

С П Р А В К А

за изпълнението на минималните национални изисквания по чл. 26 от ЗРАСРБ
за научна област Физически науки,
професионално направление 4.1 Физически науки (Теоретична и математична физика),
от Кирил Петров Христов- кандидат
за заемане на академична длъжност

Номер и съдържание на показател	Общ брой точки	Номер на приложение с данни за постижения и брой точки по показатели*
Група от показатели А		
Показател 1: Дисертационен труд за присъждане на образователна и научна степен "доктор"	50	
Група от показатели Б		
Показател 2: Дисертационен труд за присъждане на научна степен "доктор на науките"	0	
Група от показатели В		
4. Хабилизационен труд - научни публикации в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus)	100	Статии 11-14 от приложение 1
общо група от показатели В	100	
Група от показатели Г		
7. Научна публикация в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus), извън хабилизационния труд	200	Статии 15-22 от приложение 1
общо група от показатели Г	200	
Група от показатели Д		
11. Цитирания в научни издания, монографии, колективни томове и патенти, реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus)	262	Приложение 2
общо група от показатели Д	262	
Група от показатели Е		
13. Ръководство на успешно защитил докторант (броят съръководители на съответния докторант е 2)	25	консултант на Andrea Rota (съвместни публикации 11 и 13 в приложение 1), успешно защитил 12.2015 в Milano-Bicocca

14. Участие в национален научен или образователен проект	40	4 проекта с ФНИ
15. Участие в международен научен или образователен проект	20	пост-докторантура в Milano-Bicocca за 3 години
общо група от показатели Е	65	

Допълнителни изисквания на ФзФ		
22. Успешно защитил дипломант	1 (мин. 1)	Andrea Rota, виж горе
23. Брой публикации от група I през последните 3 години	5 (мин. 1)	Приложение 1
24. Брой публикации от група I в групи от показатели В и Г	12 (мин. 7)	Приложение 1
28. h-фактор	14 (мин. 5)	Inspire-NEP
31. Учебно-преподавателски опит, часове	1500 часа (мин. 540)	Асистент на курсовете "Обща физика", "Класическа механика" и "Квантова механика" в Бремен, Германия 2004-2006 (на английски) = 360 часа; асистент на курсовете КТП 1 (x2) и 2, ОТО, "Статистическа физика" в Утрехт, Холандия 2007-2012 (на английски) = 600 часа; преподавател на курсовете Избрани глави от КТП 1 (x3) и 2 (x2) във ФзФ, София, 2016-2020 = 540 часа

Приложение 1					
№	Публикация	Съществе н принос	Точки	Група	Степен/д лъжност
1	K. Hristov, "Axion Stabilization in Type IIB Flux Compactifications", JHEP 01 (2009) 046	Да	25	I	магистър
2	K. Hristov, H. Looyestijn and S. Vandoren, "Maximally supersymmetric solutions of $D=4$ $N=2$ gauged supergravity", JHEP 11 (2009) 115	Да	25	I	доктор
3	K. Hristov, H. Looyestijn and S. Vandoren, "BPS black holes in $N=2$ $D=4$ gauged supergravities", JHEP 08 (2010) 103	Да	25	I	
4	K. Hristov, S. Vandoren, "Static supersymmetric black holes in AdS_4 with spherical symmetry", JHEP 04 (2011) 047	Да	25	I	
5	K. Hristov, C. Toldo and S. Vandoren, "On BPS bounds in $D=4$ $N=2$ gauged supergravity", JHEP 1112 (2011) 014	Да	25	I	
6	K. Hristov, "On BPS Bounds in $D=4$ $N=2$ Gauged Supergravity II: General Matter couplings and Black Hole Masses", JHEP 1203 (2012) 095	Да	25	I	
7	K. Hristov, S. Katmadas and V. Pozzoli, "Ungauging black holes and hidden supercharges", JHEP 1301 (2013) 110	Да	25	I	гл. асист.
8	K. Hristov, A. Tomasiello and A. Zaffaroni, "Supersymmetry on Three-dimensional Lorentzian Curved Spaces and Black Hole Holography", JHEP 1305 (2013) 057	Да	25	I	
9	K. Hristov, C. Toldo and S. Vandoren, "Phase transitions of magnetic AdS_4 black holes with scalar hair", Phys.Rev. D88 (2013) 026019	Да	25	I	
10	A. Gnechhi, K. Hristov, D. Klemm, C. Toldo, and O. Vaughan, "Rotating black holes in 4d gauged supergravity", JHEP 1401 (2014) 127		25	I	

