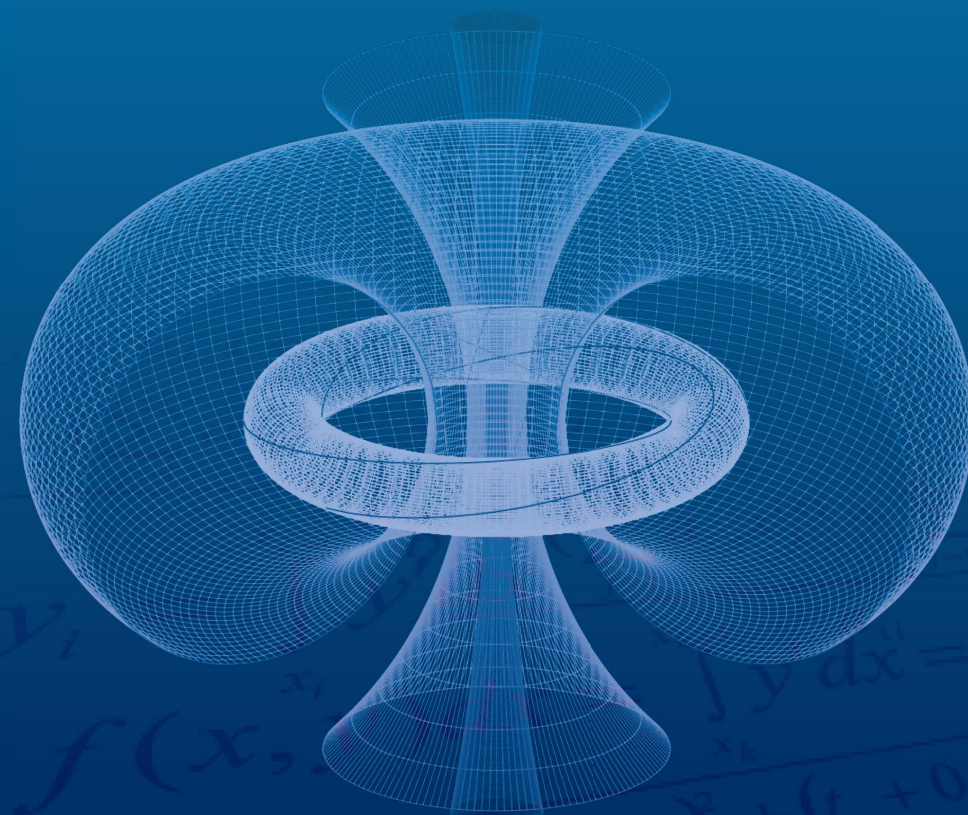清华大学
TSINGHUA UNIVERSITY

丘成桐数学科学中心
YAU MATHEMATICAL SCIENCES CENTER

中心概览

丘成桐数学科学中心
YAU MATHEMATICAL SCIENCES CENTER

地　　址：中国北京市海淀区清华园
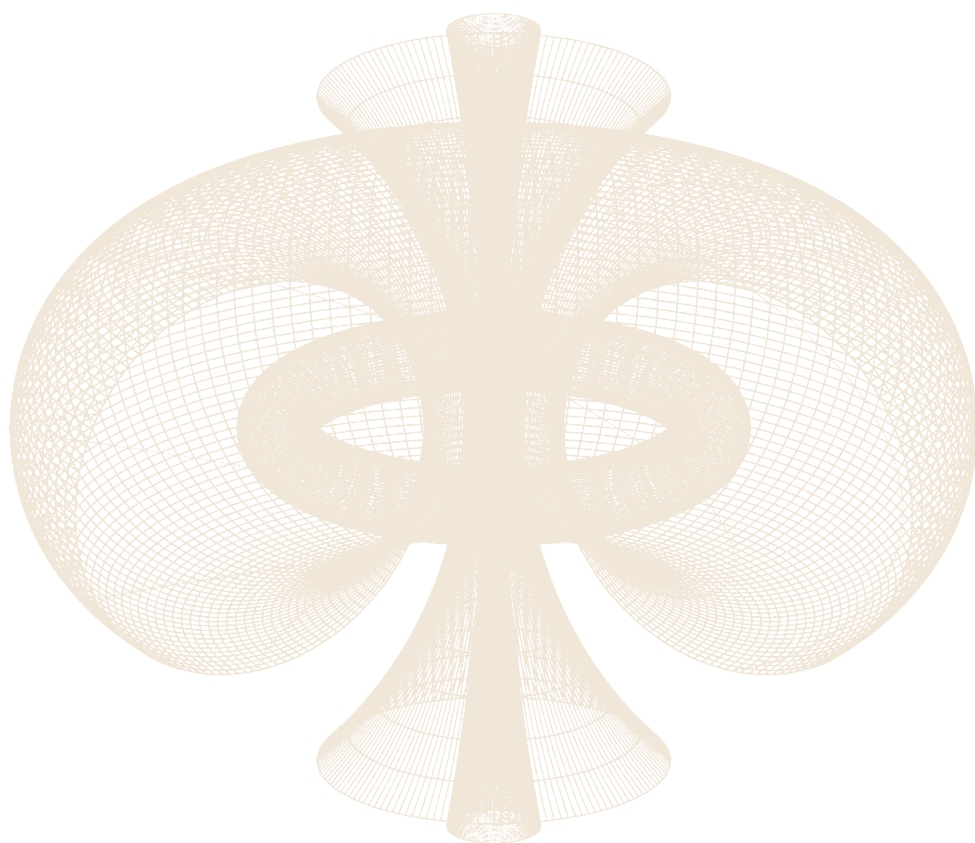邮　　编：100084
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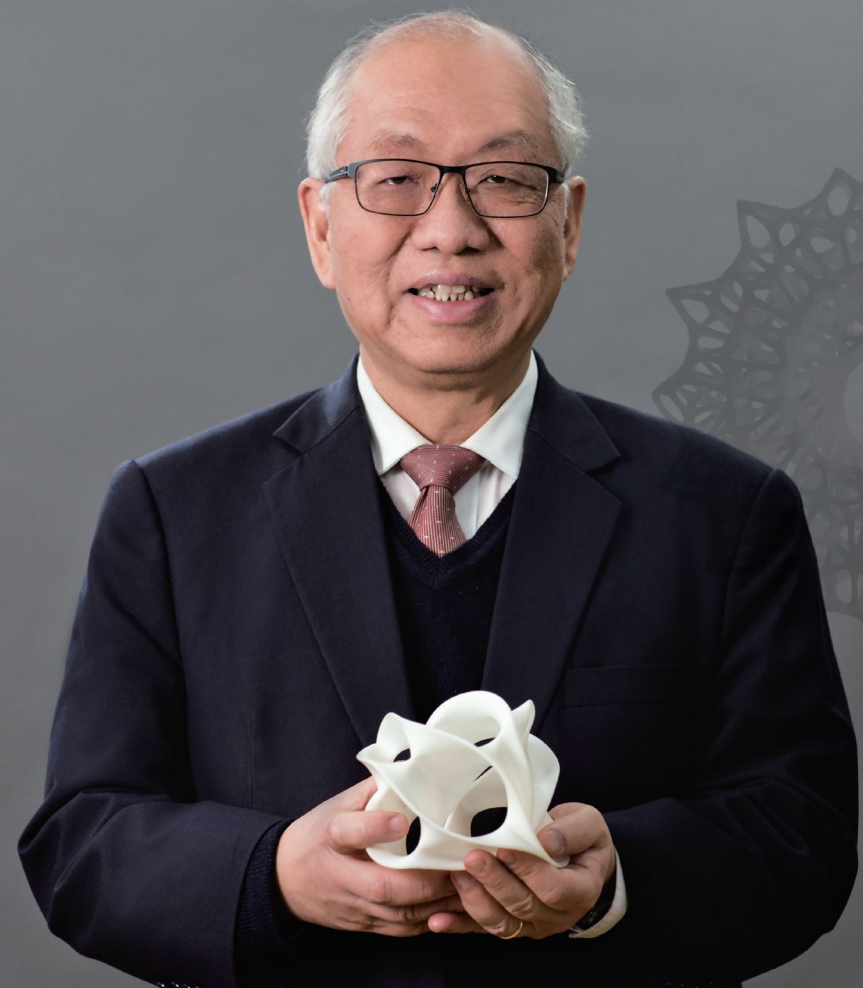网　　址：http://ymsc.tsinghua.edu.cn

