure model for stably stratified flows. Part II: The role of internal gravity waves. *Boundary-Layer Meteorol.* **133**, 139-164
166. Zilitinkevich, S.S., Elperin, T., Kleeorin, N., and Rogachevskii, I., 2009: Turbulence closure for stably stratified flows in the atmosphere and the ocean. *Ukrainian Hydromet. J.* **4**, 75-102.

2010

167. Zilitinkevich, S.S., Esau, I.N., Kleeorin, N., Rogachevskii, I., and Kouznetsov, R.D., 2010: On the velocity gradient in the stably stratified sheared flows. Part 1: Asymptotic analysis and applications. *Boundary-Layer Meteorol.* **135**, 505-511.
168. Kouznetsov, R.D., and Zilitinkevich, S.S., 2010: On the velocity gradient in stably stratified sheared flows. Part 2: Observations and models. *Boundary-Layer Meteorol.* **135**, 513-517.
169. Zilitinkevich, S.S., 2010: Comments on numerical simulation of homogeneous stably stratified turbulence. *Boundary-Layer Meteorol.* **136**, 161-164.
170. Esau, I., and Zilitinkevich, S., 2010: On the role of the planetary boundary layer depth in climate system. *Adv. Sci. Res.* **4**, 63-69.
171. Zilitinkevich, S.S., 2010: Self-organisation and non-local nature of geophysical turbulence and planetary boundary layers. *Geophysical J.* **6**, 168-174.

2011

172. Esau I.N., Zilitinkevich, S.S., Djolov G., Rautenbach C.J. deW., 2011: A micro-meteorological experiment in the atmospheric boundary layer in Highveld Region. *IOP Conf. Series: Earth and Environmental Science* **13**, 012011 (8 pp), doi:10.1088/1755-1315/13/1/012011
173. Baklanov, A.A., Grisogono, B., Bornstein, R., Mahrt, L., Zilitinkevich, S.S., Taylor, P., Larsen, S.E., Rotach, M.W., and Fernando, H.J.S., 2011: The nature, theory, and modeling of atmospheric planetary boundary layers. *Bull. Amer. Meteorol. Soc.*, February 2011, 123-128.
174. Kulmala, M., Alekseychik, P., Paramonov, M., Laurila, T., Asmi, E., Arneth, A., Zilitinkevich, S.S., and Kerminen, V.-M., 2011: On measurements of aerosol particles and greenhouse gases in Siberia and future research needs. *Boreal Environment Res.*, **16**, 337-362.

2012

175. Zilitinkevich S., Tyuryakov S., Troitskaya Y., Mareev E., 2012: Theoretical models of the height of the atmospheric boundary layer and turbulent entrainment at its upper boundary. *Izvestiya Atmospheric and Oceanic Physics* **48**, 133-142.
176. Zilitinkevich S.S., 2012: The Height of the Atmospheric Planetary Boundary layer: State of the Art and New Development – Chapter 13 in “*National Security and Human Health Implications of Climate Change*”, edited by H.J.S. Fernando, Z. Klaić, J.L. McKulley, NATO Science for Peace and Security Series – C: Environmental Security, ISBN 978-94-007-2429-7, Springer, 147-161.
177. Troitskaya Y.I., Druzhinin O., Zilitinkevich S., 2012: Direct numerical simulation of a turbulent wind over a wavy water surface. *J. Geophys. Res.* **117**, C00J05, doi:10.1029/2011JC007789.
178. Baklanov A.A., Bondur V.G., Klaić Z.B., Zilitinkevich S.S., 2012: Integration of geospheres in Earth systems: modern queries in environmental physics. *Geofizika* **29**, No. 1, 1-4.
179. Esau, I.N., Luhunga P., Djolov, G., Rautenbach C.J.deW., Zilitinkevich, S.S., 2012: Links between observed micro-meteorological variability and land use patterns in Highveld Priority Area of South Africa. *Meteorol. Atmos. Phys.* **118**, 129-142.