11	K. Hristov, A. Rota, "Attractors, black objects, and holographic RG flows in 5d maximal gauged supergravities", JHEP 1403 (2014) 057	Да	25	1	ДОЦЕНТ
12	K. Hristov, "Dimensional reduction of BPS attractors in AdS gauged supergravities", JHEP 1412 (2014) 066	Да	25	1	
13	K. Hristov, A. Rota, "6d-5d-4d reduction of BPS attractors in flat gauged supergravities", Nucl.Phys. B897 (2015) 213-228	Да	25	1	
14	K. Hristov, S. Katmadas, "Wilson lines for AdS ₅ black strings", JHEP 1502 (2015) 009	Да	25	1	
15	K. Hristov, S. Katmadas and I. Lodato, "Higher derivative corrections to BPS black hole attractors in 4d gauged supergravity", JHEP 1605 (2016) 173	Да	25	1	
16	S. M. Hosseini, K. Hristov and A. Zaffaroni, "An extremization principle for the entropy of rotating BPS black holes in AdS ₅ ", JHEP 1707 (2017) 106	Да	25	1	
17	S. M. Hosseini, K. Hristov and A. Passias, "Holographic microstate counting for AdS ₄ black holes in massive IIA supergravity", JHEP 1710 (2017) 190	Да	25	1	
18	K. Hristov, I. Lodato and V. Reys, "On the quantum entropy function in 4d gauged supergravity, JHEP 1807 (2018) 072	Да	25	1	
19	S. M. Hosseini, K. Hristov and A. Zaffaroni, "A note on the entropy of rotating BPS AdS ₇ × S ⁴ black holes", JHEP 1805 (2018) 121	Да	25	1	
20	S. M. Hosseini, K. Hristov, A. Passias and A. Zaffaroni, "6D attractors and black hole microstates", JHEP 1812 (2018) 001		25	1	
21	N. Bobev, F. Gautason and K. Hristov, "The Holographic Dual of the Ω-background", Phys.Rev. D100 (2019) no.2, 021901	Да	25	1	

22	K. Hristov, S. Katmadas and C. Toldo, "Matter-coupled supersymmetric Kerr- Newman-AdS ₄ black holes", Phys.Rev. D100 (2019) no.6, 066016	Да	25	1	
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Приложение 2

№	Цитати	цитираща статья №
1	N.Bobev, K.Pilch and O.Vasilakis, `` $(0, 2)$ SCFTs from the Leigh-Strassler fixed point," JHEP 06 (2014), 094	11
2	A.Bhattacharyya, S.S.Haque, V.Jejjala, S.Nampuri and Á.Véliz-Ororio, ``Attractive holographic \mathcal{S} -functions," JHEP 11 (2014), 138	11
3	H.L.Dao and P.Karndumri, ``Supersymmetric AdS_5 black holes and strings from 5D $N=4$ gauged supergravity," Eur. Phys. J. C 79 (2019) no.3, 247	11, 16, 17, 19, 20
4	B.Chakrabarty, K.Inbasekar and R.Samanta, ``Supersymmetry of Bianchi attractors in gauged supergravity," Phys. Rev. D 96 (2017) no.6, 066020	12
5	D.Klemm, N.Petri and M.Rabbiosi, ``Black string first order flow in $N = 2, d = 5$ abelian gauged supergravity," JHEP 01 (2017), 106	12
6	S.M.Hosseini, A.Nedelin and A.Zaffaroni, ``The Cardy limit of the topologically twisted index and black strings in AdS_5 ," JHEP 04 (2017), 014	12
7	M.Azzola, D.Klemm and M.Rabbiosi, `` AdS_5 black strings in the stu model of FI-gauged $N=2$ supergravity," JHEP 10 (2018), 080	12
8	S.M.Hosseini, I.Yaakov and A.Zaffaroni, ``Topologically twisted indices in five dimensions and holography," JHEP 11 (2018), 119	12, 18
9	P.Karndumri and P.Nuchino, ``Twisted compactifications of 6D field theories from maximal 7D gauged supergravity," Eur. Phys. J. C 80 (2020) no.3, 201	12, 19
10	N.Gaddam, A.Gnecchi, S.Vandoren and O.Varela, ``R holography, Black Holes and Scherk-Schwarz," JHEP 06 (2015), 058	13
11	D.Klemm and M.Nozawa, ``Black holes in an expanding universe and supersymmetry," Phys. Lett. B 753 (2016), 110-116	13
12	G.L.Cardoso, M.Haack and S.Nampuri, ``Nernst branes with Lifshitz asymptotics in $\mathcal{N} = 2$ gauged supergravity," JHEP 06 (2016), 144	15
13	S.M.Hosseini and A.Zaffaroni, ``Large N matrix models for 3d $\mathcal{N}=2$ theories: twisted index, free energy and black holes," JHEP 08 (2016), 064	15