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中心概览

主任致辞

在清华大学的百年历史里，清华一直被认为是中国一流的大学，以强大的工程和应用科学学科闻名于世。清华大学远见卓识地认识到数学在科学学科里的基础和战略性作用。2009 年 12 月，清华大学举行了数学科学中心的落成典礼，并邀请我担任中心首届主任。这邀请带着清华大学核心领导充满雄心的承诺和热切的期望。这份承诺给我提供了时间和机会去充分发展数学科学中心。我希望在学校的持续支持、战略性的投资和有效的管理基础上，数学科学中心将推动清华大学数学学科跻身于国际前沿。许多人一直在为我们共同的目标非常努力地工作。我相信有了你的支持和参与，数学科学中心将对全世界的数学家和数学学科做出重大贡献。
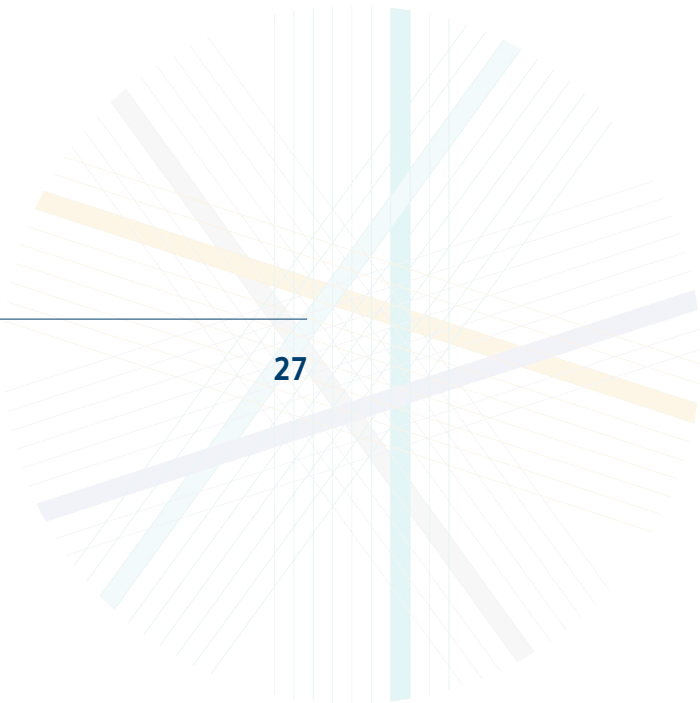
丘成桐数学科学中心 主任

目录

中心简介

　　清华大学数学科学中心（简称"数学中心"）成立于 2009 年 12 月，特聘国际著名数学大师丘成桐先生担任中心主任。作为支持清华大学发展数学学科的重大战略举措，教育部于 2014 年底正式批准成立清华大学丘成桐数学科学中心。

　　十年间，在丘成桐先生的带领下，数学中心在高端人才引进、杰出数学人才培养、高水平学术研究和数学学科建设方面取得了跨越式发展，成为中国基础科学人才培养和学术研究的重要基地，是清华大学建设世界一流大学的重要基础。

　　中心秉承"国际性、开放性、学术性"的建设定位，以开放活跃的学术氛围，吸引了一大批数学顶尖人才，并开始为国家输送优秀青年学者。

数学中心基本数据 *：

教职工人数	125
教师人数	70
教授	20
副教授	10
助理教授	40
外籍	16
博士后在站人数	37
外籍	6
在学学生人数	114
本科生 *	59
博士生	55

* 表示丘成桐数学英才班的本科生
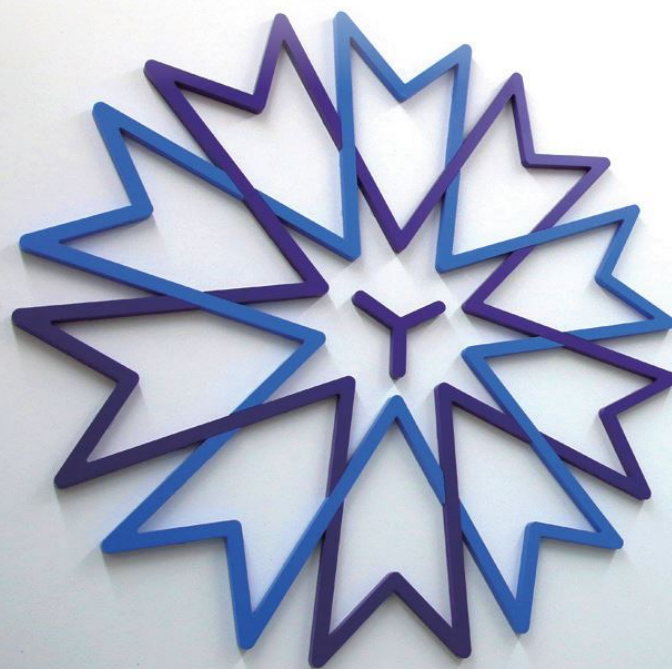
综合性学科布局

建成以纯粹数学为核心的"五大领域"和"三个交叉研究方向"的综合性学科布局。其中代数与数论、数学物理以及动力系统与随机分析这三个科研团队，已达到世界顶尖水平。2020 年成立的北京雁栖湖应用数学研究院将应用数学纳入未来学科发展规划，着眼于基础学科研究的产业应用。