2013

180. Zilitinkevich, S.S., Elperin, T., Kleorin, N., Rogachevskii, I., Esau, I.N., 2013: A hierarchy of energy- and flux-budget (EFB) turbulence closure models for stably stratified geophysical flows. *Boundary-Layer Meteorol.* **146**, 341-373 (DOI: 10.1007/s10546-012-9768-8).
181. Esau, I., Davy, R., Outten, S., Tyuryakov, S., Zilitinkevich, S., 2013: Structuring of turbulence and its impact on basic features of Ekman boundary layers, *Non-linear Proc. in Geophys.*, **20**, 589-604 (doi:10.5194/npg-20-589-2013).
182. Hellsten A., Zilitinkevich S., 2013: Role of convective structures and background turbulence in the dry convective boundary layer. *Boundary-Layer Meteorol.* **149**, 323-353 (DOI 10.1007/s10546-013-9854-6)
183. Esau I.N., Wolf T., Miller E., Repina I.A., Troitskaya Yu.I., Zilitinkevich S.S., 2013: The analysis of results of remote sensing monitoring of the temperature profile in lower atmosphere in Bergen (Norway). *Russian Meteorology and Hydrology* **38**, 715-722.
184. Troitskaya Yu.I., Ezhova E.V., Zilitinkevich S.S., 2013: Momentum and buoyancy exchange in a turbulent air boundary layer over a wavy water surface. Part 1. A harmonic wave. *Non-linear Proc. in Geophys.*, **20**, 825-839 (DOI:10.5194/npg-20-825-2013).
185. Troitskaya Yu.I., Ezhova E.V., Sergeev D.A., Kandaurov A.A., Vaidakov G.A., Vdovin M.I., Zilitinkevich S.S., 2013: Momentum and buoyancy exchange in a turbulent air boundary layer over a wavy water surface. Part 2. Wind wave spectra. *Non-linear Proc. in Geophys.*, **20**, 841-856 (DOI: 10.5194/npg-20-841-2013).
186. Anisimov S.V., Mareev E.A., Shikhova N.M., Shatalina M.V., Galichenko S.V., Zilitinkevich S.S., 2013: Aeroelectric structures and turbulence in atmospheric boundary layer. *Non-linear Proc. in Geophys.* **20**, 819-824 (DOI: 10.5194/npg-20-819-2013).
187. Druzhinin O.A., Ostrovsky L.A., Zilitinkevich S.S., 2013: The study of the effect of small-scale turbulence on internal gravity waves propagation in a pycnocline. *Nonlin. Processes Geophys.*, **20**, 1–11. doi:10.5194/npg-20-1-2013.
188. Kudrin A.V., Zaitseva A.S., Zaboronkova T.M., Zilitinkevich S.S., 2013: Current distribution and input impedance of a strip loop antenna located on the surface of a circular column filled with a resonant magnetoplasma. *Prog. Electromagn. Res. B*, **55**, 241-256, doi:10.2528/PIERB1309010.

2014

189. Lappalainen H., Petaja T., Kujansuu J., Kerminen V.-M., Shvidenko A., Bäck J., Vesala T., Vihma T., de Leeuw G., Lauri A., Ruuskanen T., Lapshin V.B., Zaitseva N., Glezer O., Arshinov M., Spracklen D.V., Arnold S.R., Juhola S., Lihavainen H., Viisanen Y., Chubarova N., Chalov S., Filatov N., Skorokhod A., Elansky N., Dyukarev E., Esau I., Hari P., Kotlyakov V., Kasimov N., Bondur V., Matvienko G., Baklanov A., Mareev E., Troitskaya Y., Ding A., Guo H., Zilitinkevich S., Kulmala M., 2014: Pan-Eurasian Experiment (PEEX) – A research initiative meeting the grand challenges of the changing environment of the northern Pan-Eurasian Arctic-boreal areas. *Geography, Environment and Sustainability* **7**, No. 2, 13-48.
190. Troitskaya Yu. I., Sergeev D.A., Druzhinin O., Kandaurov A.A., Ermakova O.S., Ezhova E.V., Esau I., Zilitinkevich S., 2014: Atmospheric boundary layer over steep surface waves. *Ocean Dynamics* **64**, 1153–1161 (DOI 10.1007/s10236-014-0743-4).

2015

191. Medvedeva A.Yu., Arkhipkin V.S., Myslenkov S.A., Zilitinkevich S.S., 2015: Wave climate of the Baltic Sea following the results of the SWAN spectral model application. *Proceedings of Moscow University, Series 5 Geography*. No. 1, 12-22.
192. Zilitinkevich S., Kulmala M., Esau I., Baklanov A., 2015: Megacities – refining models to personal environment. *WMO Bulletin* **64** (1), 20-22.