14	P.Dempster, D.Errington, J.Gutowski and T.Mohaupt, "Five-dimensional Nernst branes from special geometry," JHEP 11 (2016), 114	15
15	F.Azzurli, N.Bobev, P.M.Crichigno, V.S.Min and A.Zaffaroni, "A universal counting of black hole microstates in AdS ₄ ," JHEP 02 (2018), 054	15, 17
16	S.Chimento, "On timelike supersymmetric solutions of Abelian gauged 5-dimensional supergravity," JHEP 07 (2017), 059	16
17	J.T.Liu, L.A.Pando Zayas, V.Rathee and W.Zhao, "Toward Microstate Counting Beyond Large N in Localization and the Dual One-loop Quantum Supergravity," JHEP 01 (2018), 026	16
18	C.Closset, H.Kim and B.Willett, " $\mathcal{N} = 1$ supersymmetric indices and the four-dimensional A-model," JHEP 08 (2017), 090	16
19	F.Benini, H.Khachatryan and P.Milan, "Black hole entropy in massive Type IIA," Class. Quant. Grav. 35 (2018) no.3, 035004	16, 17
20	J.Markeviciute and J.E.Santos, "Evidence for the existence of a novel class of supersymmetric black holes with AdS ₅ asymptotics," Class. Quant. Grav. 36 (2019) no.2, 02LT01	16
21	D.Cassani and L.Papini, "Squashing the boundary of supersymmetric AdS ₅ black holes," JHEP 12 (2018), 037	16, 17, 19
22	J.Markeviciute, "Rotating Hairy Black Holes in AdS ₅ asymptotics," JHEP 03 (2019), 110	16, 19
23	A.Cabo-Bizet, D.Cassani, D.Martelli and S.Murthy, "Microscopic origin of the Bekenstein-Hawking entropy of supersymmetric AdS ₅ black holes," JHEP 10 (2019), 062	16, 19
24	S.Choi, C.Hwang, S.Kim and J.Nahmgoong, "Entropy Functions of BPS Black Holes in AdS ₄ and AdS ₆ ," J. Korean Phys. Soc. 76 (2020) no.2, 101-108	16, 19, 20, 22
25	F.Benini and P.Milan, "Black holes in 4d $\mathcal{N}=4$ Super-Yang-Mills," Phys. Rev. X 10 (2020) no.2, 021037	16, 17, 20
26	A.Pittelli, "Supersymmetric localization of refined chiral multiplets on topologically twisted $S^2 \times S^1$," Phys. Lett. B 801 (2020), 135154	16, 17
27	M.Honda, "Quantum Black Hole Entropy from 4d Supersymmetric Cardy formula," Phys. Rev. D 100 (2019) no.2, 026008	16, 17, 19, 20
28	A.Arabi Ardehali, "Cardy-like asymptotics of the 4d $\mathcal{N}=4$ index and AdS ₅ blackholes," JHEP 06 (2019), 134	16