国际一流人才引进

人才为学科建设之基。数学中心以高水平人才引进、造就新一代世界领先数学家为根本任务。

2021 年，成功引进 2018 年菲尔兹奖得主 Caucher Birkar，担任中心教授。

过去十年间，中心已引进全日制教师 70 人，其中 35 岁以下的教师 31 人，外籍教师 16 人，不乏长江学者奖励计划入选者、国家杰出青年科学基金获得者、国家高层次人才特殊支持计划入选者、国家海外高层次人才引进计划入选者、国家优秀青年科学基金获得者、青年拔尖人才支持计划入选者、以及晨兴数学竞赛获奖者。

目前，在站博士后 37 人（外籍 6 人），在学博士生 55 人，丘成桐数学英才班本科生 59 人。

立体人才培养机制

围绕人才引进与培养的根本任务，数学中心不断探索和创新数学人才发掘培养模式，建立并形成了包括"丘成桐中学科学奖""丘成桐大学生数学竞赛""新世界数学奖"和"ICCM 数学奖"、"世界华人数学家联盟"和"世界华人数学家大会"等系列人才发掘机制、学术交流平台，惠及全球热爱数学研究的学者。

国际学术交流平台

中心先后与美国哈佛大学、斯坦福大学及英国牛津大学等国内外 30 余所高校和科研机构建立了良好的合作关系，每年超过 300 位数学家及相关领域专家学者来中心工作、访学和交流，许多重要的国际学术会议在中心、北京雁栖湖数学研究院和"清华三亚国际数学论坛"会议基地召开，众多院士，诺贝尔奖、沃尔夫奖、菲尔兹奖得主等来中心访问、交流和演讲，成为富有凝聚力的国际学术交流平台。

学术成果初具影响

截至 2021 年 3 月，数学中心已有 6 位学者在国际顶级"4 大"综合性数学期刊《数学年刊》、《数学发明》、《数学学报》、《美国数学会杂志》上发表了 7 篇高水平论文。仅仅 2020，中心就发表 156 篇论文。

伴随数学中心的跨越式发展，在数学学科同仁同心戮力之下，清华数学科学专业 QS 排名由 2016 年第 43 名，上升到 2021 最新排名第 18 位。

今天，数学科学面临前所未有的历史机遇，数学中心将秉持开拓、创新、谋长远的发展宗旨，面向国家战略需求，瞄准世界科技前沿，凝聚师生力量，齐心协力，扎实工作；在培养高素质一流创新人才，取得国际原创性科研成果，创建世界领先水平的数学学科及师资队伍方面取得突破性进展；为建设成为世界一流数学基地、为清华大学建设世界一流大学和中华民族伟大复兴而努力奋斗！

发展历程

2009

09月29日 丘成桐教授担任"清华学堂数学班"首席教授

12月17日 清华大学成立数学科学中心，时任中共中央政治局委员、国务委员刘延东致电祝贺，时任教育部副部长陈希出席揭牌仪式，丘成桐担任中心主任，组建国际顾问委员会和国内学术委员会

12月21日 时任全国人大常委会副委员长陈至立在人民大会堂会见华裔数学家、"菲尔兹奖"获得者丘成桐、陶哲轩及部分学者代表

2010

04月26日 庆祝丘成桐先生荣获沃尔夫奖大会在人民大会堂举行，丘成桐教授捐出全部奖金设立丘成桐奖励基金，奖励在数学方面有突出才能的清华学生

06月10日 与三亚市人民政府签订建设清华三亚国际数学论坛会议中心协议

09月28日 召开第五届世界华人数学家大会暨纪念华庚先生诞辰100周年、陈省身先生诞辰99周年新闻发布会

12月16日 首次承办丘成桐中学数学奖（第三届）总决赛暨颁奖典礼

12月17日 举办第五届世界华人数学家大会开幕暨晨兴数学奖颁奖典礼
纪念华罗庚先生诞辰100周年、陈省身先生诞辰99周年纪念活动
举办第二届新世界数学奖颁奖典礼

12月20日 举办首届丘成桐大学生数学竞赛

12月23日 举办首届三亚国际数学论坛，诺贝尔物理奖获得者大卫·格罗斯、荷兰皇家人文与科学院院长罗伯特·迪格拉夫、美国加州大学圣塔巴巴拉分校校长杨祖祐、哈佛大学数学系讲座教授本尼迪科·格罗斯、香港中文大学首席副校长华云生、台湾新竹清华大学校长陈立俊、前任校长刘炯朗，沃尔夫奖、阿贝儿奖获得者约翰·塔特，菲尔兹奖获得者沃恩·琼斯教授等国际数学大师出席了开幕式。诺贝尔物理奖获得者大卫·格罗斯，沃尔夫奖、阿贝儿奖获得者约翰·塔特等17名国际顶尖大师作报告

2011

07月13日 数学科学中心迁入近春园西楼（原清华高培中心和老射击馆）办公

07月13日 设立以陈省身、华罗庚、许宝騄和林家翘四位数学大师姓名的冠名讲座，每年邀请相关领域国际顶尖学者来校作报告

09月05日 设立博士后工作站，首批2名博士后进站

12月19日 举办清华三亚国际经济圆桌会议暨第二届清华三亚国际数学论坛

2012

03月02日 开设现代数学系列报告，即每周五下午国内外专家学者一小时学术专题系列报告

06月29日 成立国际华人数学家应用数学联盟

08月27日 开始招收研究生，首届招收5名研究生

12月15日 举办首届国际华人数学家应用数学联盟成像科学研讨会

12月20日 举办第五届丘成桐中学数学奖，并纳入清华大学自主招生计划

2013

01 月 05 日 举办首届学术大师论坛暨第三届清华三亚国际数学论坛

05 月 29 日 与哈佛大学、斯坦福大学、牛津大学、剑桥大学等近 30 所世界著名大学相关院系、研究院分别签署双边合作备忘

09 月 18 日 全职引进郑绍远教授和 Eduard Looijenga 教授。郑绍远教授曾担任香港科技大学署理副校长（学术）、香港科技大学理学院院长、香港数学会主席；Eduard Looijenga 教授是荷兰皇家人文与科学院院士，曾任荷兰乌特勒支大学教授

12 月 16 日 丘成桐中学生数学奖更名为"丘成桐中学科学奖"，增加物理方向评奖并纳入清华大学自主招生计划

12 月 16 日 时任国务院副总理刘延东会见丘成桐教授和诺贝尔物理学奖得主 David Gross 教授

12 月 18 日 清华三亚国际数学论坛永久会址落成启用，时任全国政协副主席陈元发来贺信表示祝贺。举办 2013 年学术大师论坛暨第四届清华三亚国际数学论坛

2014

02 月 23 日 举办"和世界一流物理学家对话：希格斯粒子发现之后，基础物理学向何处发展"论坛，丘成桐先生主持会议，与八位世界著名物理学家共同探讨希格斯粒子发现对基础物理学的影响