193. Li D., Katul G.G., Zilitinkevich S.S., 2015: Revisiting the turbulent Prandtl number in an idealized atmospheric surface layer. *J. Atmos. Sci.* **72**, 2394-2410.
194. Elperin T., Kleeorin N., Krasovtsov B., Kulmala M., Liberman M., Rogachevskii I., Zilitinkevich S., 2015: Acceleration of raindrop formation due to tangling-clustering instability in a turbulent stratified atmosphere. *Phys. Review E* **92**, 013012-1-11 (DOI: 10.1103/PhysRevE.92.013012).
195. Druzhinin O.A., Troitskaya Yu.I., Zilitinkevich S.S., 2015: Stably stratified air flow over wavy water surface. Part 1: Stationary turbulence regime. *Quart. J. Roy. Met. Soc.*, **142**, 759-772 (doi: 10.1002/qj.2677).
196. Druzhinin O.A., Troitskaya Yu.I., Zilitinkevich S.S., 2015: Stably stratified air flow over wavy water surface. Part 2: Wave-induced pre-turbulent motions. *Quart. J. Roy. Met. Soc.*, **142**, 773-780 (doi: 10.1002/qj.2678).
197. Kulmala, M., Lappalainen, H. K., Petäjä, T., Kurten, T., Kerminen, V.-M., Viisanen, Y., Hari, P., Sorvari, S., Bäck, J., Bondur, V., Kasimov, N., Kotlyakov, V., Matvienko, G., Baklanov, A., Guo, H. D., Ding, A., Hansson, H.-C., and Zilitinkevich, S., 2015: Introduction: The Pan-Eurasian Experiment (PEEX) – multidisciplinary, multiscale and multicomponent research and capacity-building initiative. *Atmos. Chem. Phys.*, **15**, 13085-13096 (doi:10.5194/acp-15-13085-2015).