29	A.Bombini and L.Papini, "General supersymmetric AdS_5 black holes with squashed boundary," Eur. Phys. J. C 79 (2019) no.6, 515	16
30	A.Cabo-Bizet, D.Cassani, D.Martelli and S.Murthy, "The asymptotic growth of states of the 4d $\mathcal{N}=1$ superconformal index," JHEP 08 (2019), 120	16
31	D.Cassani and L.Papini, "The BPS limit of rotating AdS black hole thermodynamics," JHEP 09 (2019), 079	16, 19, 22
32	F.Larsen, J.Nian and Y.Zeng, "AdS ₅ black hole entropy near the BPS limit," JHEP 06 (2020), 001	16
33	G.Kántor, C.Papageorgakis and P.Richmond, "AdS ₇ black-hole entropy and 5D $\mathcal{N} = 2$ Yang-Mills," JHEP 01 (2020), 017	16, 19
34	A.Lanir, A.Nedelin and O.Sela, "Black hole entropy function for toric theories via Bethe Ansatz," JHEP 04 (2020), 091	16, 17, 19, 20
35	C.Closset and H.Kim, "Three-dimensional $\mathcal{N}=2$ supersymmetric gauge theories and partition functions on Seifert manifolds: A review," Int. J. Mod. Phys. A 34 (2019) no.23, 1930011	16
36	N.Bobev and P.M.Crichigno, "Universal spinning black holes and theories of class \mathcal{R} ," JHEP 12 (2019), 054	16, 17, 20, 22
37	J.Nian and L.A.Pando Zayas, "Microscopic entropy of rotating electrically charged AdS ₄ black holes from field theory localization," JHEP 03 (2020), 081	16, 17, 18, 19, 22
38	K.Goldstein, V.Jejjala, Y.Lei, S.van Leuven and W.Li, "Probing the EVH limit of supersymmetric AdS black holes," JHEP 02 (2020), 154	16, 22
39	A.Arabí Ardehali, J.Hong and J.T.Liu, "Asymptotic growth of the 4d $\mathcal{N} = 4$ index and partially deconfined phases," JHEP 07 (2020), 073	16
40	M.Suh, "Holographic renormalization group flows in two-dimensional gravity and AdS black holes," JHEP 07 (2020), 209	16, 17, 19, 20
41	P.Karndumri, "Supersymmetric AdS ₂ × Σ_2 solutions from tri-sasakian truncation," Eur. Phys. J. C 77 (2017) no.10, 689	17
42	N.Bobev and P.M.Crichigno, "Universal RG Flows Across Dimensions and Holography," JHEP 12 (2017), 065	17
43	J.T.Liu, L.A.Pando Zayas, V.Rathee and W.Zhao, "One-Loop Test of Quantum Black Holes in anti-de Sitter Space," Phys. Rev. Lett. 120 (2018) no.22, 221602	17

44	Y.Pang, J.Rong and O.Varela, "Spectrum universality properties of holographic Chern-Simons theories," JHEP 01 (2018), 061	17
45	A.Cabo-Bizet, U.Kol, L.A.Pando Zayas, I.Papadimitriou and V.Rathee, "Entropy functional and the holographic attractor mechanism," JHEP 05 (2018), 155	17
46	C.Toldo and B.Willett, "Partition functions on 3d circle bundles and their gravity duals," JHEP 05 (2018), 116	17
47	A.Guarino, "Hypermultiplet gaugings and supersymmetric solutions from 11D and massive IIA supergravity on $\mathbb{H}^{(p,q)}$ spaces," Eur. Phys. J. C 78 (2018) no.3, 202	17
48	H.Kim, N.Kim and M.Suh, "On the $U(1)^2$ -Invariant Sector of Dyonically Maximal Supergravity," J. Korean Phys. Soc. 73 (2018) no.3, 249-258	17
49	N.Bobev, V.S.Min and K.Pilch, "Mass-deformed ABJM and black holes in AdS_4 ," JHEP 03 (2018), 050	17
50	D.Gang and N.Kim, "Large N twisted partition functions in 3d-3d correspondence and Holography," Phys. Rev. D 99 (2019) no.2, 021901	17
51	P.M.Crichigno, D.Jain and B.Willett, "5d Partition Functions with A Twist," JHEP 11 (2018), 058	17
52	N.Daniele, F.Faedo, D.Klemm and P.F.Ramírez, "Rotating black holes in the FI-gauged $N=2$, $D=4$ $\overline{\text{MCC}}^n$ model," JHEP 03 (2019), 151	17, 18
53	D.Jain and A.Ray, "3d $\mathcal{N}=2$ \widehat{ADE} Chern-Simons quivers," Phys. Rev. D 100 (2019) no.4, 046007	17
54	J.P.Gauntlett, D.Martelli and J.Sparks, "Toric geometry and the dual of \mathcal{I} -extremization," JHEP 06 (2019), 140	17, 20
55	H.Kim and N.Kim, "Black holes with baryonic charge and \mathcal{I} -extremization," JHEP 11 (2019), 050	17
56	D.Gang, N.Kim and L.A.Pando Zayas, "Precision Microstate Counting for the Entropy of Wrapped M5-branes," JHEP 03 (2020), 164	17, 18
57	P.Benetti Genolini, J.M.Perez Ipiña and J.Sparks, "Localization of the action in AdS/CFT," JHEP 10 (2019), 252	17, 18
58	A.Guarino, J.Tarrío and O.Varela, "Halving ISO(7) supergravity," JHEP 11 (2019), 143	17
59	O.Varela, "Minimal $D=4$ truncations of type IIA," JHEP 11 (2019), 009	17

