



## Lance Dixon

Professor of Particle Physics and Astrophysics

 Curriculum Vitae available Online

### Bio

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#### ACADEMIC APPOINTMENTS

- Professor, Particle Physics and Astrophysics

#### ADMINISTRATIVE APPOINTMENTS

- Chair, SLAC PPA Faculty, (2011-2014)

#### HONORS AND AWARDS

- Galileo Galilei Medal, National Nuclear Physics Agency, Italy (INFN) (2023)
- Member, National Academy of Sciences (2022)
- Schrodinger Professor, ETH Zurich and University of Zurich (2019)
- Humboldt Research Award, Alexander von Humboldt Foundation (2017)
- Distinguished Visitor Research Chair, Perimeter Institute (2014-2020)
- J.J. Sakurai Prize, American Physical Society (2014)
- Outstanding Referee, American Physical Society (2008)
- Fellow, American Physical Society (1995)

#### BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Scientific Advisory Board, Kavli Institute for Theoretical Physics (2017 - 2021)
- Chair of Organizing Committee, Amplitudes 2018 Conference at SLAC (2017 - 2018)
- Committee of Visitors, US Department of Energy (2016 - 2016)
- Chair, Scientific Advisory Board, Theoretical Advanced Study Institute, Boulder, CO (2015 - 2021)
- Advisory Committee, Galileo Galilei Institute, Florence (2015 - 2018)
- Co-organizer, Bay Area Particle Theory Seminar (2013 - present)
- Scientific Advisory Board, Max Planck Institute for Physics, Munich (2012 - 2021)
- International Advisory Committee, Higgs Centre for Theoretical Physics, U. Edinburgh (2012 - 2018)
- Scientific Advisory Committee, Munich Institute for Astro- and Particle Physics (2012 - 2017)
- Steering Committee, Institute for Particle Physics Phenomenology, Durham, UK (2010 - 2015)
- High Energy Physics Advisory Panel, US Government (2008 - 2011)
- Editorial Board, Journal of High Energy Physics (2007 - present)
- Executive Committee, SLAC Users' Organization (2004 - 2007)

- General member, Aspen Center for Physics (1993 - 2003)

## PROFESSIONAL EDUCATION

- Ph.D., Princeton University , Physics (1986)
- B.S., California Institute of Technology , Physics and Applied Mathematics (1982)

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

I am interested in novel descriptions of how relativistic particles scattering, and how those insights can be applied to a variety of problems. Applications include precision QCD for the Large Hadron Collider; scattering in "toy models" such as N=4 super-Yang-Mills theory where an all orders solution seems feasible in the planar limit; the ultraviolet structure of quantum gravity; and problems in classical gravity such as gravitational radiation from compact binary inspiral.

## Teaching

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### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Zach Hulcher

#### Doctoral Dissertation Advisor (AC)

Anthony Morales, Adi Suresh, Shuo Xin

## Publications

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### PUBLICATIONS

- **An eight loop amplitude via antipodal duality** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Liu, Y.  
2023
- **Antipodal Self-Duality for a Four-Particle Form Factor.** *Physical review letters*  
Dixon, L. J., Gürdoğan, Ö., Liu, Y. T., McLeod, A. J., Wilhelm, M.  
2023; 130 (11): 111601
- **All-Orders Quadratic-Logarithmic Behavior for Amplitudes.** *Physical review letters*  
Basso, B., Dixon, L. J., Liu, Y. T., Papathanasiou, G.  
2023; 130 (11): 111602
- **The SAGEX review on scattering amplitudes\*** *JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL*  
Travaglini, G., Brandhuber, A., Dorey, P., McLoughlin, T., Abreu, S., Bern, Z., Bjerrum-Bohr, N. J., Bluemlein, J., Britto, R., Carrasco, J. M., Chicherin, D., Chiodaroli, M., Damgaard, et al  
2022; 55 (44)
- **The SAGEX review on scattering amplitudes Chapter 15: The multi-Regge limit** *JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL*  
Del Duca, V., Dixon, L. J.  
2022; 55 (44)
- **One-loop central-emission vertex for two gluons in N=4 super Yang-Mills theory** *JOURNAL OF HIGH ENERGY PHYSICS*  
Byrne, E. P., Del Duca, V., Dixon, L. J., Gardi, E., Smillie, J. M.  
2022
- **Bootstrapping a stress-tensor form factor through eight loops** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Gurdogan, O., McLeod, A. J., Wilhelm, M.  
2022