2016

198. Davy R., Esau I., Outten S., Chernokulsky A., Zilitinkevich S., 2016: Diurnal asymmetry to the observed global warming. *International Journal of Climatology*, DOI: 10.1002/joc.4688.
199. Druzhinin O.A., Troitskaya Yu.I., and Zilitinkevich S.S., 2016: Direct numerical simulation of a turbulent stably stratified air flow above a wavy water surface. *Doklady Earth Sciences*, **466**, Part 1, 54–58.
200. Zilitinkevich S.S., Kulmala M., Baklanov A.A., Esau I.N., Tyuryakov S.A., 2016: Monitoring and forecasting of personal environment. *Fundamentalnaya i prikladnaya gidrofizika*, **9**, No. 1, 93-97 [Зилитинкевич С.С., Кулмала М., Бакланов А.А., Эсау И.Н, Тюряков С.А., 2016: Мониторинг и прогноз «персональной» окружающей среды. *Фундаментальная и прикладная гидрофизика* (Russian Acad. Sci.), Т.9, №1, 93-97].
201. Lappalainen, H. K., Kerminen, V.-M., Petäjä, T., Kurten, T., Baklanov, A., Shvidenko, A., Bäck, J., Vihma, T., Alekseychik, P., Arnold, S., Arshinov, M., Asmi, E., Belan, B., Bobylev, L., Chalov, S., Cheng, Y., Chubarova, N., de Leeuw, G., Ding, A., Dobrolyubov, S., Dubtsov, S., Dyukarev, E., Elansky, N., Eleftheriadis, K., Esau, I., Filatov, N., Flint, M., Fu, C., Glezer, O., Gliko, A., Heimann, M., Holtzlag, A. A. M., Hörrak, U., Janhunen, J., Juhola, S., Järvi, L., Järvinen, H., Kanukhina, A., Konstantinov, P., Kotlyakov, V., Kieloaho, A.-J., Komarov, A. S., Kujansuu, J., Kukkonen, I., Kyrö, E., Laaksonen, A., Laurila, T., Lihavainen, H., Lisitzin, A., Mahura, A., Makshtas, A., Mareev, E., Mazon, S., Matishov, D., Melnikov, V., Mikhailov, E., Moisseev, D., Nigmatulin, R., Noe, S. M., Ojala, A., Pihlatie, M., Popovicheva, O., Pumpanen, J., Regerand, T., Repina, I., Shcherbinin, A., Shevchenko, V., Sipilä, M., Skorokhod, A., Spracklen, D. V., Su, H., Subetto, D. A., Sun, J., Terzhevik, A. Y., Timofeyev, Y., Troitskaya, Y., Tynkkynen, V.-P., Kharuk, V. I., Zaytseva, N., Zhang, J., Viisanen, Y., Vesala, T., Hari, P., Hansson, H. C., Matvienko, G. G., Kasimov, N. S., Guo, H., Bondur, V., Zilitinkevich, S., and Kulmala, M., 2016: Pan-Eurasian Experiment (PEEX): Towards holistic understanding of the feedbacks and interactions in the land–atmosphere–ocean–society continuum in the Northern Eurasian region. *Atmos. Chem. Phys. Discuss.*, doi:10.5194/acp-2016-186.
202. Kulmala M., Lappalainen H.K., Petäjä T., Kerminen V.-M., Viisanen Y., Matvienko G., Melnikov V., Baklanov A., Bondur V., Kasimov N., Zilitinkevich S., 2016: Pan-Eurasian Experiment (PEEX) program: Grand challenges in the Arctic-Boreal context. *Geography, Environment and Sustainability* **9**, No. 2, 5-18. DOI: 10.15356/2071-9388_02v09_2016_01.
203. Ding A.J., Huang X., Nie W., Sun J.N., Kerminen V.-M., Petäjä T., Su H., Cheng Y.F., Yang X.-Q., Wang M.H., Chi X.G., Wang J.P., Virkkula A., Guo W.D., Yuan J., Wang S.Y., Zhang R.J., Wu Y.F., Song Y., Zhu T., Zilitinkevich S., Kulmala M., Fu C.B., 2016: Enhanced haze pollution by black carbon in megacities in China. *Geophysical Research Letters*. **43**, 6, 2873-2879 (doi: 10.1002/2016GL067745).
204. Troitskaya Yu.I., Ezhova E.V., Soustova I.A., Zilitinkevich S.S., 2016: On the effect of sea spray on the aerodynamic surface drag under severe winds. *Ocean Dynamics* **66**, 659-669 (DOI 10.1007/s10236-016-0948-9).

205. Petäjä T., Järvi L., Kerminen V.-M., Ding A., Sun J., Nie W., Kujansuu J., Virkkula A., Yang X., Fu C., Zilitinkevich S., Kulmala M., 2016: Enhanced air pollution via aerosol-boundary layer feedback in China. *Scientific Reports* **6**, 18998 (doi:10.1038/srep18998)
206. Ezhova E.V., Zilitinkevich S.S., Rybushkina G.V., Soustova I.A., and Troitskaya Yu.I., 2016: On the application of a turbulence closure modified model to the description of the density jump evolution in a stably stratified medium. *Izv. Atmos. Ocean. Phys.*, **52**, No. 3, 334-341.
207. Li D., Katul G.G., Zilitinkevich S., 2016: Closure schemes for stably stratified atmospheric flows without turbulence cutoff. *J. Atmos. Sci.* (doi: 10.1175/JAS-D-16-0101.1)

