UNIVERSITÀ DEGLI STUDI DI MILANO

TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE 6543**

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 Mathematics**

Scientist- in – charge: Prof. Camere Chiara

[Name and surname]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Lee
Name	Jae Hwang

PRESENT OCCUPATION

Appointment	Structure
20 Aug 2018 – 30 May 2024	PhD student, Teaching assistant at Colorado State University

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	PhD (expected)	Colorodo State University	17 May 2024
Specialization	Algebraic Geometry		
PhD			
Master	Algebraic Geometry	Seoul National University	20 Aug 2018
Degree of medical specialization			
Degree of European specialization			
Other			

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
20 Aug 2018	Colorado State University	Fort Collins, Colorado, US

FOREIGN LANGUAGES

Languages	level of knowledge
English	Good standing

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2023	Graduate Student Summer Fellow, Colorado State University
2023	DR. FRANK DEMEYER FELLOWSHIP IN MATHEMATICS
2022	EDWARD AND JUDITH ELGETHUN Scholarship IN MATHEMATICS
2021	ARNE MAGNUS Scholarship
2017-2018	President's Scholarship, Seoul National University
2014	Awarded for the Best Academic Achievement with Full Scholarship, KyungHee University

TRAINING OR RESEARCH ACTIVITY

My research focuses on the study of moduli space of quasimaps. Using the 2|1-pointed quasimaps, where 2 is the number of heavy markings and 1 is the number of light marking, we defined a new deformation of the product of the cohomology of a smooth projective variety. It turns out that this defines not a product but a module structure, called the quantum module structure. I computed the complete description of the quantum module structure of the Hirzebruch surface of type 2. This is an interesting example of a non-Fano but semipositive space that shows a faillure of the equality between the quantum cohomology and the Batyrev ring of a smooth projective toric Fano varieties. However, the quantum module structure of the Hirzebruch surface of type 2 coincide with the Batyrev ring realized as a natural module. Our conjecture is that this coincidence will occur for general smoothe projective toric semipositive varieties.

PROJECT ACTIVITY

Year	Project
2020-2023	An analogue of WDVV equations for 2|1 quasimaps, and localization computation for the quantum module structure of the Hirzebruch surface of type 2

PATENTS

Patent

CONGRESSES AND SEMINARS

Date	Title	Place
Nov 2023	Algebraic geometry seminar	University of British Columbia
Jan 2024	Joint Mathematics Meetings	San Francisco
Mar 2024	AMS Southeastern Sectional Meeting	Florida State University

PUBLICATIONS

Books
[title, place, publishing house, year …]
[title, place, publishing house, year …]
[title, place, publishing house, year …]

Articles in reviews(NOT review, but submitted)
Jae Hwang Lee, A Quantum H∗(T)-module via Quasimap Invariants, arXiv 2401.00066, 2023, submitted to IMRN
[title of the article, review, place, publishing house, year …]
[title of the article, review, place, publishing house, year …]

Congress proceedings
[title, structure, place, year]
[title, structure, place, year]
[title, structure, place, year]

OTHER INFORMATION

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.

Please DO NOT SIGN this form.

Place and date: ___Fort Collins, CO, USA____, __19 Mar 2024__

Università degli Studi di Milano – Direzione Trattamenti Economici e Lavoro Autonomo
Ufficio Contratti di formazione e Ricerca
Via Sant'Antonio 12 - 20122 Milano, Italia
assegni.ricerca@unimi.it DTELA_M_CVAssegniENG_rev. 00 del 02/09/2021