- **Folding Amplitudes into Form Factors: An Antipodal Duality** *PHYSICAL REVIEW LETTERS*  
Dixon, L. J., Gurdogan, O., McLeod, A. J., Wilhelm, M.  
2022; 128 (11): 111602
- **Heptagon functions and seven-gluon amplitudes in multi-Regge kinematics** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Liu, Y., Miczajka, J.  
2021
- **Fishnet four-point integrals: integrable representations and thermodynamic limits** *JOURNAL OF HIGH ENERGY PHYSICS*  
Basso, B., Dixon, L. J., Kosower, D. A., Krajenbrink, A., Zhong, D.  
2021
- **A three-point form factor through five loops** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., McLeod, A. J., Wilhelm, M.  
2021
- **Lifting heptagon symbols to functions** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Liu, Y.  
2020
- **Soft gluon emission at two loops in full color** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Herrmann, E., Yan, K., Zhu, H.  
2020
- **Origin of the Six-Gluon Amplitude in Planar N=4 Supersymmetric Yang-Mills Theory.** *Physical review letters*  
Basso, B., Dixon, L. J., Papathanasiou, G.  
2020; 124 (16): 161603
- **The cosmic Galois group and extended Steinmann relations for planar N=4 SYM amplitudes** *JOURNAL OF HIGH ENERGY PHYSICS*  
Caron-Huot, S., Dixon, L. J., Dulat, F., von Hippel, M., McLeod, A. J., Papathanasiou, G.  
2019
- **Six-Gluon amplitudes in planar N=4 super-Yang-Mills theory at six and seven loops** *JOURNAL OF HIGH ENERGY PHYSICS*  
Caron-Huot, S., Dixon, L. J., Dulat, F., von Hippel, M., McLeod, A. J., Papathanasiou, G.  
2019
- **Collinear limit of the energy-energy correlator** *PHYSICAL REVIEW D*  
Dixon, L. J., Moul, I., Zhu, H.  
2019; 100 (1)
- **Two-Loop Five-Point Amplitude in N=4 Super-Yang-Mills Theory** *PHYSICAL REVIEW LETTERS*  
Abreu, S., Dixon, L. J., Herrmann, E., Page, B., Zeng, M.  
2019; 122 (12): 121603
- **The two-loop five-point amplitude in N=8 supergravity** *JOURNAL OF HIGH ENERGY PHYSICS*  
Abreu, S., Dixon, L. J., Herrmann, E., Page, B., Zeng, M.  
2019
- **The double pentaladder integral to all orders** *JOURNAL OF HIGH ENERGY PHYSICS*  
Caron-Huot, S., Dixon, L. J., von Hippel, M., McLeod, A. J., Papathanasiou, G.  
2018
- **Analytical Computation of Energy-Energy Correlation at Next-to-Leading Order in QCD** *PHYSICAL REVIEW LETTERS*  
Dixon, L. J., Luo, M., Shtabovenko, V., Yang, T., Zhu, H.  
2018; 120 (10): 102001
- **The principle of maximal transcendentality and the four-loop collinear anomalous dimension** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J.  
2018