2017

208. Troitskaya Yu., Kandaurov A., Ermakova O., Kozlov D., Sergeev D., Zilitinkevich S., 2017: Bag-breakup fragmentation as the dominant mechanism of sea-spray production in high winds. *Scientific Reports*. **7**, 1614 (DOI:10.1038/s41598-017-01673-9)
209. Troitskaya Yu.I., Ermakova O.S., Kandaurov A.A., Kozlov D.S., Sergeev D.A., Zilitinkevich S.S., 2017: Bag-breakup – Mechanism of generation of sea-spray in strong and hurricane winds. *Doklady Akademii Nauk*, **477**, No. 2, 226-232 (DOI: 10.7868/S0869565217320196)
210. Druzhinin O.A., Troitskaya Yu.I., Zilitinkevich S.S., 2017: The study of droplet-laden turbulent air-flow over wavy water surface by direct numerical simulation. *J. Geophys. Research: Oceans* **122**, 1789-1807 (doi:10.1002/2016JC012134)
211. Monzikova A.K., Kudryavtsev V.N., Myasoedov A.G., Chapron B., Zilitinkevich S.S., 2017: Features of wind field over the sea surface in coastal area. *Izvestiya, Atmos. and Oceanic Physics*, **53**, No. 1, 76–83, doi: 10.1134/S000143381701008X.
212. Troitskaya Yu. I., Ermakova O.S., Kandaurov A.A., Kozlov D.S., Sergeev D.A., Zilitinkevich S.S., 2017: Non-monotonous dependence of the ocean surface drag coefficient on the hurricane wind speed due to the fragmentation of the ocean-atmosphere interface. *Doklady Earth Sciences*, **477**(1), 1373-1378. DOI 10.1134/S1028334X17110265
213. Łobocki L., Zilitinkevich S., 2017: Obituary Zbigniew W. Sorbjan. *Boundary-Layer Meteorol.*, DOI 10.1007/s10546-017-0299-1
214. Davy, R., Esau, I., Chernokulsky, A., Outten, S., Zilitinkevich, S., 2017: Diurnal asymmetry to the observed global warming. *International J. of Climatology*, **37**, 1, 79–93. <https://doi.org/10.1002/joc.4688>

2018

215. Myslenkov S., Medvedeva A., Arkhipkin V., Markina M., Surkova G., Krylov A., Dobrolyubov S., Zilitinkevich S., Koltermann P., 2018: Long-term Statistics of Storms in the Baltic, Barents and White Seas and Their Future Climate Projections. *Geography, Environment and Sustainability*, **11**(1):93-112, DOI 10.24057/2071-9388-2018-11-1-93-112
216. Lappalainen H.K., Altimir N., Kerminen V.-M., Petäjä T., Makkonen R., Alekseychik P., Zaitseva N., Bashmakova I., Joni Kujansuu, Ruuskanen T., Lauri A., Haapanala P., Mazon S.B., Borisova A., Konstantinov P., Chalov S., Laurila T., Asmi E., Lihavainen H., Bäck J., Arshinov M., Mahura M., Arnold S., Vihma T., Uotila P., de Leeuw G., Kukkonen I., Malkatshova S., Tynkkynen V.-P., Fedorova I., Ding A., Hansson H.-C., Melnikov V., Matvienko G., Baklanov A., Viisanen Y., Kasimov N., Guo H., Bondur V., Kabat P., Zilitinkevich S. and Kulmala M., 2018: Pan-Eurasian Experiment (PEEX) Program: An overview of the first 5 years in operation and future prospects. *Geography, Environment and Sustainability*, **11**(1):6-19, DOI 10.24057/2071-9388-2018-11-1-6-19
217. Lappalainen H.K., Petäjä T., Kerminen V.-M., Bäck J., Vesala T., Lauri A., Vihma T., Haapala J., Mahura A., Baklanov A., Makkonen R., Tynkkynen V.-P., Konstantinov P., Kasimov N., Bondur V., Melnikov V., Zilitinkevich S., Kulmala M., 2018: Pan-Eurasian Experiment (PEEX). *Arctic Yearbook*.
218. Melnikov V., Gennadinik V., Kulmala M., Lappalainen H.K., Tuukka P. and Zilitinkevich S., 2018: Cryosphere: a kingdom of anomalies and diversity. *Atmos. Chem. Phys. Discuss.*, **18**, 6535-6542, DOI 10.5194/acp-18-6535-2018

219. Lappalainen H.K., Kulmala M., Kujansuu J., Petäjä T., Mahura A., de Leeuw G., Zilitinkevich S., Juustila M., Kerminen V.-M., Bornstein B., Jiahua Z., Yong X., Yubao Q., Dong L., Jie L. and Huadong G., 2018: The Silk Road agenda of the Pan-Eurasian Experiment (PEEX) Program, *Big Earth Data*, 2, 1, 8-35, DOI 10.1080/20964471.2018.1437704
220. Troitskaya Y., Kandaurov A., Ermakova O., Kozlov D., Sergeev D., and Zilitinkevich S., 2018: The “bag breakup” spume droplet generation mechanism at high winds. Part I. Spray generation function. *J. Phys. Oceanogr.*, 48, 2167–2188, DOI 10.1175/JPO-D-17-0104.1
221. Troitskaya Y., Druzhinin O., Kozlov D., Zilitinkevich S., 2018: Bag-breakup spume droplet generation mechanism at high winds. Part II: The impact on momentum and enthalpy transfer. *J. Phys. Oceanogr.*, 48, 2189–2207, DOI 10.1175/JPO-D-17-0105.1
222. Druzhinin O., Troitskaya Y., Zilitinkevich S., 2018: The study of momentum, mass and heat transfer in a droplet-laden turbulent air-flow over a waved water surface by direct numerical simulation. *Journal of Geophys. Res. Oceans*, 123, 11, 8346-8365, DOI 10.1029/2018JC014346

