

Curriculum Vitae

OSOBNI PODACI

Ime i prezime	BLAŽENKA MELIĆ
Titula	Dr.sc. (Dr.rer.nat.) znanstvena savjetnica u trajnom zvanju IRB-a nasl. prof. Sveučilišta u Zagrebu (2/2026-) nasl. izv. prof. Sveučilišta u Zagrebu (5/2020-5/2025)
Godina i ustanova stjecanja doktorata	1994, Sveučilište u Karlsruheu, Njemačka
Adresa	Institut „Ruđer Bošković“, Bijenička c. 54, Zagreb
Telefon	01/4561033
Telefaks	01/4561033
E-adresa	melic@thphys.irb.hr
Osobna mrežna stranica	http://www.irb.hr/Ljudi/Blazenka-Melic
Državljanstvo	hrvatsko
Datum i mjesto rođenja	15.9.1967, Karlovac, Hrvatska

PODRUČJE ISTRAŽIVANJA

Glavno polje istraživanja	Teorijska fizika elementarnih čestica
	Fizika kvarkova, perturbativna i neperturbativna kvantna kromodinamika, fizika na sudaračima čestica, fizika izvan Standardnog modela

RADNO ISKUSTVO

Datum (od – do)	9/2016 – 9/2022
Ustanova zaposlenja	Institut „Ruđer Bošković“
Naziv radnog mjesta	Predstojnica Zavoda za teorijsku fiziku
Datum (od – do)	3/2013 –
Ustanova zaposlenja	Institut „Ruđer Bošković“
Naziv radnog mjesta	Voditeljica Grupe za fiziku čestica i kozmologiju
Datum (od – do)	1-2/2026 –
Ustanova	Sveučilište u Zagrebu
Naziv	Naslovno nastavno-znanstveno zvanje redovite profesorice
Datum (od – do)	11/2015 – 11/2019
Ustanova	Sveučilište u Rijeci
Naziv	Naslovno nastavno-znanstveno zvanje redovite profesorice
Datum (od – do)	7/2017 –
Ustanova zaposlenja	Institut „Ruđer Bošković“
Naziv radnog mjesta	Znanstvena savjetnica u trajnom zvanju
Datum (od – do)	5/2020 – 5/2025

Ustanova Sveučilište u Zagrebu
 Naziv Naslovno nastavno-znanstveno zvanje izvanredne profesorice

Datumi (od -do) 7/2012 – 7/2017
 Ustanova zaposlenja Institut „Ruđer Bošković“
 Naziv radnog mjesta Znanstvena savjetnica

Datumi (od -do) 6/2006 – 7/2012
 Ustanova zaposlenja Institut „Ruđer Bošković“
 Naziv radnog mjesta Viša znanstvena suradnica

Datumi (od – do) 12/2002 – 06/2006
 Ustanova zaposlenja Institut „Ruđer Bošković“
 Naziv radnog mjesta Znanstvena suradnica

Datumi (od – do) 12/1994 – 12/2002
 Ustanova zaposlenja Institut „Ruđer Bošković“
 Naziv radnog mjesta Viša asistentica

do) Datumi (od – 4/1991 – 12/1994
 Ustanova zaposlenja Institut „Ruđer Bošković“
 Naziv radnog mjesta Asistentica

ŠKOLOVANJE

Datum 4/11/**1994**
 Mjesto Karlsruhe, Njemačka
 Ustanova **Universität Karlsruhe**, Institut für theoretische Teilchenphysik
 Zvanje **Dr. rer. nat.**

Datum 4/1991-12/1992
 Mjesto Zagreb
 Ustanova Sveučilište u Zagrebu, poslijediplomski studij

Datum 22/1/**1991**
 Mjesto Zagreb
 Ustanova **Sveučilište u Zagrebu**
 Zvanje **Dipl. ing. Fizike**

Datum 10/1986-1/1991
 Mjesto Zagreb
 Ustanova Sveučilište u Zagrebu, diplomski studij

DUŽA GOSTOVANJA NA INOZEMNIM INSTITUCIJAMA

Godina 10/2012-4/2013
 Mjesto Riverside, USA
 Ustanova University of California Riverside
 Status *gostujuća profesorica – Fulbright stipendija*

Godina 4-6/2018
 Mjesto Mainz, Njemačka
 Ustanova Universität Mainz, Institut für Physik
 Status *gostujuća znanstvenica- Alexander von Humboldt stipendija*

Godina 11-12/2011

Mjesto *Ljubljana, Slovenija*
 Ustanova *Institut Jožef Stefan*
 Status *gostujuća znanstvenica*

Godina *11-12/2008*
 Mjesto *Haifa, Izrael*
 Ustanova *Technion*
 Status *gostujuća znanstvenica*

Godina *6/2007*
 Mjesto *Geneva, Švicarska*
 Ustanova *CERN*
 Status *gostujuća znanstvenica*

Godina *11/2002 – 5/2003*
 Mjesto *Karlsruhe, Njemačka*
 Ustanova *Universität Karlsruhe, Institut für theoretische Teilchenphysik*
 Status *gostujuća znanstvenica*

Godina *5/2001- 10/2002*
 Mjesto *Mainz, Njemačka i Würzburg, Njemačka*
 Ustanova *Universität Mainz, Institut für Physik i Universität Wuerzburg, Institut für Theoretische Physik und Astrophysik*
 Status *gostujuća znanstvenica - **Alexander von Humboldt stipendija***

Godina *12/1992- 11/1994*
 Mjesto *Karlsruhe, Njemačka*
 Ustanova *Universität Karlsruhe, Institut für theoretische Teilchenphysik*
 Status *doktorski studij*

NAGRADE

2026 Nagrada grada Zagreba
 2002 Alexander von Humboldt stipendija
 2012 Fulbright stipendija

2020, 2021, 2022 (2 rada), 2024 - godišnja nagrada IRBa za znanstveni rad

ZNANSTVENI PROJEKTI

(VOĐENJE I SUDJELOVANJE; IZVOR FINANCIRANJA)

Trenutni projekti:

12/2024- **voditeljica** znanstvenog projekta „Neperturbativni QCD u fizici teških okusa“ – IP-2024-05-4427 financirano preko Hrvatske zaklade za znanost (HrZZ) -162.690,00 eur

