



I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di fisica**

Scientist- in -charge: Prof. Raoul Horst Röntsch

Amlan Chakraborty

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Chakraborty
Name	Amlan

PRESENT OCCUPATION

Appointment	Structure
Post-doctoral visitor	Institute Of Mathematical Science, India

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Master's Degree in Physics	H o m i B h a b a National Institute	2017
Specialization			
PhD	PhD in Physics	H o m i B h a b a National Institute	2021
Master			
Degree of medical specialization			
Degree of European specialization			
Other	Bachelor's Degree in Physics	U n i v e r s i t y o f Calcutta	2013



REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City

FOREIGN LANGUAGES

Languages	level of knowledge
Bengali	Native
English	C1

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
01/08/2022	PostDoc fellowship at State University Of New York, Buffalo
01/10/2020	PostDoc fellowship at Michigan State University
01/08/2016	Senior research fellowship in Physics, Institute Of Mathematical Sciences (Homi Bhaba National Institute)
01/08/2013	Junior research fellowship in Physics, Institute Of Mathematical Sciences (Homi Bhaba National Institute)

TRAINING OR RESEARCH ACTIVITY

<p>PostDoctoral Researcher Aug 2022 - 2024</p> <p>State University Of New York, Buffalo</p> <ul style="list-style-type: none">- Computation of Multiloop amplitude in QCD and Electroweak studies in Standard Model.- Advisors : Doreen Wackerroth and Ciaran Williams <p>PostDoctoral Researcher Oct 2020-July 2022</p> <ul style="list-style-type: none">- Computation Of Multiloop scattering amplitude in QCD.- Advisor : Andreas von Manteuffel <p>TEACHING ASSISTANTSHIP</p> <ul style="list-style-type: none">- Quantum Field theory - Aug, 2019 - Dec, 2019- Lectures and tutorials- Instructor - V Ravindran - IMSc, Chennai
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CONGRESSES AND SEMINARS

Date	Title	Place
Jan - 2023	Seminar- The three loop four parton Scattering in QCD	IMSc, Chennai, India
Jan - 2023	Seminar- The three loop four parton Scattering and Four loop Form factor in QCD	IISc, Bengaluru, India
Jan - 2023	Seminar- The three loop four parton Scattering in QCD	SINP, Kolkata, India
Dec - 2022	The three loop four parton Scattering in QCD	DAE-BRNS Symposium, IISER Mohali, India
May - 2022	Seminar - The Four loop Form factor in QCD	SUNY, Buffalo, USA
May - 2022	The three loop four parton Scattering in QCD	Loopfest 2022, University Of Pittsburgh, USA
May - 2022	Seminar- The three loop four parton Scattering in QCD	Michigan State University, USA
April - 2021	Seminar - The Infrared Structure Of Gauge theory	Michigan State University, USA
Sep -2020	Seminar - Infrared structure of N =4 SYM and Leading Transcendentality principle in Gauge theory	IMSc, Chennai, India
Jan - 2020	Infrared structure of N =4 SYM and comparison with QCD	International workshop on precision QCD and LHC, IIT, Hyderabad, India
Sep - 2019	Infrared structure of N =4 SYM and Leading Transcendentality principle in Gauge theory	Radcor 2019, Avignon, France
Mar -2019	Seminar - Infrared structure of N =4 SYM and comparison with QCD	IMSc, Chennai, India
Feb - 2019	Resummed predictions for the Higgs production at N3LL	IOP, Bhubaneshwar, India
Dec - 2018	Infrared structure of Gauge theory	DAE-BRNS Symposium, IIT Madras, India



PUBLICATIONS

Three-loop helicity amplitudes for photon + jet production - Piotr Bargiela, Amlan Chakraborty , Giulio Gambuti - Phys.Rev.D 107 (2023) 5, L051502 [arXiv:2212.14069]
Three-loop helicity amplitudes for quark-gluon scattering in QCD - Fabrizio Caola, Amlan Chakraborty , Giulio Gambuti, Andreas von Manteuffel, Lorenzo Tancredi - <i>JHEP</i> 12 (2022) 082 [arXiv:2207.03503]
The Hb b vertex at four loops and hard matching coefficients in SCET for various currents - Amlan Chakraborty , Tobias Huber, Roman N. Lee, Andreas von Manteuffel, Robert M. Schabinger, Alexander V. Smirnov, Vladimir A. Smirnov, Matthias Steinhauser - Phys.Rev.D 106 (2022) 7, 074009 [arXiv:2204.02422]
Three-loop gluon scattering in QCD and the gluon Regge trajectory (2022) - Fabrizio Caola, Amlan Chakraborty , Giulio Gambuti, Andreas von Manteuffel, Lorenzo Tancredi - Phys. Rev. Lett. 128, 212001 [Editors' Suggestion] [arXiv:2112.11097]
Three-loop helicity amplitudes for four-quark scattering in massless QCD - Fabrizio Caola, Amlan Chakraborty , Giulio Gambuti, Andreas von Manteuffel, Lorenzo Tancredi - JHEP10(2021)206 [arXiv:2108.00055]
Form factors with two operator insertions and the principle of maximal transcendentality - Taushif Ahmed, Pulak Banerjee, Amlan Chakraborty , Prasanna K. Dhani, V Ravindran Phys. Rev. D 102, 061701(R) [arXiv:1911.11886]
NNLO QCD@QED corrections to Higgs production in bottom quark annihilation - Ajjath A H, Pulak Banerjee, Amlan Chakraborty , Prasanna K. Dhani, Pooja Mukherjee, Narayan Rana, V Ravindran - Phys.Rev.D 100 (2019) 11 114016 [arXiv:1906.09028]
The Curious Case of Leading Transcendentality: Three Point Form Factors - Taushif Ahmed, Pulak Banerjee, Amlan Chakraborty , Prasanna K. Dhani, V Ravindran - [arXiv:1905.12770]
Resummed prediction for Higgs boson production through bb annihilation at N3LL - Ajjath A H, Amlan Chakraborty , Goutam Das, Pooja Mukherjee, V Ravindran - JHEP 11 (2019) 006 - [arXiv:1905.03771]
Higgs pair production from bottom quark annihilation to NNLO in QCD - Ajjath A H, Pulak Banerjee, Amlan Chakraborty , Prasanna K. Dhani, Pooja Mukherjee, Narayan Rana, V Ravindran - JHEP 1905 (2019) 030 - [arXiv:1811.01853]



Second order splitting functions and infrared safe cross sections in $N = 4$ SYM theory -
Pulak Banerjee, **Amlan Chakraborty**, Prasanna K. Dhani, V Ravindran, Satyajit Seth

- JHEP 1904 (2019) 058 [arXiv:1810.07672]

Congress proceedings

Three-Loop Four-Point Scattering Amplitudes in Massless Gauge Theories -
Amlan Chakraborty, Giulio Gambuti

- PoS LL2022 (2022) 022 [arXiv: 2208.08139]

Infrared structure of $N = 4$ SYM and leading transcendentality principle in gauge theory -
Taufiq Ahmed, Pulak Banerjee, **Amlan Chakraborty**, Prasanna K. Dhani, V Ravindran, Satyajit Seth

PoS RADCOR2019 (2019) 059 [arXiv:1912.06929]

OTHER INFORMATION

SKILLS

Programming: c, c++, Shell Programming

Framework: Form, Mathematica, REDUZE, Kira, Fire, FiniteFlow, Litered

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

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Place and date: Bandel, 07/05/2024