

Yasemin Saraç Oymak, Ph.D.

Professor of Physics

Atılım University

Physics Group

06830 İncek, Gölbaşı, Ankara/TURKEY

yasemin.sarac@atilim.edu.tr

Tel: +90 312 586 8327

EDUCATION

2001-2007	Middle East Technical University, Physics, Ph.D.
2000-2001	Middle East Technical University, Physics, M.S
1996-2000	Middle East Technical University, Physics Education, B.S.

ACADEMIC POSITIONS

10/2019-present	Professor, Physics Group, Atılım University, Ankara, Turkey.
03/2014-10/2019	Associated Professor, Physics Group, Atılım University, Ankara, Turkey.
09/2007-03/2014	Assistant Professor, Physics Group, Atılım University, Ankara, Turkey.
03/2007-06/2007	Post Doctoral Researcher, Department of Physics, Yonsei University, South Korea.
01/2005-08/2005	Researcher, Department of Physics, Yonsei University, South Korea. Ph.D. Scholarship from The Scientific and Technological Research Council of Turkey, TUBITAK
09/2000-02/2007	Research Assistant, Department of Physics Middle East Technical University, Ankara, Turkey.

HONORS&AWARDS

1	Ph.D. Scholarship from The Scientific and Technological Research Council of Turkey, TUBITAK (2002-2006).
----------	--

RESEARCH INTERESTS

1	QCD Sum Rules
2	Pentaquark
3	Heavy Baryons
4	Heavy Mesons
5	Exotic Hadrons.

PUBLICATIONS

1	A. Gokalp, Y. Sarac , O. Yilmaz, Scalar a_0 -meson Contribution to Radiative $\omega \rightarrow \pi^0 \eta \gamma$ and $\rho^0 \rightarrow \pi^0 \eta \gamma$ Decays, Eur. Phys. Jour. C 22 , 327 (2001).
2	A. Gokalp, Y. Sarac , O. Yilmaz, The Coupling Constant $g_{a_0 \pi \eta}$ as Derived From Light-Cone QCD Sum Rules, Mod. Phys. Lett. A 19 , 3011 (2004).
3	A. Gokalp, Y. Sarac , O. Yilmaz, An Analysis of f_0 - σ Mixing in Light Cone QCD Sum Rules, Phys. Lett. B 609 , 291 (2005).
4	Y. Sarac , H. Kim, S. H. Lee, QCD Sum Rules for the Anti-charmed Pentaquark, Phys. Rev. D 73 , 014009 (2006).
5	A. Gokalp, Y. Sarac , and O. Yilmaz, $\kappa K^* \gamma$ -vertex in light cone QCD sum rules, Phys. Rev. D 77 , 114015 (2008).
6	K. Azizi, M. Bayar, A. Ozpineci, Y. Sarac , Tree level semileptonic Sigma b to nucleon decay in light cone QCD sum rules, Phys. Rev. D 80 , 036007 (2009).
7	K. Azizi, M. Bayar, Y. Sarac , H. Sundu, Semileptonic $\Lambda_{b,c}$ to nucleon transitions in full QCD at light cone, Phys. Rev. D 80 , 096007 (2009).
8	G. Baytemir, Y. Sarac , O. Yilmaz, $\kappa K^+ \pi^-$ vertex in light cone QCD sum rules, Phys. Rev. D 81 , 094009 (2010).
9	K. Azizi, M. Bayar, Y. Sarac , H. Sundu, FCNC transitions of $\Lambda_{b,c}$ to nucleon in SM, J. Phys. G 37 , 115007 (2010).
10	K. Azizi, M. Bayar, A. Ozpineci, Y. Sarac , $g_{\Sigma_Q \Sigma_Q \pi}$ coupling constant via light cone QCD sum rules, Phys. Rev. D 82 , 076004 (2010).
11	K. Azizi, M. Bayar, A. Ozpineci, Y. Sarac , H. Sundu, Semileptonic transition of Σ_b to Σ in light cone QCD sum rules, Phys. Rev. D 85 , 016002 (2012).
12	K. Azizi, Y. Sarac , H. Sundu, Light cone QCD sum rules study of the semileptonic heavy Ξ_Q and Ξ'_Q transitions to Ξ and Σ baryons, Eur. Phys. J. A 48 , 2 (2012).