12/2024- **suradnica** na znanstvenom projektu „Semileptonske probe u fizici b-kvarkova na budućim ekperimentima okusa“ – IP-2024-05-6159 financirano preko Hrvatske zaklade za znanost (HrZZ)

Završeni projekti:

2/2020-7/2024 **voditeljica** znanstvenog projekta „Raspadi i vremena života teških hadrona“ – financirano preko Hrvatske zaklade za znanost (HrZZ) - 894.000 kn

1/2021-6/2024 **voditeljica** institucijske suradnje između instituta Ruđer Bošković i Sveučilišta u Siegeni i Sveučilišta u Munchenu/Durhamu kroz međunarodni projekt Alexander von Humboldt fondacije " Understanding Flavour Anomalies in Heavy Quark Decays", 50.000 Eur

6/2018 - 6/2020 **voditeljica** strukturnog projekta "Sinergijom do uspjeha: RBI-T-WINNING i ESIF udruženi u jačanju izvrsnosti Zavoda za teorijsku fiziku Instituta Ruđer Bošković (RBI-TWINN-SIN), financirano od Europske Unije kroz Europski regionalni fond za razvoj – operativni program konkurentnost i kohezija (KK.01.1.1.06)– 1.500.000 kn

2014-2018 **voditeljica** znanstveno-istraživačkog projekta "Fizika unutar i izvan Standardnog modela" financiranog od strane HrZZ-a, 770.000 kn

2017-2021 suradnica na znanstveno-istraživačkom projektu "Fizika teraskale na LHC-u i u svemiru" financiranog od strane HrZZ-a

2005-2010 **voditeljica** institucijske suradnje između instituta Ruđer Bošković i Sveučilišta u Siegenu kroz međunarodni projekt Alexander von Humboldt fondacije "QCD sum rules for exclusive decays of heavy hadrons", 50.000 Eur

2009-2010 **voditeljica** međunarodnog francusko-hrvatskog COGITO projekta "Final state interaction in non-leptonic D- and B-decays"

2006-2013 istraživač na znanstveno-istraživačkom projektu financiranom od strane MZOŠ-a "Temeljne interakcije u fizici elementarnih čestica i kozmologiji" 098-0982930-2864

2004-2006 istraživač na hrvatsko-austrijskom projektu "Hard exclusive photo- and electroproduction of heavy quarkonium"

2003-2005 istraživač na DFG projektu (436 KRO 113/6/0-1) "Higher-order QCD corrections in exclusive processes - mesons and baryons"

MEDUNARODNE SURADNJE

Brojne uspješne znanstvene suradnje s cijelim nizom znanstvenika u svijetu (U. Karlsruhe, U. Wuerzburg, Taiwan Natl. Cheng Kung U., U. Siegen, U. Ljubljana, U. California Riverside, Tartu U., LPT Orsay, Nankai U, U. of South Carolina...)

od 2005 - kraći boravci na Universität Siegen, Fakultät IV/Department Physik (prof. Th. Mannel, prof. A Khodjamirian - 7 zajedničkih radova)

od 2013- kraći boravci na LPT Orsay (dr. Damir Becirevic – 3 zajednička rada)

4-6/2018 Universität Mainz, Institut für Physik (prof. M. Neubert, prof. J. Koerner – 1 zajednički rad) / Alexander von Humboldt fondacija

10/2012-4/2013 University of California Riverside, USA (prof. J.Wudka – 3 zajednička rada, prof. E. Ma -1 zajednički rad)/ Fulbrightova fondacija

11-12/2012 Jožef Stefan Institute, Ljubljana (prof. S.Fajfer – 2 zajednička rada)

11-12/2008 Technion, Haifa, Israel (prof. G. Eilam – 1 zajednički rad)

8/2007 CERN, Geneva (prof. R. Fleischer)

11/2002-5/2003 Universität Karlsruhe, Institut für theoretische Teilchenphysik (prof. Th. Mannel, prof A. Khodjamirian)

5/2001- 10/2002 Universität Mainz, Institut für Physik (prof. J. Koerner – 2 zajednička rada) i Universität Wuerzburg , Institut für Theoretische Physik und Astrophysik (prof. R. Rueckl – 2 rada) / Alexander von Humboldt fondacija

4/1999 - 6/1999 Universität Mainz, Institut für Physik (prof. J. Koerner– 1 zajednički rad)

12/1992-11/1994 Universität Karlsruhe, Institut für theoretische Teilchenphysik (prof. H. Pilkuhn, PhD mentor– 2 rada

NASTAVNA DJELATNOST
(PREDDIPLOMSKA, DODIPLOMSKA, DIPLOMSKA, POSLIJEDIPLOMSKA NASTAVA)

od 2016/17 nositeljica obavezni poslijediplomski kolegij "Fizika elementarnih čestica" na Sveučilištu u Zagrebu

od 2023 inicijatorica i nositeljica poslijediplomskog kolegija ""Efektivne teorije polja" na Sveučilištu u Zagrebu

2014 -2016 diplomski kolegij "Fizika elementarnih čestica" na Sveučilištu u Rijeci - nositeljica kolegija

2005/2006-2016 poslijediplomski kolegij "Efektivne teorije polja i fizika teških kvarkova" na Sveučilištu u Zagrebu - inicijatorica i nositeljica kolegija

2012-2013/ lj.sem poslijediplomski kolegij "Advanced quantum mechanics and quantum field theory" na University of California Riverside, USA - nositeljica kolegija

2005-2006/ lj.sem diplomski kolegij "Fizika elementarnih čestica" na Sveučilištu u Zagrebu - predavač

1991-1992/ lj.sem diplomski kolegij "Uvod u strukturu materije" na Sveučilištu u Zagrebu – asistent

VOĐENJE MLADIH SURADNIKA
(DIPLOMSKI RADOVI, DOKTORATI, POSLIJEDOKTORANDI)

Doktorandi:

- Domagoj Leljak, dr.sc.. teza "Testing of the Standard Model in heavy quark decays", 7/2021, projekt DOK-2015-10-6029 (Fizika unutar i van Standardnog modela) - 4 zajednička Q1 rada

- Lovro Dulibic, obrana predviđena za 2026, „Nonperturbative QCD“ , projekt DOK-2020-01-6272 (Raspadi i vremena života teških hadrona) - 2 zajednička Q1 rada

Poslijedoktorandi:

- Monalisa Patra 2015-2017

- Kenji Nishiwaki 2018-2019

- James Gratrex 2020-2022

- Aleksei Kachanovich 2021-2023

- Alam Khan 12/2025-11/2026

Diplomandi: Eugen Hukic, Mag. phys., teza "Decays and lifetimes of heavy hadrons" 3/2022

ORGANIZACIJA MEĐUNARODNIH SKUPOVA

2024 supredsjedateljica međunarodnog skupa "Quirks in Quark flavour physics", 2024, Zadar, lipanj 17-21 2024.