07 月 21 日 举办首届丘成桐中学生数学夏令营

08 月 04 日 举办"卡拉比猜想 60 年暨丘成桐先生 65 华诞庆祝"国际会议

09 月 01 日 于品晋升为教研系列长聘副教授（首位长聘教师）

12 月 29 日 教育部正式批准依托清华大学成立"丘成桐数学科学中心"

2015

01 月 数学中心部分成员迁入"静斋"办公

03 月 19 日 举行"丘成桐数学科学中心"揭牌成立仪式

06 月 08 日 邀请六位国际知名数学家组成评估委员会对中心作全面考核和评估。评估委员会成员包括 Wilfried Schmid、 John Coates、Bjorn Engquist、Clifford Taubes、李骏和姚鸿泽

12 月 27 日 String Math 2015 会议在三亚举行，丘成桐和 Edward Witten 等上百位世界知名弦理论专家参会

2016

08 月 01 日 举办国际弦理论界最重大的年度盛会——2016 年国际弦理论大会

12 月 17 日 举办第九届丘成桐中学科学奖，增设化学、生物方向，增设综合"科学金奖"

2017

04 月 04 日 发布丘成桐数学科学中心标识 LOGO

04 月 21 日 庆祝清华大学数学学科建立 90 周年

04 月 21 日 清华大学授予法国数学家 Jean-Pierre Serre 清华大学名誉博士学衔

06 月 09 日 郑绍远教授获香港科技大学"荣誉大学院士"称号

12 月 12 日 第十届丘成桐中学科学奖暨奖项设立十周年大会，增设计算机方向

12 月 27 日 举办世界华人数学家联盟首届年会

2018

02 月 07 日 教育部批复设立数学英才班，招收高二、高三学生，每年不超过 30 人

02 月 24 日 数学中心全英文博士学位项目通过专家论证，拟于 2018 年 10 月面向海外招收数学博士研究生

04 月 01 日 全职引进原日本东京大学数学系系主任 Akito Futaki 教授

06 月 30 日 举办首届"数学物理方向"优秀大学生夏令营

07 月 04 日 丘成桐教授获物理学界最重要的奖项之一马塞尔·格罗斯曼奖

08 月 22 日 第一届 2018 级"丘成桐数学英才班"15 名本科生入学，平均年龄17岁，其中高二学生 9 人

11 月 16 日 全职引进原哈佛大学统计学系主任、国际统计学顶级专家 Donald Rubin 教授

12 月 14 日 举办第十一届丘成桐中学科学奖，增设经济金融建模方向

12月22日 "卡拉比－丘理论发展四十年"国际会议在广东省梅州市蕉岭县举行
"卡拉比－丘空间"雕塑落成剪彩；与蕉岭县人民政府确立"丘成桐国际交流中心"建设方案
清华大学继续教育学院和数学中心，分别与蕉岭县人民政府签署《清华—蕉岭远程教育教学站合作协议》、《蕉岭县与清华大学数学中心教育合作框架协议》

12月27日 第二届世界华人数学家联盟年会在台湾大学举行

2019

03月22日 首届清华三亚人工智能高峰论坛在三亚举行

03月23日 原国家副总理刘延东同志会见并祝贺丘成桐教授七十岁寿辰

03月30日 丘成桐教授获"影响世界华人大奖"终身成就奖

06月09日－14日 举办第八届世界华人数学家大会

06月09日 举办第五届新世界数学奖颁奖典礼

06月26日 吴昊教授获评"清华大学2018年度学术新人奖"

06月26日 举办首场"叶承耀·叶家祺冠名讲座"，中国科学院院士王贻芳作题为"探索无穷"的特别报告

06月29日 新增科研用房——"宁斋"揭牌

08月19日 北京市市长陈吉宁会见丘成桐教授，并委托丘成桐教授牵头组建北京雁栖湖应用数学研究院。北京市委办公厅秘书长靳伟，北京市教育委员会主任刘宇辉，北京市人才局局长桂生及数学中心副主任黄晓霞、数学系副主任李思一同参加会见

10月17日 丘成桐教授在中关村论坛做题为《数学和基本科学在应用科学中的重要性》的主旨报告

10月19日 中共中央政治局委员、国务院副总理孙春兰在中南海会见丘成桐教授，听取丘教授关于清华大学数学学科建设的情况汇报，以及对中国数学发展的意见建议

12月07日－09日 举行2020年"丘成桐数学英才班"招生考试，招收30名高二、高三优秀学生

12月16日 清华三亚国际数学论坛发起全新系列讲座——当代数学史大师讲座。菲尔兹奖获得者、伦敦帝国理工学院教授Martin Hairer，英国皇家科学院院士、剑桥大学教授John Coates以及美国人文与科学院院士、哈佛大学教授Wilfried Schmid担任首届当代数学史大师讲座的主讲人

12月16日 第三届ICCM最佳论文奖颁奖典礼在清华三亚国际数学论坛举行，16位青年学者获奖

12月16日 "图论及其应用会议"在三亚举行，庆祝美国人文与科学院院士、美国加州大学圣地亚哥分校金芳蓉教授七十岁生日

12月30日 菲尔兹奖得主、英国剑桥大学Caucher Birkar教授正式接受聘任邀请，将于2021年全职加盟清华大学

2020

01月09日 北京市市长陈吉宁会见丘成桐教授和普林斯顿高等研究院院Robbert Dijkgraaf教授。当日下午，清华大学校长邱勇教授同两人会面

03月24日 丘成桐教授在哈佛大学在线为学堂班学生及校内师生作题为"陈省身——20世纪伟大的几何学家"的学术报告

06月12日 北京雁栖湖应用数学研究院正式成立，研究院成立暨合作共建签约仪式举行

07月 吴昊获"清华大学优秀班主任"称号；吴昊、邱宇和杨一龙获"2019-2020学年度春季学期疫情防控期间在线教学优秀教师优秀奖"

08月 袁瑶项目"代数几何"获"国家自然科学基金优秀青年科学基金项目"资助

10月 李思课题"量子场论与引力的数学前沿及其应用"获国家重点研发计划 – 变革性技术关键科学问题专项资助

10月18日 于品获"第十六届中国青年科技奖"

10月25日 第十一届丘成桐大学生数学竞赛总决赛暨颁奖典礼

12月07日 清华大学2020年全国重点中学校长会在北京雁栖湖应用数学研究院举办

12月12-13日 第十二届丘成桐中学科学奖总决赛暨颁奖典礼在清华举行

12月13日 2020丘成桐科学论坛在清华大学举办。哈佛大学天文学院长Abraham (Avi) Loeb院士、哈佛大学自然基本规律中心主任Andrew Strominger院士、哈佛大学弦理论物理学家Cumrun Vafa院士等6位学者作报告