13	K. Azizi, Y. Sarac , H. Sundu, Investigation of the $B_c \rightarrow \chi_{c2} \bar{1} \bar{\nu}$ transition via QCD sum rules, Eur. Phys. J. C 73 , 2638 (2013).
14	K. Azizi, Y. Sarac , H. Sundu, Strong Λ_b NB and Λ_c ND vertices, Phys. Rev. D 90 , 114011 (2014).
15	K. Azizi, Y. Sarac , H. Sundu, Analysis of the strong $D_2^* (2460)^0 \rightarrow D^+ \pi^-$ and $D_{s2}^* (2573)^+ \rightarrow D^+ K^0$ transitions via QCD sum rules, Eur. Phys. J. C 74 , 3106 (2014).
16	K. Azizi, Y. Sarac , H. Sundu, Strong couplings of negative and positive parity nucleons to the heavy baryons and mesons, Phys. Rev. D 92 , 014022 (2015).
17	K. Azizi, Y. Sarac , H. Sundu, Strong Σ_b NB and Σ_c ND coupling constants in QCD, Nucl. Phys. A 943 , 159 (2015).
18	K. Azizi, Y. Sarac , H. Sundu, On the strong coupling $N^{(*)} N^{(*)} \pi$, Eur. Phys. J. A 52 , 114 (2016).
19	K. Azizi, Y. Sarac , H. Sundu, Analysis of $P_c^+(4380)$ and $P_c^+(4450)$ as pentaquark states in the molecular picture with QCD sum rules, Phys. Rev. D 95 , 094016 (2017).
20	K. Azizi, Y. Sarac , H. Sundu, Hidden bottom pentaquark states with spin 3/2 and 5/2, Phys. Rev. D 96 , 094030 (2017).
21	T. M Aliev, K Azizi, Y Saraç , H Sundu, Structure of the $\Xi_b(6227)$ resonance, Phys. Rev. D 98 (9), 094014 (2018).
22	T. M Aliev, K Azizi, Y Saraç , H Sundu, Nature of the $\Omega(2012)$ through its strong decays, The European Physical Journal C 78 (11), 894 (2018).
23	K. Azizi, Y. Sarac , H. Sundu, Possible molecular pentaquark states with different spin and quark configurations, Phys. Rev. D 98 , 054002 (2018).
24	T. M Aliev, K Azizi, Y Saraç , H Sundu, Interpretation of the newly discovered $\Omega(2012)$, Phys. Rev. D 98 , 014031 (2018).
25	K. Azizi, Y. Sarac , H. Sundu, Strong decay of $P_c(4380)$ pentaquark in a molecular picture, Phys. Lett. B 782 , 694-701 (2018).
26	H. Mutuk,, Y. Saraç, H. Gümüş, A. Özpineci, $X(3872)$ and its heavy quark spin symmetry partners in QCD sum rules, The Europ. Phys. J C 78 , 904 (2018).

27	K. Azizi, Y. Sarac , H. Sundu, Determination of the quantum numbers of $\Sigma_b(6097)^\pm$ via their strong decays, Phys. Rev. D 99 , 094003 (2019).
28	K. Azizi, Y. Sarac , H. Sundu, Lepton flavor universality violation in semileptonic tree level weak transitions, Phys. Rev. D 99 , 113004 (2019).

PROJECTS

1	OKTET VE DEKUPLET BARYONLARIN KENDİ ARALARINDA VE BİRBİRLERİNE RADYATİF VE KUVVETLİ GEÇİŞLERİNİN İNCELENMESİ, ARAŞTIRMACI, (TUBITAK-1001) 1 Kasım 2006 - 1 Kasım 2008
2	EGZOTİK HADRONLARIN FİZİKSEL ÖZELLİKLERİNİN İNCELENMESİ ARAŞTIRMACI, (TUBITAK-1001) 01 Ekim 2015 - 01 Ekim 2018

CONFERENCE PRESENTATIONS

1	Yasemin Saraç, (2007), "Anticharmed Pentaquarks Within the QCD Sum Rules Approach", International Conference on Hadron Physics TROIA'07, 30 August - 3 September, 2007, Canakkale, Turkiyey
2	Yasemin Saraç, (2009), "Tree Level Semileptonic Σ_b to Nucleon Decay in Light Cone QCD Sum rules", II nd International Conference on Hadron Physics TROIA'09, 10 - 14 September 2009, Canakkale, Turkiye.
3	Yasemin Sarac, "Analysis of the semileptonic transition of heavy Ξ_Q baryon to Ξ baryon in Light Cone QCD Sum Rules", HADRON STRUCTURE '13, 29 June- 4 July, 2013, Tatranské Matliare, Slovakia. Nuclear Phys. B (Proc. Suppl.) 245 (2013).
4	Yasemin Saraç, (2014), "Strong $D_2^*(2460)0 \rightarrow D^+\pi^-$ Transition in QCD", QCD@Work, International Workshop on QCD, theory and experiment, 16-19 June 2014, Giovinazzo Bari, Italy. EPJ Web of Conferences 80 , 00044 (2014)
5	Yasemin Saraç, (2014), "Investigation of the $D_{s2}^*(2573)^+ D^+ K^0$ vertex via QCD sum rules", IV th International Conference on Hadron Physics TROIA'14, 01 - 05 July 2014, Canakkale, Turkiye. J. Phys.: Conf. Ser. 562 , 012004.

CITATIONS

Sum of times cited without self-citations (ISI Web of Science):	189
H-index (ISI Web of Science):	8

COURSES GIVEN

1	PHYS101 Physics I Mechanics
2	PHYS102 Physics II Electricity and Magnetism
3	PHYS704 Introductory Quantum Mechanics
4	PHYS504 Analytical Mechanics

THESES SUPERVISED

1	MS Thesis, (Co Supervisor), Gülsen Baytemir, $\kappa K^+ \pi^-$ Vertex in light cone QCD sum rules , 2011.
2	MS Thesis, (Supervisor), Haneen Alsafi, Analysis of Spectroscopic Properties of Ground State and First Orbitally Excited State Heavy Baryon Sigma(Q), 2019.

BOOKS

1	Author: Dr. Michio Kaku. Translator: Yasemin Sarac Oymak, Hüseyin Oymak. Editors: Yasemin Sarac Oymak, Hüseyin Oymak (2013), Geleceğin Fiziği, ODTÜ Yayıncılık, Ankara (ISBN: 978-605-5164-67-6)
---	---