2022 supredsjedateljica međunarodnog skupa "Quirks in Quark flavour physics", 2022, Zadar, lipanj 14-17 2022.

2019 članica organizacijskog odbora međunarodne konferencije "Bridging perturbative and non-perturbative physics", Primošten, 7-9. listopada 2019

2014-2016-2018 članica advisory board-a međunarodne konferencije International Conference "LHC days in Split", Split, Sept. 29 - Oct. 4 2014, Sept. 19-24 2016, Sept 17 -22. 2018

2017 članica organizacijskog odbora međunarodnog workshopa „Current Trends in Flavor Physics“, Paris,

France, 29 – 31 March 2017

2010 članica organizacijskog odbora međunarodne konferencije 3rd International Conference on Nuclear and Particle Physics with CEBAF at Jefferson Lab, NAPP 2010, Dubrovnik, 3-8. listopada 2010

2009 supredsjedateljica međunarodnog skupa "Progress and Challenges in Particle Physics", Primošten, 29. rujna - 03. listopada 2009

2006 članica organizacijskog odbora međunarodne konferencije "2006 LHC days in Split", Split, 2-7. listopada 2006

UREDNIŠTVO I RECENZIRANJE U ZNANSTVENIM ČASOPISIMA

2012 –2017 članica uredništva u The Scientific World Journal u dijelu iz područja fizike visokih energija

2004 – 2010 pridružena urednica znanstvenog časopisa "Fizika B"

učestalo **recenziranje** (više od 100 radova) za slijedeće časopise:

"Nuclear Physics B" (od 2014. -)

"European Physical Journal A" (od 2012. -)

"Physical Review Letters" (od 2005. -)

"Physical Review D" (od 2004. -),

"European Physical Journal C" (od 2004. -),

"Journal of Physics G: Nuclear and Particle Physics" (od 2001. -)

ČLANSTVA U ZNANSTVENIM ORGANIZACIJAMA I TIJELIMA, POVJERENSTVIMA I ODBORIMA

2013—danās (s prekidom 9/2022-2/2024)) članica Znanstvenog vijeća Instituta Ruđer Bošković

2022—danās članica ERC (European Research Council) panela 2022/23, 2024/25

2019-2023 članica panela HrZZ na IP-2019 i koordinatorica HrZZ panela u području fizike na callu IP-2022

2019 – danās članica Povjerenstva za suradnju s Europskom organizacijom za nuklearna istraživanja (CERN) u Ministarstvu znanosti i obrazovanja

2021- 2025 predstavnica Instituta „Ruđer Bošković“ u Vijeću doktorskog studija Fizičkog odsjeka PMFa

2013- 2021 zamjenica koordinatora IRB-a za suradnju s PMF-om

2011-2016 voditeljica Povjerenstva za nabavu računalne opreme IRB-a

2001 članica delegacije Ministarstva znanosti, obrazovanja i sporta, vođenog od strane ministra H. Kraljevića u pregovorima oko ulaska Hrvatske u CERN

2011-2014 voditeljica Povjerenstva za nabavu računalne opreme IRB-a

2007-2009 članica Upravnog odbora Kluba hrvatskih humboldtovaca

članica Kluba hrvatskih humboldtovaca

članica kluba Hrvatski fulbrightovci

ZNANSTVENA POSTIGNUĆA

(ZNANSTVENI RADOVI; CITIRANOST; PREDAVANJA NA MEĐUNARODNIM SKUPOVIMA I INSTITUCIJAMA)

*citati prema inSPIRE'HEP 4/2026
(CC = članci u Current Content časopisima)*

CITIRANOST (SLAC INSPIRE database, 4/2026):

- ukupan broj publiciranih članaka: **54** (51 u CC od čega 48 u Q1 časopisima)
- ukupan broj radova u zbornicima: **37** (19 u CC recenziranim zbornicima radova)
- ukupna citiranost: **> 2200**
- prosječna citiranost po publiciranom članku: **38**
- h-indeks: **28**

PREDAVANJA:

- pozvana plenarna predavanja na međunarodnim konferencijama: **15**
- pozvana predavanja na međunarodnim konferencijama: **34**
- ostala predavanja na međunarodnim konferencijama: **6**
- seminari na stranim institucijama: **17**
- ostala predavanja (javna, međun. škole): **3**