- **Gluing Ladder Feynman Diagrams into Fishnets.** *Physical review letters*  
Basso, B., Dixon, L. J.  
2017; 119 (7): 071601
- **Heptagons from the Steinmann cluster bootstrap** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Drummond, J., Harrington, T., McLeod, A. J., Papathanasiou, G., Spradlin, M.  
2017
- **Two-loop renormalization of quantum gravity simplified** *PHYSICAL REVIEW D*  
Bern, Z., Chi, H., Dixon, L., Edison, A.  
2017; 95 (4)
- **Multi-loop positivity of the planar N=4 SYM six-point amplitude** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., von Hippel, M., McLeod, A. J., Trnka, J.  
2017
- **Bootstrapping a Five-Loop Amplitude Using Steinmann Relations** *PHYSICAL REVIEW LETTERS*  
Caron-Huot, S., Dixon, L. J., McLeod, A., von Hippel, M.  
2016; 117 (24)
- **The four-loop six-gluon NMHV ratio function** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., von Hippel, M., McLeod, A. J.  
2016
- **Evanescence Effects can Alter Ultraviolet Divergences in Quantum Gravity without Physical Consequences.** *Physical review letters*  
Bern, Z., Cheung, C., Chi, H., Davies, S., Dixon, L., Nohle, J.  
2015; 115 (21): 211301-?
- **Interference effects in the  $H(\rightarrow\gamma\gamma)+2$  jets channel at the LHC** *PHYSICAL REVIEW D*  
Coradeschi, F., de Florian, D., Dixon, L. J., Fidenza, N., Hoeche, S., Ita, H., Li, Y., Mazzitelli, J.  
2015; 92 (1)
- **Extrapolating W-associated jet-production ratios at the LHC** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Febres Cordero, F., Hoeche, S., Ita, H., Kosower, D. A., MAITRE, D.  
2015; 92 (1)
- **Bootstrapping an NMHV amplitude through three loops** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., von Hippel, M.  
2014
- **Next-to-leading order  $\gamma\gamma+2$ -jet production at the LHC** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Cordero, F. F., Hoeche, S., Ita, H., Kosower, D. A., Lo Presti, N. A., MAITRE, D.  
2014; 90 (5)
- **The four-loop remainder function and multi-Regge behavior at NNLLA in planar N=4 super-Yang-Mills theory** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Drummond, J. M., Duhr, C., Pennington, J.  
2014
- **Ntuples for NLO events at hadron colliders** *COMPUTER PHYSICS COMMUNICATIONS*  
Bern, Z., Dixon, L. J., Febres Cordero, F., Hoeche, S., Ita, H., Kosower, D. A., Maitre, D.  
2014; 185 (5): 1443-1460
- **The BFKL equation, Mueller-Navelet jets and single-valued harmonic polylogarithms** *JOURNAL OF HIGH ENERGY PHYSICS*  
Del Duca, V., Dixon, L. J., Duhr, C., Pennington, J.  
2014
- **Hexagon functions and the three-loop remainder function** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Drummond, J. M., von Hippel, M., Pennington, J.  
2013

- **Bounding the Higgs Boson Width through Interferometry** *PHYSICAL REVIEW LETTERS*  
Dixon, L. J., Li, Y.  
2013; 111 (11)
- **Next-to-leading order W+5-jet production at the LHC** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Cordero, F. F., Hoeche, S., Ita, H., Kosower, D. A., MAITRE, D., Ozeren, K. J.  
2013; 88 (1)
- **Missing energy and jets for supersymmetry searches** *PHYSICAL REVIEW D*  
Bern, Z., Diana, G., Dixon, L. J., Febres Cordero, F., Hoeche, S., Ita, H., Kosower, D. A., MAITRE, D., Ozeren, K. J.  
2013; 87 (3)
- **D = 5 maximally supersymmetric Yang-Mills theory diverges at six loops** *PHYSICAL REVIEW D*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Douglas, M. R., von Hippel, M., Johansson, H.  
2013; 87 (2)
- **Single-valued harmonic polylogarithms and the multi-Regge limit** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Duhr, C., Pennington, J.  
2012
- **Color-kinematics duality and double-copy construction for amplitudes from higher-dimension operators** *JOURNAL OF HIGH ENERGY PHYSICS*  
Broedel, J., Dixon, L. J.  
2012
- **Four-Jet Production at the Large Hadron Collider at Next-to-Leading Order in QCD** *PHYSICAL REVIEW LETTERS*  
Bern, Z., Diana, G., Dixon, L. J., Febres Cordero, F., Hoeche, S., Kosower, D. A., Ita, H., MAITRE, D., Ozeren, K.  
2012; 109 (4)
- **Simplifying multiloop integrands and ultraviolet divergences of gauge theory and gravity amplitudes** *PHYSICAL REVIEW D*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Johansson, H., Roiban, R.  
2012; 85 (10)
- **LOOPS, TREES AND THE SEARCH FOR NEW PHYSICS** *SCIENTIFIC AMERICAN*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2012; 306 (5): 34-41
- **Precise predictions for Z-boson +4 jet production at hadron colliders** *PHYSICAL REVIEW D*  
Ita, H., Bern, Z., Dixon, L. J., Febres Cordero, F., Kosower, D. A., MAITRE, D.  
2012; 85 (3)
- **Analytic result for the two-loop six-point NMHV amplitude in N=4 super Yang-Mills theory** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Drummond, J. M., Henn, J. M.  
2012
- **Driving missing data at next-to-leading order** *PHYSICAL REVIEW D*  
Bern, Z., Diana, G., Dixon, L. J., Febres Cordero, F., Hoeche, S., Ita, H., Kosower, D. A., MAITRE, D., Ozeren, K. J.  
2011; 84 (11)
- **N >= 4 supergravity amplitudes from gauge theory at two loops** *JOURNAL OF HIGH ENERGY PHYSICS*  
Boucher-Veronneau, C., Dixon, L. J.  
2011
- **Scattering amplitudes: the most perfect microscopic structures in the universe** *JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL*  
Dixon, L. J.  
2011; 44 (45)
- **Bootstrapping the three-loop hexagon** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Drummond, J. M., Henn, J. M.  
2011