12月18日 北京雁栖湖应用数学研究院博士后科研工作站园区分站成立

12月18-19日 2020大师论坛在北京雁栖湖应用数学研究院举行，菲尔兹奖得主、剑桥大学考切尔．比尔卡尔（Caucher Birkar）教授，沃尔夫奖得主、美国科学院院士、芝加哥大学格雷戈里．劳勒（Gregory Lawler）教授两位国际数学大师做线上报告

组织机构

顾问委员会

*成员以英文姓氏字母为序

曹怀东	美国里海大学	美国里海大学讲座教授
翟敬立	美国宾夕法尼亚大学	台湾研究院院士
John Coates	英国剑桥大学	英国皇家科学院院士
黎子良	美国斯坦福大学	COPSS 会长奖得主、美国统计学会会士、美国数理统计学院院士
Ari Laptev	瑞典米塔格莱夫勒研究所	瑞典米塔格莱夫勒研究所教授，曾任欧洲数学学会会长
刘军	美国哈佛大学	ICCM 应用数学奖金奖得主、COPSS 会长奖得主
刘克峰	美国加利福尼亚大学洛杉矶分校	ICCM 数学奖金奖得主、古根海姆奖得主
Stanley Osher	美国加利福尼亚大学洛杉矶分校	美国国家科学院院士、美国 ACM 计算和应用数学奖得主
Duong H. Phong	美国哥伦比亚大学	斯特凡·伯格曼奖得主
Richard Schoen	美国加利福尼亚大学欧文分校	沃尔夫数学奖得主、美国国家科学院院士、美国人文与科学院院士

学术委员会

程崇庆	南京大学	"长江学者奖励计划"特聘教授
郑绍远	清华大学	香港科技大学荣誉院士、美国数学学会会士、ICCM 陈省身奖得主
扶磊	清华大学	"长江学者奖励计划"特聘教授、国家杰出青年基金获得者
傅吉祥	复旦大学	"长江学者奖励计划"特聘教授、国家杰出青年基金获得者、国家杰出青年基金获得者、ICCM 陈省身奖得主
林长寿	台湾大学	ICCM 数学奖金奖得主、台湾研究院院士
潘日新	美国加利福尼亚大学河滨分校	美国加利福尼亚大学河滨分校教授
肖杰	清华大学	国家杰出青年基金获得者
辛周平	香港中文大学	ICCM 数学奖金奖、美国总统奖得主
杨乐	中国科学院	中国科学院院士
朱熹平	中山大学	"长江学者奖励计划"特聘教授、国家杰出青年基金获得者，ICCM 陈省身、ICCM 数学银奖得主

师资队伍

数学中心已经汇聚了一批高水平的专家和学者。至 2021 年 3 月，数学中心共有全日制在校教师和科研人员 107 人，平均年龄 35 岁，其中教师 70 人（包含教授 20 人、副教授 10 人、助理教授 40 人）、在站博士后 37 人。中心自 2011 年开始招收博士后，累计招收博士后 97 人，累计出站 60 人。全体教师及科研人员中外籍人员 16 人，分别来自荷兰、日本、韩国、智利、澳大利亚、美国、英国、法国、丹麦、德国等国家和地区，另有 10 名国际一流数学家为兼职教授。

现有教师中菲尔兹奖获得者 2 人、沃尔夫奖、克拉福德奖、马塞尔·格罗斯曼奖获得者 1 人，美国国家科学院院士、美国人文与科学院院士 2 人，荷兰皇家科学院院士 1 人，美国数学学会会士 2 人，瑞典皇家科学院诺贝尔经济奖评审委员会委员 1 人，香港科技大学荣誉院士 1 人，教育部"长江学者奖励计划"特聘教授 3 人；"国家杰出青年科学基金" 2 人，"国家高层次人才特殊支持计划"1 人，"国家海外高层次人才引进计划"入选者 22 人，"优秀青年科学基金" 3 人，"青年拔尖人才支持计划" 1 人， "求是杰出青年学者奖" 3 人，"学术新人奖" 3 人，晨兴数学金奖 1 人，晨兴数学银奖 2 人，"中国青年科技奖" 1 人，"北京市杰出青年基金" 1 人。中心现博士后在站 37 人，其中外籍 6 人。已经出站的博士后或留校任教，或分赴国内外重点高校任教，部分人员已是相关高校和科研机构的学术领军人才。

领军学者

丘成桐 教授，数学中心主任，美国国家科学院院士，美国人文与科学院院士，中国科学院外籍院士。哈佛大学数学系 William Casper Graustein 讲座教授，兼任哈佛大学物理系教授。1982 年获菲尔兹奖，1994 年获瑞典皇家科学院克拉福德奖，2010 年获沃尔夫奖，2018 年获马塞尔·格罗斯曼奖。

Donald Rubin 教授，美国国家科学院院士，美国人文与科学院院士，曾任哈佛大学统计系 John L. Loeb 讲席教授。他所获得著名奖项包括 Wilks 奖章、Parzen 奖、Snedecor 奖等。

Eduard Looijenga 教授，荷兰皇家科学院院士，美国数学会会士，曾任荷兰乌特勒支大学、荷兰阿姆斯特丹大学、荷兰奈梅根大学教授。

郑绍远 教授，香港科技大学荣誉院士，美国数学学会会士，曾任香港科技大学署理副校长、香港科技大学理学院院长、香港数学会主席。2007 获得世界华人数学家大会（杭州）陈省身奖，1977 年获得史隆研究奖。

Caucher Birkar 教授

2018 年获得菲尔兹奖。曾获得美国数学会的 Moore 奖。

青年学者

长江学者奖励计划入选者	扶磊、薛金鑫、宗正宇
国家杰出青年科学基金获得者	扶磊、于品
国家高层次人才特殊支持计划	扶磊
国家海外高层次人才引进计划	22 名
国家优秀青年科学基金获得者	于品、曾惠慧、袁瑶
青年拔尖人才支持计划入选者	于品
晨兴数学金奖获得者	李思
晨兴数学银奖获得者	单芃、刘正伟
求是杰出青年学者奖获得者	扶磊、宋伟、单芃
北京市杰出青年基金	吴昊
中国青年科技奖	于品
清华大学学术新人奖获得者	曾惠慧、陈志杰、吴昊
清华大学优秀博士后	江怡、文强、孙哲 、邱宇、吴昊

学术成果

在丘成桐先生的带领下，数学中心学科建设布局合理稳步推进，以基础数学为核心，已组建了包括基础数学和应用数学、计算数学在内的多个高水平学科团队。形成"五大领域""三个交叉研究方向"的学科布局。五大领域是代数与数论、几何与拓扑、分析和偏微分方程、计算数学和应用数学、人工智能和大数据中的应用数学。三大交叉方向为数学与物理、数学与工程、数学和社会科学。其中代数与数论、数学物理以及动力系统与随机分析这三个科研团队，已达到世界顶尖水平，取得国际水平的重大原创性成果，在国际上享有重要影响。