PUBLICATION LIST

A1: Articles in CC journals

1. L. Dulibić, B. Melić, A.A. Petrov: Nonperturbative Dynamics in D-meson Mixing, arXiv: 2508.16337, JHEP 12 (2025) 112
2. B. Melić, M. Rebold: Form factors and phenomenology of B(s) and D(s) semileptonic decays to η and η' , arXiv: 2507.13734, JHEP 10 (2025) 025
3. B. Melić, I. Nišandžić: Nonperturbative Parameters of Inclusive Λb Decays from Small Velocity Sum Rules, arXiv: 2506.05134, JHEP 11 (2025) 048
4. A. Khodjamirian, B. Melić, Y-M Wang: A guide to the QCD light-cone sum rules for b -quark decays, Eur.Phys.J.ST 233 (2024)2, 271-298, Eur.Phys.J.ST (2023)
5. L. Dulibić, J. Gratrex, B. Melić, I. Nišandžić, M.L. Piscopo: Revisiting lifetimes of doubly charmed baryons, JHEP 07 (2023)061
6. J. Gratrex, A. Lenz, B. Melić, I. Nišandžić, M.L. Piscopo: Quark-hadron duality at work: lifetimes of bottom baryons, JHEP 04 (2023)034
7. D. Lejčak, B. Melić, F. Novak, M. Rebold, D. Van Dyk: Toward a complete description of $b \rightarrow u\ell\nu$ decays within the Weak Effective Theory, JHEP 08 (2023) 063
8. J. Gratrex, B. Melić, I. Nišandžić: Lifetimes of singly charmed baryons, JHEP 07 (2022) 058.
9. D. Lejčak, B. Melić, D. Van Dyk: The $B \rightarrow \pi$ form factors from QCD and their impact on $|V_{ub}|$, JHEP 07 (2022) 036.
10. A. Khodjamirian, B. Melić, Y-M. Wang, Y-B. Wei: The D^*D_{π} and B^*B_{π} couplings from light-cone sum rules, JHEP 03 (2021) 016.
11. D. Lejčak, B. Melić: $|V_{ub}|$ determination and testing of the lepton flavour universality in semileptonic $B_c \rightarrow D^{(*)}$ decays, JHEP 2002 (2020) 171.
12. S. Groote, J.G. Koerner, B. Melić :A new angle on an old problem: Helicity approach to neutron beta decay in the Standard Model, Eur.Phys.J C79 (2019) 11.948
13. D. Lejčak, B. Melić, M.Patra: On the lepton flavour universality in semileptonic $B_c \rightarrow \eta(c), J/\psi$ decays, JHEP 1905 (2019) 094
14. S. Fajfer, B. Melić, M.Patra: Testing spin-2 mediator in $B \rightarrow s \mu^+ \mu^-$, Phys.Rev. D97 (2018) no.9, 095036.
15. D. Bečirević, B. Melić, M. Patra, O. Sumensari, Seeking the CP-odd Higgs via $h \rightarrow \eta(c,b)\ell^+\ell^-$, Phys.Rev. D97 (2018) no.1, 015008.
16. O.Antipin, B. Melić: Revisiting the decoupling effects in the running of the Cosmological Constant, Eur.Phys.J. C77 (2017) no.9, 583.
17. B. Melić, M. Patra: Exploring the Top-Higgs FCNC Couplings at Polarized Linear Colliders with Top Spin Observables, JHEP 1701 (2017) 048.
18. G. Duplanić, B. Melić: Form factors of $B, B_s \rightarrow \eta(\prime)$ and $D, D_s \rightarrow \eta(\prime)$ transitions from QCD light-cone rules, JHEP 1511 (2015) 138.
19. D. Bečirević, G. Duplanić, B. Klajn, B. Melić and F. Sanfilippo: Lattice QCD and QCD sum rule determination of the decay constants of $\eta_c, J/\psi$ and h_c states, Nucl.Phys. B883 (2014) 306-327.
20. S. Bhattacharya, B. Melić and J. Wudka: Pionic Dark Matter, JHEP 1402 (2014) 115.
21. E. Ma and B. Melić: Updated S3 model of quarks, Phys. Lett. B 725 (2013) 402
22. S. Fajfer, J.F. Kamenik and B. Melić: Discerning New Physics in Top-Antitop Production using Top Spin Observables at Hadron Colliders, JHEP 1208 (2012) 114.
23. S. Groote, J.G. Koerner, B. Melić and S. Prelovšek: Survey of top quark polarization at a polarized linear e^+e^- collider, Phys.Rev. D 83 (2011) 054018.
24. G. Eilam, B. Melić and J. Trampetić: CP violation and the 4th generation, Phys. Rev. D 80 (2009)116003.
25. G. Duplanić and B. Melić: $B, B_s \rightarrow K$ form factors: An update of light-cone sum rule results, Phys. Rev. D 78 (2008) 054015.
26. G. Duplanić, A. Khodjamirian, Th. Mannel, B. Melić and N. Offen: Light-cone sum rules for $B \rightarrow \pi$ form factors revisited, JHEP 0804 (2008) 014.
27. A. Khodjamirian, Th. Mannel, M. Melcher and B. Melić: Annihilation effects in $B \rightarrow \pi \pi$ from QCD light-cone sum rules, Phys. Rev. D 72 (2005) 094012.
28. B. Melić, K. Passek-Kumerički and J. Trampetić: $K \rightarrow \pi \gamma$ decays and space-time noncommutativity, Phys. Rev. D 72 (2005) 057502.
29. B. Melić, K. Passek-Kumerički and J. Trampetić: Quarkonia decays into two photons induced by the space-time non-commutativity, Phys. Rev.D 72 (2005) 054004,

30. B. Melić, K. Passek-Kumerički, J. Trampetić, P. Schupp and M. Wohlgenannt: The Standard model on non-commutative space-time: strong interactions included, *Eur. Phys. J. C* 42 (2005) 499-504.
31. B. Melić, K. Passek-Kumerički, J. Trampetić, P. Schupp and M. Wohlgenannt, The Standard model on non-commutative space-time: electroweak currents and Higgs sector, *Eur. Phys. J. C* 42 (2005) 483-497.
32. B. Melić: LCSR analysis of exclusive two body B decay into charmonium, *Phys. Lett. B* 591 (2004) 91.
33. A. Babić, B. Guberina, B. Melić and H. Štefančić: Cabibbo-suppressed decays of the Ω_c -feedback to the $\Xi+c$ lifetime, *Phys. Rev. D* 70 (2004) 117501.
34. B. Melić, B. Nižić and K. Passek: A note on the factorization scale independence of the PQCD prediction for exclusive processes, *Eur. Phys. J. C* 36 (2004) 453-458.
35. A. Khodjamirian, Th. Mannel and B. Melić: QCD Light-Cone Sum Rule Estimate of Charming Penguin Contributions in $B \rightarrow \pi \pi$, *Phys. Lett. B* 571 (2003) 75-84, *Phys. Lett. B* 572 (2003) 171-180 (published twice in journal).
36. B. Melić: Nonfactorizable contributions to $B \rightarrow J/\psi K$, *Phys. Rev. D* 68 (2003) 034004.
37. B. Melić, D. Mueller and K. Passek-Kumerički: Next-to-next-to-leading prediction for the photon-to-pion transition form factor, *Phys. Rev. D* 68 (2003) 014013.
38. B. Melić, B. Nižić and K. Passek: BLM scale setting for the pion transition form factor, *Phys. Rev. D* 65 (2002) 053020.
39. J. G. Koerner, B. Melić and Z. Merebashvili: Analyticity, crossing and the absorptive parts of the one-loop contributions to the quark-quark-gluon gauge boson four-point function, *Phys. Rev. D* 62 (2000) 96011.
40. J. G. Koerner and B. Melić: Exclusive-inclusive ratio of semileptonic Λ_b -decays, *Phys. Rev. D* 62 (2000) 74008.
41. B. Guberina, B. Melić and H. Štefančić: Lifetime-difference of heavy hadrons, *Phys. Lett. B* 484 (2000) 43-50.
42. B. Guberina, B. Melić and H. Štefančić: Inclusive Decays and Lifetimes of Doubly Charmed Baryons, *Eur. Phys. J. C* 9 (1999) 213-219; Erratum, *ibidem*, 13 (2000) 551-551.
43. B. Guberina, B. Melić and H. Štefančić: Enhancement of preasymptotic effects in inclusive beauty decays, *Phys. Lett. B* 469 (1999) 253-258.
44. H.-n. Li and B. Melić: Determination of heavy meson wave functions from B decays, *Eur. Phys. J. C* 11 (1999) 695-702.
45. B. Melić: Perturbative approach to the penguin-induced $B \rightarrow \pi \Phi$ decay, *Phys. Rev. D* 59 (1999) 074005.
46. D. Klabučar, K. Kumerički, B. Melić and I. Picek: On the instanton-induced portion of the nucleon strangeness, *Eur. Phys. J. C* 9 (1999) 589-599.
47. B. Melić, B. Nižić and K. Passek: Complete next-to-leading order perturbative QCD prediction for the pion form factor, *Phys. Rev. D* 60 (1999) 074004.
48. B. Guberina and B. Melić: Inclusive charmed baryon decays and lifetimes, *Eur. Phys. J. C* 2 (1998) 697-703.
49. B. Melić and S. Meljanac: Permutation invariant statistics, duality and simple interpolations, *Phys. Lett. A* 226 (1997) 22-30.
50. B. Melić: Hydrogenic atoms with spinless nucleus in a magnetic field, *J. Phys. B* 27 (1994) 3849-3862.
51. B. Melić: Zeeman splitting in neutral hydrogenic atoms with spinless nucleus, *J. Phys. B* 27 (1994) 993-1003.