- **The one-loop six-dimensional hexagon integral with three massive corners** *PHYSICAL REVIEW D*  
Del Duca, V., Dixon, L. J., Drummond, J. M., Duhr, C., Henn, J. M., Smirnov, V. A.  
2011; 84 (4)
- **Left-handed W bosons at the LHC** *PHYSICAL REVIEW D*  
Bern, Z., Diana, G., Dixon, L. J., Febres Cordero, F., Forde, D., Gleisberg, T., Hoeche, S., Ita, H., Kosower, D. A., MAITRE, D., Ozeren, K.  
2011; 84 (3)
- **Amplitudes and ultraviolet behavior of N=8 supergravity** *16th European Workshop on String Theory*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Johansson, H., Roiban, R.  
WILEY-VCH VERLAG GMBH.2011: 561–78
- **The one-loop six-dimensional hexagon integral and its relation to MHV amplitudes in N=4 SYM** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Drummond, J. M., Henn, J. M.  
2011
- **Precise Predictions for W+4-Jet Production at the Large Hadron Collider** *PHYSICAL REVIEW LETTERS*  
Berger, C. F., Bern, Z., Dixon, L. J., Cordero, F. F., Forde, D., Gleisberg, T., Ita, H., Kosower, D. A., MAITRE, D.  
2011; 106 (9)
- **A tree-level amplitudes in massless QCD** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Henn, J. M., Plefka, J., Schuster, T.  
2011
- **Complete four-loop four-point amplitude in N=4 super-Yang-Mills theory** *PHYSICAL REVIEW D*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Johansson, H., Roiban, R.  
2010; 82 (12)
- **Next-to-leading order QCD predictions for Z,gamma\*+3-jet distributions at the Tevatron** *PHYSICAL REVIEW D*  
Berger, C. F., Bern, Z., Dixon, L. J., Febres Cordero, F., Forde, D., Gleisberg, T., Ita, H., Kosower, D. A., MAITRE, D.  
2010; 82 (7)
- **Vector Boson plus Jets with BLACKHAT and SHERPA** *10th DESY Workshop on Elementary Particle Theory*  
Berger, C. F., Bern, Z., Dixon, L. J., Cordero, F. F., Forde, D., Gleisberg, T., Ita, H., Kosower, D. A., MAITRE, D.  
ELSEVIER SCIENCE BV.2010: 92–97
- **R-4 counterterm and E-7(7) symmetry in maximal supergravity** *JOURNAL OF HIGH ENERGY PHYSICS*  
Broedel, J., Dixon, L. J.  
2010
- **On soft singularities at three loops and beyond** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Gardi, E., Magnea, L.  
2010
- **Next-to-leading order QCD predictions for W+3-jet distributions at hadron colliders** *PHYSICAL REVIEW D*  
Berger, C. F., Bern, Z., Dixon, L. J., Cordero, F. F., Forde, D., Gleisberg, T., Ita, H., Kosower, D. A., MAITRE, D.  
2009; 80 (7)
- **Ultraviolet Behavior of N=8 Supergravity at Four Loops** *PHYSICAL REVIEW LETTERS*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Johansson, H., Roiban, R.  
2009; 103 (8)
- **Analytic one-loop amplitudes for a Higgs boson plus four partons** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Sofianatos, Y.  
2009
- **Precise Predictions for W+3 Jet Production at Hadron Colliders** *PHYSICAL REVIEW LETTERS*  
Berger, C. F., Bern, Z., Dixon, L. J., Cordero, F. F., Forde, D., Gleisberg, T., Ita, H., Kosower, D. A., MAITRE, D.  
2009; 102 (22)