中心每年发表各类论文百余篇。其中，已经有 6 位教师在国际顶级 "四大" 综合性数学期刊《数学年刊》、《数学发明》、《数学学报》、《美国数学会杂志》上发表 7 篇高水平论文。

1. 于品论文《能演化成黑洞的爱因斯坦场方程柯西初值的构造》（Construction of Cauchy data of vacuum Einstein field equations evolving to black holes）2015 年发表在国际顶级数学期刊《数学年刊》上。

2. 于品的另一篇论文《关于拟线性波方程的激波形成机制》（On the formation of shocks for quasilinear wave equations）2017 年发表在国际顶级数学期刊《数学发明》上。

3. 金龙与美国加州大学伯克利分校塞米扬·迪亚特洛夫（Semyon Dyatlov）教授合作的论文《双曲曲面上半经典测度具有全支集》（Semiclassical measures on hyperbolic surfaces have full support）2018 年在国际顶尖数学期刊《数学学报》上在线发表。

4. 宗正宇与刘秋菊、方博汉教授合作的论文《三维环卡拉比－丘迹形的重塑猜想》2019 年在国际顶级数学期刊《美国数学会杂志》在线发表。

5. 邱宇的论文"丛交换群胚与带框二次微（Cluster exchange groupoids and framed quadratic differentials）"2019 年在国际顶级数学期刊《数学发明》上在线发表。

6. 薛金鑫的论文《平面四体问题的非碰撞奇点》（Noncollision singularities in a planar four-body problem）2019 年底被国际顶级数学期刊《数学学报》接收。

7. Emmanuel Lecouturier 的论文《Higher Eisenstein Elements, Higher Eichler Formulas and Ban of Hecke Algebras》2020 年，被数学四大顶级期刊之一的《数学发明》接收。

招生及培养

本科生招生及培养

根据清华大学人才培养目标，遵循数学学科人才成长规律，清华大学分别于 2009 年 9 月设立"学堂数学班"，2018 年设立"丘成桐数学英才班"，综合评价、因材施招，选拔和培养数学天分较高的青年学生。2021 年，清华大学推出"丘成桐数学科学领军人才培养计划"，成立求真书院作为数学领军计划人才培养机构。

清华大学数学本科教育设数学与应用数学专业，学制 4 年，授理学学士学位。专业课程分为基础数学、应用数学、概率统计、计算数学、运筹学与控制论五个方向。本科第一年和第二年，学习掌握数学分析、高等代数、常微分方程、抽象代数、复分析、测度与积分、概率论等基础核心课程；本科第三年和第四年，根据学生学习能力、兴趣及志向，可以选择五个方向之一作为个人专业，学生必须选修本方向全部专业核心课程。

参与数学培养项目的学生学习并掌握数学分析等十门核心基础课程后，在导师指导下进一步选修专业核心课程，包括部分研究生基础课程，参加科研实践活动，找到适合自己发展的学科方向，进入研究数学的阶段。

学堂数学班

　　"学堂数学班"是清华学堂人才培养计划首批六个项目之一，属于教育部"基础学科拔尖学生培养试验计划"，旨在选拔志向以数学事业为终生职业并且数学天分较高的青年学生，使他们受到良好的训练，创造机会让他们在数学的主流方向跟随国际数学大师学习工作，迅速成长为重要的数学家。2009 年 9 月学堂数学班设立，丘成桐教授担任首席教授。

　　学堂数学班的学生管理实行动态进出机制和自由选择机制。学生通过自主招生及高考，每年 9 月入学，在清华大学数学系学习。次年春季学期从本科一年级、二年级和三年级同学中选拔增补 20 位左右学生进入学堂班；已在学堂班的同学根据其学习情况和个人意愿，选择是否继续留在学堂班；已经选修过同一届数学系学生所必修的数学核心课程的非数学系学生，也可以申请进入学堂数学班。三年级开始学堂班人员将相对稳定。

　　自学堂数学班设立至今（2012−2020 届）共培养本科生 165 人。其中 40 人继续在清华大学攻读博士学位，100 余人赴欧美等著名大学数学或相关学科深造，其中哈佛大学 8 人、麻省理工学院 6 人、哥伦比亚大学 7 人、普林斯顿大学 8 人、加州大学伯克利分校 6 人、法国巴黎高师 8 人，另有学生前往斯坦福大学、耶鲁大学、加州理工学院、法国巴黎六大及法国巴黎十一大等校深造。
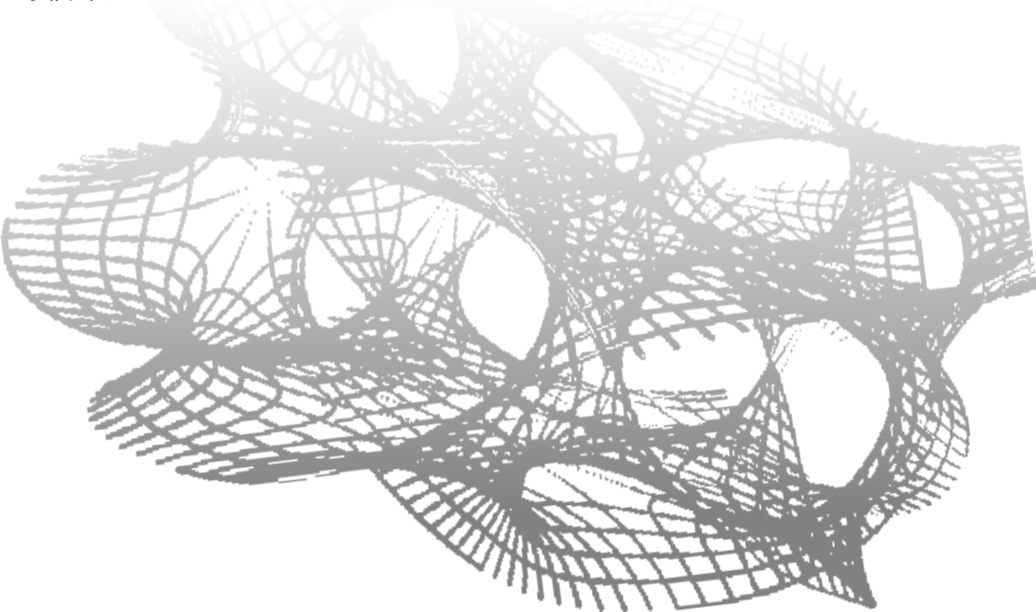
求真书院