A2: Articles in non-CC journals

52. B. Melić, B. Nižić and K. Passek: On the complete next-to-leading order PQCD prediction for the pion form factor, *Fizika B* 8 (1999) 327-334
53. D. Klabučar, K. Kumerički, B. Melić, and I. Picek: Nucleon strangeness as the response to a strangeness-sensitive probe in a class of hadrons models, *Fizika B* 8 (1999) 505-534
54. A.T. Goritschnig, B. Melić, K. Passek-Kumerički and W. Schweiger: Hard Exclusive Photoproduction of Φ and J/Ψ Mesons, *Prog. Part. Nucl. Phys.* 61 (2008) 173-174.

B1: Articles in CC journals - refereed proceedings

1. J. G. Koerner and B. Melić: Exclusive and inclusive semileptonic Λ_b -decays, *Nucl. Phys. Proc. Suppl.* 93 (2000) 13-17.

2. D. Klabučar, K. Kumerički, B. Melić, and I. Picek: Proton strangeness induced by instantons, Proc. of International workshop Symmetry and spin, Czech. J. Phys. 50 (2000) S1 187-193.
3. B. Melić, B. Nižić and K. Passek: BLM scale for the pion transition form factor, Lect. Notes Phys. 616 (2003) 114-122.
4. B. Melić: Exclusive nonleptonic B decays from QCD light-cone sum rules, Lect. Notes Phys. 647 (2004) 287-301.
5. B. Melić: Estimate of the charming penguin contributions to $B \rightarrow \pi \pi$, Eur. Phys. J. C 33 (2004) S250-S252.
6. G. Duplančić, A. Khodjamirian, Th. Mannel, B. Melić and N. Offen: $|V_{ub}|$ determination using $B \rightarrow \pi$ form factor from light-cone sum rule, J.Phys. Conf. Ser. 110 (2008) 052026.
7. B. Melić: Charmless two-body B-meson decays in QCD, Nucl. Phys. Proc. Suppl. 209 (2011) 129-134.
8. S. Bhattacharya, B. Melić and J. Wudka: Dark Matter Pions, Acta Phys.Polon. B44 (2013) 11, 2359-2366.
9. B. Melić: DisCERNing new physics in $t\bar{t}$ -production from top-spin observables. J.Phys.Conf.Ser. 485 (2014) 012052.
10. A. T. Goritschnig, B. Melic, K. Passek-Kumericki, W. Schweiger: Hard Exclusive Φ and J/Ψ Photoproduction of a Proton, PoS DIS2014 (2014) 170.
11. S. Bhattacharya, B. Melić and J. Wudka: Pion-like dark matter, Nucl.Part.Phys.Proc. 273-275 (2016) 2329-2331.
12. D. Bečirević, G. Duplančić, B. Klajn, B. Melić, F. Sanfilippo: Charmonia decay constants from lattice QCD and QCD sum rules, Nucl.Part.Phys.Proc. 273 (2016) 1611-1617.
13. B. Melić, M. Patra: Using Spin Observables and Polarizations to Probe Top-Higgs FCNC Couplings at Colliders, J. Phys.Conf.Ser. 878 (2017) No.1, 012026.
14. O. Antipin and B. Melic: Decoupling effects in the running of the Cosmological Constant, PoS(EPS-HEP2017)043.
15. B. Melić, M. Patra: Probing Chirality of Top-Higgs FCNC Couplings at Linear Colliders, PoS(EPS-HEP2017)316.
16. D. Bečirević, B. Melić, M.Patra, O. Sumensari: Seeking a light CP-odd Higgs state, PoS EPS-HEP2017 (2018) 678.
17. O. Antipin and B. Melic: Revisiting decoupling effects in the running of the Cosmological Constant, Int.J.Mod.Phys. A33 (2018) no.34, 1845013.
18. J. Gratrex, B. Melić, I.Nisandzic: Charmed hadron lifetimes, PoS CORFU2022 (2023) 040
19. L. Dulibic, B. Melić, A. Petrov: D-Dbar mixing from nonlocal condensate contributions PoS ICHEP2024 (2025) 413