2019

223. Zilitinkevich, S., Druzhinin, O., Glazunov, A., Kadantsev, E., Mortikov, E., Repina, I., and Troitskaya, Y., 2019: Dissipation rate of turbulent kinetic energy in stably stratified sheared flows. *Atmos. Chem. Phys.*, 19, 2489-2496, <https://doi.org/10.5194/acp-19-2489-2019>
224. Debolskiy, A.V., Stepanenko, V.M., Glazunov, A.V., and Zilitinkevich, S.S., 2019: Bulk Models of Sheared Boundary Layer Convection. *Izv. Atmos. Ocean. Phys.*, 55: 139, <https://doi.org/10.1134/S000143381902004X>
225. Kleerorin N., Rogachevskii I., Soustova I.A., Troitskaya Yu. I., Ermakova O. S., and Zilitinkevich S, 2019: Internal gravity waves in the energy and flux budget turbulence-closure theory for shear-free stably stratified flows *Physical Review E* 99, 063106 <https://doi.org/10.1103/PhysRevE.99.063106>
226. Glazunov, A.V., Mortikov, E.V., Barskov K.V., Kadantsev E.V., and Zilitinkevich, S.S., 2019: Layered structure of stably stratified turbulent shear flows. *Izv. Atmos. Ocean. Phys.* 55, 312–323, <https://doi.org/10.1134/S0001433819040042>
227. Mortikov E.V., Glazunov A.V., Debolskiy A.V. Lykosov, V.N., Zilitinkevich S.S., 2019: Modeling of the Dissipation Rate of Turbulent Kinetic Energy. *Doklady Earth Sciences*, 489, Part 2, pp. 1440–1443. <https://doi.org/10.1134/S1028334X19120067>

2020

228. Lampilahti, J., Manninen, H. E., Leino, K., Väänänen, R., Manninen, A., Buenrostro Mazon, S., Nieminen, T., Leskinen, M., Enroth, J., Bister, M., Zilitinkevich, S., Kangasluoma, J., Järvinen, H., Kerminen, V.-M., Petäjä, T., and Kulmala, M., 2020: Roll vortices induce new particle formation bursts in the planetary boundary layer. *Atmos. Chem. Phys.*, 20, 11841–11854, <https://doi.org/10.5194/acp-20-11841-2020>.
229. Stepanenko V.M., Fedosov V.E., Repina I.A., Zilitinkevich S.S., Lykosov V.H., 2020: An overview of parameterization of heat transfer over moss-covered surfaces in the Earth System models: *Izv. Atmos. Ocean. Phys.*, 56, p.101–111. <https://doi.org/10.1134/S0001433820020139>
230. Li Q., Bou-Zeid E., Grimmond S., Zilitinkevich S., Katul G., 2020: Revisiting the relation between momentum and scalar roughness lengths of urban surfaces. *Quart. J. Roy. Meteorol. Soc.*, 1–21. <https://doi.org/10.1002/qj.3839>
231. Umnov A., Tyuryakov S., Timofeeva A., Stepanenko S., Snizhko S., Podgaiskii E., Kuzmova K., Nezhlukchenko T., Zilitinkevich S., 2020: ECOIMPACT Personal Learning Environment: A new educational tool to facilitate the application of the Internet of Things and personal learning technologies in meteorology. In: *World Meteorological Organization (WMO) Global Campus Innovations, Volume IV - Technology-enhanced Learning*, ETR-27, pp. 3-17. https://library.wmo.int/doc_num.php?explnum_id=10416
232. Kadantsev, E., Mortikov E., Zilitinkevich, S., 2020: The resistance law for stably stratified atmospheric planetary boundary layer. *Quart. J. Roy. Met. Soc.*, <https://doi:10.1002/QJ-20-0244>