- **Matter dependence of the three-loop soft-anomalous-dimension matrix** *PHYSICAL REVIEW D*  
Dixon, L. J.  
2009; 79 (9)
- **Resonance-continuum interference in light Higgs boson production at a photon collider** *PHYSICAL REVIEW D*  
Dixon, L. J., Sofianatos, Y.  
2009; 79 (3)
- **Manifest ultraviolet behavior for the three-loop four-point amplitude of N=8 supergravity** *PHYSICAL REVIEW D*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Johansson, H., Roiban, R.  
2008; 78 (10)
- **One-Loop Calculations with BlackHat** *NUCLEAR PHYSICS B-PROCEEDINGS SUPPLEMENTS*  
Berger, C. F., Bern, Z., Dixon, L. J., Cordero, F. F., Forde, D., Ita, H., Kosower, D. A., MAITRE, D.  
2008; 183: 313-319
- **Two-loop six-gluon maximally helicity violating amplitude in maximally supersymmetric Yang-Mills theory** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Kosower, D. A., Roiban, R., Spradlin, M., Vergu, C., Volovich, A.  
2008; 78 (4)
- **Automated implementation of on-shell methods for one-loop amplitudes** *PHYSICAL REVIEW D*  
Berger, C. F., Bern, Z., Dixon, L. J., Cordero, F. F., Forde, D., Ita, H., Kosower, D. A., MAITRE, D.  
2008; 78 (3)
- **Universal structure of subleading infrared poles in gauge theory amplitudes** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Magnea, L., Sterman, G.  
2008
- **On-shell methods in perturbative QCD** *ANNALS OF PHYSICS*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2007; 322 (7): 1587-1634
- **Cancellations beyond finiteness in N=8 supergravity at three loops** *PHYSICAL REVIEW LETTERS*  
Bern, Z., Carrasco, J. J., Dixon, L. J., Johansson, H., Kosower, D. A., Roiban, R.  
2007; 98 (16)
- **Four-loop planar amplitude and cusp anomalous dimension in maximally supersymmetric Yang-Mills theory** *PHYSICAL REVIEW D*  
Bern, Z., Czakon, M., Dixon, L. J., Kosower, D. A., Smirnov, V. A.  
2007; 75 (8)
- **Is N=8 supergravity ultraviolet finite?** *PHYSICS LETTERS B*  
Bern, Z., Dixon, L. J., Roiban, R.  
2007; 644 (4): 265-271
- **All one-loop maximally helicity violating gluonic amplitudes in QCD** *PHYSICAL REVIEW D*  
Berger, C. F., Bern, Z., Dixon, L. J., Forde, D., Kosower, D. A.  
2007; 75 (1)
- **Recursive construction of Higgs plus multiparton loop amplitudes: The last of the "phi-nite" loop amplitudes** *PHYSICAL REVIEW D*  
Berger, C. F., Del Duca, V., Dixon, L. J.  
2006; 74 (9)
- **On-shell unitarity bootstrap for QCD amplitudes** *8th DESY Workshop on Elementary Particle Theory*  
Berger, C. F., Bern, Z., Dixon, L. J., Forde, D., Kosower, D. A.  
ELSEVIER SCIENCE BV.2006: 261–270
- **Two-loop soft anomalous dimension matrix and resummation at next-to-next-to-leading poles** *PHYSICAL REVIEW D*  
Aybat, S. M., Dixon, L. J., Sterman, G.  
2006; 74 (7)