B2: Articles in other proceedings

20. B. Melić: On the perturbative approach to the penguin induced $B \rightarrow \pi \Phi$ decay, Proc. of The International Europhysics Conference, HEP99, Tampere, Finland, July 15-21, 1999, pp. 540-541.
21. D. Klabučar, K. Kumerički, B. Melić and I. Picek: On the instanton induced nucleon strangeness, Proc. of the XIth Rencontres de Blois, Blois, France, June 27 – July 3, 1999, pp. 279-281.
22. B. Melić, B. Nižić and K. Passek: On the PQCD prediction for the pion form factor, Proc. of the 6th INT / Jlab Workshop on Exclusive and Semiexclusive Processes at High Momentum Transfer, Newport News, Virginia, USA, May 20-22, 1999: Newport News 1999, Exclusive and semiexclusive processes at high momentum transfer, World Scientific, 2000, pp.279-286.
23. B. Guberina, B. Melić and H. Štefančić: Inclusive decays and lifetimes of doubly-charmed baryons, Proc. of XVII Autumn School, QCD: Perturbative or Nonperturbative?, Lisbon, Portugal, September 29 - October 4, 1999, pp. 363-368.
24. B. Guberina, B. Melić and H. Štefančić: Preasymptotic effects in Λ_b -decays, Proc. of The 3rd International Conference on B Physics and CP Violation, Taipei, Taiwan, December 3-7, 1999, pp. 156-159.
25. B. Guberina, B. Melić and H. Štefančić, Lifetime pattern of heavy hadrons, Proc. of The 30rd International Conference on High Energy Physics, ICHEP 2000, Osaka, Japan, July 27 - August 2, 2000, pp. 888-890.
26. B. Melić: Heavy Flavour Hadrons - inclusive decays and lifetimes, Proc. of the Int. Conf. "LHC days in Split", Split, Croatia, October 4-7, 2000, pp. 644-658.
27. B. Melić, B. Nižić and K. Passek: Scale dependence and NLO predictions for the pion form factor, Proc. of the Workshop on the Pion Form Factor, NIKHEF, Amsterdam, Holland, January 18, 2000, pp. 88-100.

28. B. Melić: The lifetimes of heavy hadrons - A theoretical appraisal , Proc. of the 4th International Conference on B Physics and CP Violation, BCP4, Ise-Shima, Japan, February 19-23, 2001, pp. 299-302.
29. B. Melić and R. Rueckl: Nonfactorizable effects in $B \rightarrow J/\psi K$, Proc. of the Workshop on B physics and CP violation, Frontier Science 2002, October 6-11, 2002, INFN, Frascati, Italy, in "Frascati 2002, Frontier science 2002", pp. 235-238.
30. A. Khodjamirian, Th. Mannel and B. Melić: Charming penguins in $B \rightarrow \pi \pi$ from QCD light-cone sum rules, Proc. of the Workshop on the CKM Unitarity Triangle, IPPP Durham, England, April 5-9, 2003, eConf C0304052:WG409, 2003.
31. B. Melić: Some aspects of (charmless) B decays from QCD light-cone sum rules, Proc. of the Int. Conference on Flavor Physics and CP Violation, FPCP 2003, Ecole Polytechnique, Paris, France, June 3-6, 2003, eConf C030603:JEU03, 2003, pp. 245-249.
32. A. Khodjamirian, Th. Mannel and B. Melić: Charmless B decays and QCD light-cone sum rules - a recent development , Proc. of the 4th International Workshop on the CKM Unitarity Triangle, Nagoya, Japan, December 12-16, 2006.
33. B. Melić: Introduction to Φ_2 from charmless B decays, Proc. of the 4th International Workshop on the CKM Unitarity Triangle, Nagoya, Japan, December 12-16, 2006.
34. A. Khodjamirian, Th. Mannel, M. Melcher and B. Melić: $B \rightarrow \pi \pi$ hadronic amplitudes from QCD light-cone sum rules, Proc. of EPS International Europhysics Conference on High Energy Physics (HEP-EPS 2005), Lisbon, Portugal, 21-27 Jul 2005, PoS HEP2005:194-197, 2006.
35. B. Melić: $B \rightarrow \pi$ and $B(s) \rightarrow K$ form factors and V_{ub} determination, Proc. of the 34th International Conference on the High Energy Physics (ICHEP08), Philadelphia, USA, July 29th- August 5th, 2008, SLAC's eConf Proceedings.
36. S. Groote, J.G. Koerner, B. Melić and S. Prelovšek: Single top quark polarization at $O(\alpha_S)$ in $t\text{-}\bar{t}$ production at a polarized linear e^+e^- collider, Proc. of 2nd LHC Forum Meeting, Munich, Germany, 14-15 July 2011 and Helmholtz Alliance Linear Collider Forum : Proceedings of the Workshops Hamburg, Munich, Hamburg 2010-2012, Germany.
37. A. Goritschnig, B. Melić, K. Passek-Kumericki, W. Schweiger: Hard Exclusive Φ and J/Ψ Photoproduction off a Proton, PoS DIS2014 (2014)

CONFERENCE TALKS AND SEMINARS

A: Invited plenary talks at international conferences

- 2002** "Exclusive nonleptonic B decays from QCD light-cone sum rules", International School on Heavy Quark Physics, Dubna, Russia, May 27 - Jun 5, 2002.
- 2003** "Some aspects of (charmless) B decays from QCD light-cone sum rules", International Conference on Flavor Physics and CP Violation, FPCP 2003, Ecole Polytechnique, Paris, France, June 3-6, 2003.
- 2003** "LCSR analysis of exclusive two-body B decays", 3rd International Workshop on B physics and CP violation (BCP3), Taipei, Taiwan, September 29 - October 1, 2003.
- 2010** "Charmless two-body B-decays in QCD", 3rd Workshop on Theory, Phenomenology and Experiments in Heavy Flavour Physics (Capri2010), Anacapri, Island of Capri, Italy, July 3- 5, 2010.
- 2011** "CP violation with the fourth generation of quarks", Int. Workshop The Role of Heavy Fermions in Fundamental Physics (Portoroz 2011), Portoroz, Slovenia, April 11- 14, 2011.
- 2017** "BSM Higgs decays with quarkonium", 12th Int. Workshop on Heavy Quarkonium (QWG 2017), Beijing, China, November 6-10, 2011.
- 2019** "Bc semileptonic decays as a probe of lepton flavour universality", COST workshop on Higgs and flavour physics: Present and Future, Lisbon, Portugal 14-17 January, 2019.
- 2019** "Semileptonic Bc decays", Int. Workshop "Implications of LHCb measurements and future prospects", CERN, Geneva, Switzerland, 16-18.10.2019.
- 2021** "Exclusive V_{ub} determination from QCD - solution to V_{ub} puzzle?", Int. Workshop Physics of the Flavourful Universe (Portoroz2021), Portoroz, Slovenia, September 21-24 2021.
- 2022** "Revisiting puzzles in lifetimes of singly charmed hadrons", 9th Workshop on Flavour Symmetries and Consequences in Accelerators and Cosmology (FLASY2022), Instituto Superior Technico, Lisbon, Portugal, June 27-July 1 2022.
- 2022** „Charm lifetimes“, Corfu2022 Workshop on the Standard Model and Beyond August 28 - September 8, 2022, Mon repos, Corfu, Greece
- 2023** „Charm Hadron Lifetimes and the status of D-Dbar mixing“, 11th International workshop on Charm Physics (CHARM 2023), Siegen, Germany, 17-21.7.2023