　　2021 年 3 月，清华大学成立"求真书院"，由菲尔兹奖得主、清华大学数学中心主任丘成桐先生担任院长。书院将统筹各方资源，推进落实"丘成桐数学科学领军人才培养计划"，并将"丘成桐数学英才班"纳入书院管理。

丘成桐数学科学领军人才培养计划

　　2021 年，清华大学推出"丘成桐数学科学领军人才培养计划"（以下简称"数学领军计划"），宣布每年面向全球选拔不超过 100 名中学阶段综合素质优秀且具有突出数学潜质及特长的学生进行培养，采取"3+2+3"模式从本科连续培养至博士研究生阶段,致力于培养数学及相关领域的领军人才。该计划面向内地主要招收高中一年级和高中二年级学生，特别优秀的初中三年级及高中三年级学生亦可申请；面向海外主要招收十年级、十一年级学生，特别优秀的九年级及十二年级学生亦可申请；当年度已被录取的清华大学本科新生也可申请。

丘成桐数学英才班

2018 年 2 月教育部批复清华大学独立开设数学英才班，选拔培养优秀拔尖数学人才。丘成桐先生担任首席教授，全面督导人才培养工作。招生对象为德智体美全面发展、学习成绩优异且在数学方面具有超常表现的普通高中二年级、三年级在校学生，每年招生人数不超过 30 人。

2018 年 4 月，英才班面向全国的优秀中学生，招生工作在清华大学招生工作领导小组的领导下，严格按照相关考试程序组织和进行。测试内容包括综合测试、学科能力测试、心理测试等。数学中心负责组织专业学科能力部分测试，主要考察学生数学基础知识的掌握和学习能力。招收的学生录取至"数学与应用数学"专业，且本科阶段不得转入其他专业。

求真书院培养特色

• 充分发挥学术大师培养未来顶尖人才的资源优势

丘成桐先生提出，想要培养年轻数学家，要靠大数学家指导，需要有真学问的学者去培养他们。求真书院组建了由丘成桐先生领衔的世界一流学术大师和聚焦数学前沿领域研究的一流学者团队组成的师资团队，让学生有机会在世界一流的学术氛围中成长。

• 构建全新场地数学领军人才"专属"课程体系

在丘成桐先生看来，领军人才不应囿于单纯的数学世界中，而应具有开放的心态和宽广的胸襟，愿意接受不同学科的知识的熏陶。书院的基础课程体系中除了定制具备高挑战度、提升创新思维的数学、物理等基础课程之外，还重视定制一些融入计算机、人文、艺术等知识内容的通识课程，力求培养"通才"。在清华已有的通识课程的基础上，书院定制"数学史"、"科学史"、"西方文学经典名著阅读"、"中国历史"等书院特色课程。每学期邀请 12 位来自不同学科领域的科学家分享最前沿的科研成果，启发学生深入思考不同学科领域中的数学问题。

• 倾力打造超豪华小班教学模式

为了更好地关注每一位学生的成长，书院实行小班教学模式，专业课程每班 20 名左右同学。求真书院除大力吸引国外一流学者加入书院育人团队以外，还充分利用清华大学丘成桐数学中心的优秀师资。选聘具有创新科研思维和丰富教学经验的教师担任授课教师，开展高质量小班教学。选聘年轻优秀教师担任"学业指导老师"，每位老师负责 5 名学生的学习辅导及生活成长的各个方面。学业指导老师与授课教师密切配合，形成合力，保证每位同学都能很好地掌握课堂知识。同时这些老师可以通过与学生密切的交流，不断增强学生对于科学研究的兴趣。

• 有目的、个性化地匹配国际化培养资源

书院将根据学生成长需要，分阶段、个性化制定学生国际化培养方案。除了邀请国际著名学者来书院开展教学、讲座等活动，还会有目的地将学生派往国际顶尖名校开展访问交流。低年级阶段，书院将组织学生赴哈佛大学、芝加哥大学等开展"Winter/Summer School"交流学习；高年级阶段，书院将根据学生学术志趣和科研发展的情况，与相关领域世界一流科学家定向联系，推荐学生跟随这些科学家进行一定时间的交流和学习。

研究生招生及培养

为提升人才培养质量，培育有志于从事学术研究，愿为祖国的科教事业贡献力量的一流数学人才，数学中心自 2012 年起招收研究生，截至 2021 年 3 月，共招收研究生 81 名，目前在读研究生 55 名，全部为博士研究生。已有 26 名研究生毕业，部分赴纽约大学、挪威科技大学、巴黎六大、香港科技大学等国内外知名大学继续深造，另有部分毕业生进入数学基础教育领域担任高中教师。

博士生招生采用"申请－审核"制，综合考核、优中取优。录取过程中全面考察申请人的基本素养、学术能力、学术志趣等。博士生招生工作实施集体决策、信息公开、巡查、申诉等机制，保证选拔过程的公平、公正、公开。

数学科学研究生培养以博士生为主，专业方向分为基础数学；应用数学；计算数学；概率论与数理统计。博士生分为普博生和直博生，普博生学业年限一般为 3-4 年，直博生学业年限一般为 4-6 年，授予理学博士学位。

博士生培养实行导师负责制。导师指导博士生制定课程学习计划和学位论文工作计划。博士生学习有关课程，系统扎实掌握数学科学领域的理论和方法，拓宽知识面，提高分析问题和解决问题的能力。在导师指导下，博士生查阅文献资料，了解学科现状和动向，选择数学及其相关领域的重要问题作为研究课题，参加专题讨论班和国内外学术会议，独立从事科学研究并取得创新性成果，并完成学位论文写作和答辩。

海外博士项目

2018 年 2 月，经研究生院批复同意设立海外数学博士学位项目，吸引优秀海外学生来校学习，培养学生具有所在学科领域扎实、宽阔的理论基础和系统深入的专业知识，具有独立从事学术研究工作和开展学术交流的能力，具有创新思想、国际视野和战略眼光，能够从事数学科学领域前沿问题研究，在数学科学及相关领域做出原创性工作。数学全英文博士项目拥有先进的课程设置、培养模式和教学方法，课程将以英文授课。研究范围涉及基础数学、应用数学、计算数学、数学物理及统计学等。目前全英文博士项目已招收 5 名国际学生，分别来自剑桥大学、俄罗斯南联邦大学、帝国理工学院、曼彻斯特大学。

录取学生还可获得中国政府奖学金以及数学中心研究生奖学金。

学生资助措施

清华大学高度重视学生资助工作，将资助奖励作为清华大学学生培养、教育和管理的重要环节。建立并形成了以助学金和勤工助学为主体的"助、勤、奖、贷、补"的本科生资助体系，以前置奖学金体系、经济资助体系、奖励荣誉体系和应急就困体系构成的研究生资助奖励体系。

为支持博士生拓宽学术视野、开展创新性学术研究，培养具有国际竞争力的未来学者，数学中心博士生可申请学校"博士生出席国际会议基金""博士生短期出国访学基金"和"优秀博士学位论文出版基金"。