60	L.A.Pando Zayas and Y.Xin, ``Topologically twisted index in the 't Hooft limit and the dual AdS ₄ black hole entropy," Phys. Rev. D 100 (2019) no.12, 126019	17, 18
61	J.Hong, N.T.Macpherson and L.A.Pando Zayas, ``Aspects of AdS ₂ classification in M-theory: solutions with mesonic and baryonic charges," JHEP 11 (2019), 127	17
62	F.Benini, D.Gang and L.A.Pando Zayas, ``Rotating Black Hole Entropy from M5 Branes," JHEP 03 (2020), 057	17, 18, 20
63	J.P.Gauntlett, D.Martelli and J.Sparks, ``Fibred GK geometry and supersymmetric AdS solutions," JHEP 11 (2019), 176	17
64	S.Choi and C.Hwang, ``Universal 3d Cardy Block and Black Hole Entropy," JHEP 03 (2020), 068	17, 18, 22
65	A.Guarino, C.Sterckx and M.Trigiante, `` $\mathcal{N}=2$ supersymmetric S-folds," JHEP 04 (2020), 050	17
66	P.Karndumri and C.Maneerat, ``Supersymmetric solutions from N=5 gauged supergravity," Phys. Rev. D 101 (2020) no.12, 126015	17
67	N.Cribiori and G.Dall'Agata, ``On the off-shell formulation of $\mathcal{N}=2$ supergravity with tensor multiplets," JHEP 08 (2018), 132	18
68	M.Fluder, S.M.Hosseini and C.F.Uhlemann, ``Black hole microstate counting in Type IIB from 5d SCFTs," JHEP 05 (2019), 134	18
69	S.M.Hosseini and A.Zaffaroni, ``Geometry of \mathcal{I} -extremization and black holes microstates," JHEP 07 (2019), 174	18
70	A.González Lezcano and L.A.Pando Zayas, ``Microstate counting via Bethe Ansätze in the 4d $\mathcal{N} = 1$ superconformal index," JHEP 03 (2020), 088	19
71	M.Suh, ``Supersymmetric AdS ₆ black holes from F(4) gauged supergravity," JHEP 01 (2019), 035	20
72	M.Suh, ``Supersymmetric AdS ₆ black holes from matter coupled F(4) gauged supergravity," JHEP 02 (2019), 108	20
73	G.Dibitetto and N.Petri, ``AdS ₂ solutions and their massive IIA origin," JHEP 05 (2019), 107	20
74	D.Corbino, E.D'Hoker, J.Kaidi and C.F.Uhlemann, ``Global half-BPS AdS ₂ × S ⁶ solutions in Type IIB," JHEP 03 (2019), 039	20
75	E.Malek, H.Samtleben and V.Vall Camell, ``Supersymmetric AdS ₇ and AdS ₆ vacua and their consistent truncations with vector multiplets," JHEP 04 (2019), 088	20

76	J.M.Penin, A.V.Ramallo and D.Rodríguez-Gómez, ``Supersymmetric probes in warped AdS ₆ ," JHEP 10 (2019), 021	20
77	N.Kim and M.Shim, ``Wrapped Brane Solutions in Romans F(4) Gauged Supergravity," Nucl. Phys. B 951 (2020), 114882	20
78	C.F.Uhlemann, ``Exact results for 5d SCFTs of long quiver type," JHEP 11 (2019), 072	20
79	K.Chen and M.Gutperle, ``Holographic line defects in F(4) gauged supergravity," Phys. Rev. D 100 (2019) no.12, 126015	20
80	L.Wulff, ``Constraining integrable AdS/CFT with factorized scattering," JHEP 04 (2019), 133	21
81	P.Benetti Genolini and P.Richmond, ``Topological AdS/CFT and the Ω deformation," JHEP 10 (2019), 115	21
82	M.Gutperle and M.Vicino, ``Holographic Surface Defects in D=5, N=4 Gauged Supergravity," Phys. Rev. D 101 (2020) no.6, 066016	21
83	A.F.Faedo, C.Nunez and C.Rosen, ``Consistent truncations of supergravity and $\frac{1}{2}$ -BPS RG flows in 4d SCFTs," JHEP 03 (2020), 080	21
84	D.Astesiano and S.L.Cacciatori, ``Super throats with non trivial scalars," JHEP 07 (2020), 017	22
85	N.Bobev, F.F.Gautason and K.Parmentier, ``Holographic Uniformization and Black Hole Attractors," JHEP 06 (2020), 095	22