2025 „Exploring Charm Quark Dynamics: Lifetimes and Mixing Phenomena”, 12th International Workshop on Charm Physics (CHARM 2025), 12-16 May 2025, Tsung-Dao Lee Institute, Shanghai, China

B: Invited talks at international conferences

- 1999** “Perturbative approach to the penguin induced $B \rightarrow \pi \Phi$ decay”, invited talk (parallel session) given at the International Europhysics Conference, HEP99, Tampere, Finland, July 15-21, 1999 .
- 2000** “NLO prediction and scale dependence of the pion form factor”, invited talk given at the Workshop on the Pion Form Factor, NIKHEF, Amsterdam, Netherland, January 18, 2000 .
- 2000** “Lifetime pattern of heavy hadrons”, invited talk (parallel session) given at the 30th International Conference on the High Energy Physics, ICHEP 2000, Osaka, Japan, July 27 - August 2, 2000.
- 2000** “Heavy flavour hadrons - inclusive decays and lifetimes”, invited talk given at the International Conference “LHC days in Split”, Split, Croatia, October 4-7, 2000.
- 2002** “Nonfactorizable effects in $B \rightarrow J/\psi K$ ”, invited talk (parallel session) given at the Workshop on B physics and CP violation, Frontier Science 2002, INFN, Frascati, Italy, October 6-11, 2002.
- 2002** “Nonfactorizable effects in $B \rightarrow J/\psi K$ ”, invited talk (parallel session) given at the Workshop on B physics and CP violation, Frontier Science 2002, INFN, Frascati, Italy, October 6-11, 2002.
- 2003** “Charming penguins in $B \rightarrow \pi \pi$ from QCD light-cone sum rules”, invited (parallel session) talk given at the Workshop on the CKM Unitarity Triangle, IPPP Durham, England, April 5-9, 2003.
- 2003** “Estimate of charming penguins in $B \rightarrow \pi \pi$ ”, invited talk (parallel session) given at the International Europhysics Conference on High Energy Physics EPS , Aachen, Germany, July 17- 23, 2003.
- 2004** “Charmless B decays and (non)factorization”, invited talk given at the International conference 2004 LHC Days in Split, Split, Croatia, October 5-9, 2004.
- 2006** “QCD light-cone sum rules for charmless B decays - most recent developments”, invited talk given at the 4th International Workshop on the CKM Unitarity Triangle, Nagoya, Japan, December 12-16, 2006.
- 2006** “Introduction to Φ^2 from charmless B decays”, invited talk given at the 4th International Workshop on the CKM Unitarity Triangle, Nagoya, Japan, December 12-16, 2006.
- 2008** “ $B \rightarrow \pi$ and $B(s) \rightarrow K$ form factors and Vub determination”, invited talk given at the 34th International Conference on the High Energy Physics (ICHEP08), Philadelphia, USA, July 29- August 5, 2008.
- 2010** “B-physics in the LHC era - an overview”, invited talk given at the International conference LHC Days in Split - 2010, Split, Croatia, October 4-9, 2010.
- 2011** “The puzzling $B \rightarrow PP$ decays”, invited talk given at the Workshop “Colour meets flavour”, (Quantum Chromodynamics and Flavour Physics), University of Siegen, Germany, October 13-14, 2011.
- 2012** “Discerning new physics in tt -production from the top spin observables”, invited talk given at the 18th International Symposium on Particles, Strings and Cosmology, PASCOS2012, Merida, Mexico, June 3-8, 2012.
- 2013** “Pionic Dark Matter”, invited talk given at the workshop Selected Challenges in Particle Phenomenology, Belica, September 19-20, 2013.
- 2014** “Charmonia decay constants from QCD Sum Rules and Lattice QCD ”, invited talk given at the Int. Workshop „From Strange, through Charm and Beauty to the Top”, Ljubljana, April 16th, 2014.
- 2014** “Charmonia decay constants from lattice QCD and QCD sum rules”, invited talk given at PASCOS2014, 20th Int. Symposium on Particles, Strings and Cosmology, Warsaw, 22-27 June 2014.
- 2014** “Charmonia decay constants from lattice QCD and QCD sum rules”, invited talk given at the ICHEP2014, 37th International Conference on High Energy Physics (ICHEP), Valencia, 2nd- 9th July 2014.
- 2014** “Pion-like Dark Matter”, poster presentation at 37th International Conference on High Energy Physics ICHEP2014, Valencia, Spain, July 2-9, 2014.
- 2016** “Exploring the Top-Higgs FCNC Couplings at Colliders”, talk at the International Workshop “Hadronic Contributions to New Physics Searches”, 25-30 September 2016, Puerto de la Cruz, Tenerife, Spain.
- 2016** “Exploring the top-Higgs FCNC couplings at colliders”, talk at the International Workshop Selected topics in flavor and collider physics, Brda2016, October 19 - 21, 2016, Brda, Slovenia.
- 2016** “Using spin correlations to probe top-Higgs FCNC couplings at colliders”, talk at the International Workshop Discovery at the LHC, Kruger2016, December 3 - 9, 2016, Kruger Gate, South Africa.