233. Petäjä, T., Ganzei, K.S., Lappalainen, H.K., Tabakova, K., Makkonen, R., Räisänen, J., Chalov, S., Kulmala, M., Zilitinkevich, S.S., Baklanov, P., Shakirov, R.B., Mishina, N.V., Egidarev, E.G. and Kondrat'ev, I.I., 2020: Research agenda for the Russian Far East and utilization of multi-platform comprehensive environmental observations, *Int. J. Digital Earth*, <https://doi.org/10.1080/17538947.2020.1826589>

2021

234. Sizov, O., Ezhova, E., Tsymbarovich, P., Soromotin, A., Prihod'ko, N., Petäjä, T., Zilitinkevich, S., Kulmala, M., Bäck, J., and Köster, K. 2021: Fire and vegetation dynamics in northwest Siberia during the last 60 years based on high-resolution remote sensing, *Biogeosciences*, 18, 207–228, <https://doi.org/10.5194/bg-18-207-2021>
235. Esau I., Bobylev L., Donchenko V., Gnatiuk N., Lappalainen H.K., Konstantinov P., Kulmala M., Mahura A., Makkonen R., Manvelova A., Miles V., Petaja T., Poutanen P., Fedorov R., Varentsov M., Wolf T., Zilitinkevich S., Baklanov A. 2020: An enhanced integrated approach to knowledgeable high-resolution environmental quality assessment. *Environmental Science and Policy*. Accepted
236. Zilitinkevich S, Repina I, Kadantsev E, 2020: Order out of chaos: Shifting paradigm of convective turbulence, <https://arxiv.org/abs/2005.07680> Submitted to Journal of the Atmospheric Sciences.

Publications intended for professional communities

- Zilitinkevich, S., 2012: Understanding turbulence: the key to weather prediction. *ERC Success Stories*, accessed 24 September 2020, <https://erc.europa.eu/projects-figures/stories/understanding-turbulence-key-weather-prediction>
- Marian, C., 2012: What shakes the skies? Interview with Prof. S. Zilitinkevich. *Horizon Management Newsletter 12/2012*, accessed 24 September 2020, <http://www.planetlab.unn.ru/img/HM.pdf>
- Umnov A., Tyuryakov S., Timofeeva A., Stepanenko S., Snizhko S., Podgaiskii E., Kuzmova K., Nezhlukchenko T., Zilitinkevich S., 2020: ECOIMPACT Personal Learning Environment: A new educational tool to facilitate the application of the Internet of Things and personal learning technologies in meteorology. In: *World Meteorological Organization (WMO) Global Campus Innovations, Volume IV - Technology-enhanced Learning*, ETR-27, pp. 3-17. https://library.wmo.int/doc_num.php?explnum_id=10416

Publications intended for the general public, linked to the applicant's research

- Bulyubash, B., 2012: Scientific revolution of Sergej Zilitinkevich. Interview to electronic media *Science and Technology of Russia* on RF Government Mega-Grant 11.G34.31.0048 "Air-sea/land interaction: physics and observation of planetary boundary layers and quality of environment", accessed 05 September 2017, http://www.strf.ru/material.aspx?CatalogId=222&d_no=47093
- Ognyov A., 2012: Influential stratum of the planet. Interview to electronic media *Science and Technology of Russia*, accessed 05 September 2017, http://www.strf.ru/material.aspx?CatalogId=222&d_no=47093

Public artistic and design activities

- Zilitinkevich, S.S., 1994: Hi, Professor! *Zvezda* (monthly literary magazine, St. Petersburg, Russia), No. 1, 36-70.
- Zilitinkevich, S.S., 1995: On meaning in fine arts, *Mera* (literary magazine, St. Petersburg, Russia), No. 1, 142-151.
- Likhachev, D.S., Zilitinkevich, S.S., and Nedjalkov, V.P., 1997: I.E. Anichkov: Biography. In: I.E. Anichkov. *Works on Linguistics*, Nauka, St. Petersburg, 5-45.

Audiovisual material, ICT software

- Russian TV, "Culture", 19 June 2011 – one hour panel (5 experts) "Geography in XXI century"
- Russian TV, "Culture", 13 February 2012 – half hour panel (3 experts) "Nablyudatel': Discussion of climate change"