- **Two-loop anomalous-dimension matrix for soft-gluon exchange** *PHYSICAL REVIEW LETTERS*  
Aybat, S. M., Dixon, L. J., Sterman, G.  
2006; 97 (7)
- **Bootstrapping one-loop QCD amplitudes with general helicities** *PHYSICAL REVIEW D*  
Berger, C. F., Bern, Z., Dixon, L. J., Forde, D., Kosower, D. A.  
2006; 74 (3)
- **Bootstrapping multiparton loop amplitudes in QCD** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2006; 73 (6)
- **Last of the finite loop amplitudes in QCD** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2005; 72 (12)
- **Iteration of planar amplitudes in maximally supersymmetric Yang-Mills theory at three loops and beyond** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Smirnov, V. A.  
2005; 72 (8)
- **All next-to-maximally-helicity-violating one-loop gluon amplitudes in N=4 super-Yang-Mills theory** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2005; 72 (4)
- **On-shell recurrence relations for one-loop QCD amplitudes** *PHYSICAL REVIEW D*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2005; 71 (10)
- **All non-maximally-helicity-violating one-loop seven-gluon amplitudes in N=4 super-Yang-Mills theory** *PHYSICAL REVIEW D*  
Bern, Z., Del Duca, V., Dixon, L. J., Kosower, D. A.  
2005; 71 (4)
- **N=1 supersymmetric one-loop amplitudes and the holomorphic anomaly of unitarity cuts** *PHYSICS LETTERS B*  
Bidder, S. J., Bjerrum-Bohr, N. E., Dixon, L. J., Dunbar, D. C.  
2005; 606 (1-2): 189-201
- **Recent developments in perturbative QCD** *13th International Workshop on Deep Inelastic Scattering (DIS 2005)*  
Dixon, L. J.  
AMER INST PHYSICS.2005: 61-72
- **MHV rules for Higgs plus multi-gluon amplitudes** *JOURNAL OF HIGH ENERGY PHYSICS*  
Dixon, L. J., Glover, E. W., Khoze, V. V.  
2004
- **N=4 Super-Yang-Mills theory, QCD and collider physics** *COMPTES RENDUS PHYSIQUE*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2004; 5 (9-10): 955-964
- **Two-loop splitting amplitudes** *NUCLEAR PHYSICS B-PROCEEDINGS SUPPLEMENTS*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2004; 135: 147-151
- **Two-loop  $g \rightarrow gg$  splitting amplitudes in QCD** *JOURNAL OF HIGH ENERGY PHYSICS*  
Bern, Z., Dixon, L. J., Kosower, D. A.  
2004
- **Radiative corrections to the azimuthal asymmetry in transversely polarized Moller scattering** *PHYSICAL REVIEW D*  
Dixon, L., Schreiber, M.  
2004; 69 (11)



- **High-precision QCD at hadron colliders: Electroweak gauge boson rapidity distributions at next-to-next-to leading order** *PHYSICAL REVIEW D*  
Anastasiou, C., Dixon, L., Melnikov, K., Petriello, F.  
2004; 69 (9)
- **Cross-order relations in N=4 supersymmetric gauge theories** *QUANTUM THEORY AND SYMMETRIES*  
Anastasiou, C., Dixon, L. J., Bern, Z., Kosower, D. A.  
2004: 275-280
- **Planar amplitudes in maximally supersymmetric Yang-Mills theory** *PHYSICAL REVIEW LETTERS*  
Anastasiou, C., Dixon, L., Bern, Z., Kosower, D. A.  
2003; 91 (25)
- **Dilepton rapidity distribution in the Drell-Yan process at next-to-next-to-leading order in QCD** *PHYSICAL REVIEW LETTERS*  
Anastasiou, C., Dixon, L., Melnikov, K., Petriello, F.  
2003; 91 (18)
- **Resonance-continuum interference in the diphoton Higgs signal at the LHC** *PHYSICAL REVIEW LETTERS*  
Dixon, L., Siu, M. S.  
2003; 90 (25)
- **Two-loop helicity amplitudes for quark-gluon scattering in QCD and gluino-gluon scattering in supersymmetric Yang-Mills theory** *JOURNAL OF HIGH ENERGY PHYSICS*  
Bern, Z., De Freitas, A., Dixon, L.  
2003
- **NLO Higgs boson rapidity distributions at hadron colliders** *6th International Symposium on Radiative Corrections/6th Zeuthen Workshop on Elementary Particle Theory*  
Anastasiou, C., Dixon, L., Melnikov, K.  
ELSEVIER SCIENCE BV.2003: 193–197
- **The di-photon background to a light Higgs boson at the LHC** *6th International Symposium on Radiative Corrections/6th Zeuthen Workshop on Elementary Particle Theory*  
Bern, Z., Dixon, L., Schmidt, C.  
ELSEVIER SCIENCE BV.2003: 178–182
- **Two-loop corrections to  $gg \rightarrow \gamma\gamma$**  *6th International Symposium on Radiative Corrections/6th Zeuthen Workshop on Elementary Particle Theory*  
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