- 2017** "Decoupling effects in the running of the Cosmological Constant", Pascos 2017, 19 – 23 June 2017, Madrid, Spain.
- 2017** "Probing Chirality of Top-Higgs FCNC Couplings at Linear Colliders", EPS Conference on High Energy Physics, 05 – 12 July 2017, Venice, Italy.
- 2017** "Decoupling effects in the running of the Cosmological Constant", EPS Conference on High Energy Physics, 05 – 12 July 2017, Venice, Italy.
- 2017** "BSM Higgs decays with quarkonium", 12th International Workshop on Heavy Quarkonium (QWG 2017), 6-10 November 2017 at Peking University in Beijing, Peking, China.
- 2018** "Testing a spin-2 mediator in $b \rightarrow s \mu \mu$ decay", Conference: Windows on the Universe, ICISE, August 5-11, 2018, Quy Nhon, Vietnam.
- 2023** „ $|V_{ub}|$ and the potential impact of new physics in exclusive $b \rightarrow u l \nu$ decays”, 12th International workshop on the CKM Unitarity Triangle (CKM 2023), 18-22.10.2023, Santiago de Compostela, Spain
- 2024** „D-Dbar mixing from nonlocal condensates”, 42nd International Conference on High Energy Physics, ICHEP 2024, 18-24 July 2024, Prague, Czech Republic
- 2024** „Exploring the Vub: Selected Insights and Perspectives”, Open Questions and Future Directions in Flavour Physics, MITP - Mainz Institute for Theoretical Physics, Johannes Gutenberg University Mainz, Nov 4 – 15, 2024
- 2025** „The role of nonperturbative dynamics in D-meson mixing”, Particle Physics from Early Universe to Future Colliders, 21-25 April 2025, Portorož, Slovenia
- 2025** „Constraining Non-Perturbative Parameters in Inclusive Λ_b Decays”, PASCOS 2025, the 30th Int. Symposium on Particles, Strings and Cosmology, July 21-25, 2025 Durham, UK.
- 2025** „Phenomenology of B(s) and D(s) semileptonic decays $\text{to } \eta$ and η' ”, CKM 2025, 13th International Workshop on the CKM Unitarity Triangle, Sep 15 – 19, 2025 Cagliari, Italy

C: Other talks at international conferences

- 1997** "Inclusive charmed baryon decays and lifetimes", talk given at the XVI Autumn School and Workshop on Fermion Masses, Mixing and CP violation, Lisbon, Portugal, October 6-15, 1997.
- 1998** "Perturbative approach to the penguin-induced $B \rightarrow \pi \Phi$ ", talk given at the Triangle Seminar on Particle Physics, Vienna, Austria, November 27-28, 1998.
- 1999** "Perturbative approach to the penguin induced $B \rightarrow \pi \Phi$ decay", poster, EPS-11: Trends in Physics, London, UK, September 6-10, 1999 .
- 1999** "Preasymptotic effects in b-decays", talk given at The 3rd International Conference on B Physics and CP Violation, Taipei, Taiwan, December 3-7, 1999.
- 2001** "The lifetimes of heavy hadrons - A theoretical appraisal", poster, The 4th International Conference on B Physics and CP Violation, Ise-Shima, Japan, February 19-23, 2001.
- 2006** "Exclusive B decays in QCD", talk given at Symposium QCD: Facts and Prospects, Oberwoelz, Styria, Austria, September 10-16, 2006.

D: Talks at foreign institutions

- 1992** "Implications of large strangeness components in the nucleon", talk given at Institut fuer Theoretische Teilchenphysik, Universitaet Karlsruhe, Germany, October 14, 1992.
- 1993** "Relativistic Zeeman splitting in two-body atoms", talk given at Institute of Physics, University of Oslo, Norway, September 22, 1993.
- 1999** "Neutrino story", invited talk given at Institut Superieur de Technologie Luxembourg, Luxembourg, March 22, 1999.
- 2001** "BLM scale setting for the pion transition form factor", talk given at Universitaet Wuppertal, Germany, June 5, 2001.
- 2002** "Exclusive nonleptonic B decays from QCD light-cone sum rules", talk given at Institut fuer Theoretische Physik und Astrophysik, Universitaet Wuerzburg, Germany, October 24, 2002.
- 2003** "Theoretical aspects of heavy hadron lifetimes", talk given at National Taiwan University, Taipei, Taiwan, October 6, 2003.
- 2004** "Lifetimes of charmed and beauty hadrons", talk given at Universitaet Siegen, Germany, June 23, 2004.
- 2005** "Light-Cone Sum Rules in Charmless B-Decays", talk given at Ludwig-Maximilians-Universitaet Muenchen, Germany, January 12, 2005.
- 2005** "Light-Cone Sum Rules for nonleptonic B decays", talk given at Jozef Stefan Institute, Ljubljana, Slovenia, December 19, 2005.
- 2006** "Exclusive B meson decays from QCD sum rules", talk given at Universit ´e Catholique de Louvain, Louvain-la-Neuve, Belgium, June 23, 2006.
- 2008** "Exclusive charmless B-meson decays in QCD", talk given at Technion, Haifa, Israel, December 1, 2008.
- 2009** "Exclusive charmless B-meson decays in QCD", talk given at Wayne State University, Detroit, USA, November 4, 2009.

2010 "CP violation and the 4th generation" talk given at LPT, CNRS at University of Paris-Sud 11, Orsay, France, January 19, 2010.

2010 "CP violation and the 4th generation" talk given at Jozef Stefan Institute, Ljubljana, Slovenia, March 18, 2010.

2015 "B(s) \rightarrow eta, eta' and D(s) \rightarrow eta, eta' transitions from QCD light-cone sum rules" talk given at IFIC, University of Valencia, Spain, December 17, 2015.

2019 "Testing the Standard model in semileptonic Bc decays" talk given at LMU, Munich, Germany, 23 January, 2019.

2023 „Heavy Hadron Lifetimes“, talk given at LMU, Munich, Germany, 24 April, 2023.

E: Other talks

2005 "Razvoj subatomske fizike" (in Croatian), invited talk at the workshop "World year of physics 2005", Croatian Academy of Science and Arts, December 9th, 2005.

2019 "CERN Membership as an Opportunity for Croatian Physics", pozvano predavanje, Humboldt College Zagreb, October 10–11, 2019.

2024 „Flavour Physics in a Triangle“, invited lecture, The Fundamentals, Summer school in High-Energy and Gravitational Physics, 16-20 Sept, Split, Croatia