在学校资助体系的基础上，数学中心还设有学业优秀专项奖学金和海外学生奖学金。每年评选优秀者给与奖学金资助，入选者在享受学校正常博士补贴的基础上，还会获得由数学中心提供的全额奖学金税前 48000 元 / 学年或半额奖学金税前 24000 元 / 学年资助。资助年限通常为三年。

面向国际、学界以及社会的开放、综合性培养平台

清华数学拥有自由浓郁的学术气氛、主动求真的学术环境及平等开放教学相长的学术传统。中心设立"大师论坛""特别报告""短期课程""报告与讨论班"等系列科研交流平台。在清华大学校园之外，数学中心还拥有一个国际性数学家和热爱数学学者汇聚交流的平台——清华三亚国际数学论坛。这是一个仿照班夫国际数学站和奥博沃尔法赫数学所建于中国三亚市的国际性数学会议中心。2020 年成立的北京雁栖湖应用数学研究院，聚集应用数学领域学者和有志于推动基础科学研究产业应用的企业。上述国际交流平台营建良好的学术环境，激发和提升数学科学研究的兴趣和创新能力，努力培养新一代数学领军人才。

数学中心还开设公开课程，内容涵盖代数、数论、拓扑、几何、几何分析、成像科学、计算数学、应用数学、数学物理、统计学等多个数学领域及交叉学科的前沿问题，为学生提供丰富的数学理论知识，使他们在学习基本知识的同时，体验数学研究前沿。公开课同时面向校内外同学开放，吸引了北京市高校、外地高校和港澳高校学生慕名前来听课，切实将教育变为一种资源，惠及中国高等数学教育和发展。自 2010 年起，数学中心共开设 200 余门公开课，平均每学期 10 余门。

围绕教学科研和人才培养，数学中心持续坚持做好青年、少年人才的挖潜和培养，建立并形成了面向世界中学生的"丘成桐中学科学奖"、"清华大学丘成桐中学生数学夏令营"，面向中国内地、港澳台地区在校大学生的"丘成桐大学生数学竞赛"，面向世界华人数学本科生、硕士生和博士生的"新世界数学奖"及面向世界 45 岁以下华人数学家的"ICCM 数学奖"等系列人才发掘和培养平台，多层次、多渠道为青年数学人才培养创造条件，为具有数学潜质青年人才尽早投身基础科学研究搭建平台，激发和提升他们对数学科学研究的兴趣和创新能力，努力培养新一代数学领军人才。

2020 丘成桐中学科学奖
S.-T. Yau High School Science Award

海内外合作交流

数学中心积极开展与国内外院校和科研院所的多渠道、高层次合作与交流，已与美国哈佛大学、斯坦福大学、加州大学伯克利分校，英国牛津大学、剑桥大学等 30 多所世界知名大学和机构签署合作协议，促进国际学术交流，推动高频高端学术访问，提升清华国际影响力。每年超过 300 名世界各地的数学家及相关领域专家前来数学中心访问讲学或者从事研究工作，开设短期课程和讲座。2019-2020 年数学中心共组织奖项、会议类活动 48 个，其中主办会议 42 个，主办奖项 6 个，贡献 1400 余场学术性报告，参会的国内外专家超过 3500 人次。

重要来访

2020 年，受疫情影响，13 位世界一流大学和科研机构的学者到中心进行学术访问和交流，其中教授 5 人，博士后 2 人，初级访问 2 人，其他学者 4 人，分别来自美国哈佛大学、斯坦福大学、复旦大学等。此外，28 位学者开设线上课程，来自麻省理工大学、英国剑桥大学，华威大学，荷兰阿姆斯特丹大学，巴黎七大等各大高校。其中重要来访学者包括菲尔兹奖得主、英国剑桥大学 Caucher Birkar 教授，菲尔兹奖得主、伦敦帝国理工大学 Martin Hairer 教授，菲尔兹奖得主、范德堡大学 Vaughan Jones 教授，美国国家科学院和美国人文与科学院院士、芝加哥大学 Spencer Bloch 教授，ICCM 晨兴数学银奖、ICCM 陈省身奖获得者，中山大学朱熹平教授，数学中心访问教授、日本早稻田大学 Tadahisa Funaki 教授等。

重要活动

Caucher Birkar 教授作 "特别报告"

2020 年 9 月 4 日至 10 月 9 日，菲尔兹奖得主、英国剑桥大学数学系 Caucher Birkar 教授线上做题为 "Lectures on algebraic geometry" 的 5 场主题报告。

Spencer Bloch 教授作 "特别报告"

2020 年 11 月 25 日，美国国家科学院院士、美国艺术与科学院院士、芝加哥大学 Spencer Bloch 教授就主题 "Motivic Gamma Functions" 作线上报告。

报告讲座

举办 2020 丘成桐科学论坛

2020 年 12 月 13 日，哈佛大学天文学院院长 Abraham (Avi) Loeb 院士、哈佛大学自然基本规律中心主任 Andrew Strominger 院士、哈佛大学弦理论物理学家 Cumrun Vafa 院士等 6 位知名学者出席丘成桐科学论坛，并作报告。

Caucher Birkar 教授、Greg Lawler 教授"大师论坛"讲座

2020 年 12 月 18-20 日，第十一届大师论坛在北京雁栖湖应用数学研究院举行，菲尔兹奖得主、英国剑桥大学数学系 Caucher Birkar 教授及沃尔夫数学奖得主、美国国家科学院院士、美国艺术和科学院院士、芝加哥大学 Greg Lawler 教授作线上报告。

大师论坛

"大师论坛" 2013 年 1 月由丘成桐教授发起设立，每届论坛邀请 2-4 位世界顶级大师赴清华三亚国际数学论坛会议中心做报告。论坛的组织形式以"大师报告"结合大师本人学术领域或研究展开系列研讨，同时举办 2-4 个相关主题研讨会。截至目前，包括 3 位诺贝尔奖得主、9 位菲尔兹奖得主、5 位沃尔夫奖得主及众多院士在内 1650 余名国际前沿著名数学及相关领域学者参加了大师论坛及其专题研讨会，贡献国际前沿报告 850 余场。

特别报告

特别报告 2018 年设立，邀请数学领域顶尖学者来清华大学丘成桐数学科学中心作报告。2018 年，美国国家科学院院士、美国艺术与科学院院士 Donald Rubin 教授，以色列希伯来大学教授、以色列科学院和人文学科院院士、美国国家科学院院士、沃尔夫数学奖得主 Hillel Furstenberg 教授，天体物理学家、相对论天体物理国际中心联合体主任 Remo Ruffini 教授，受邀访问数学中心并作特别报告。

冠名讲座

四大冠名讲座

2011 年设立，以陈省身、华罗庚、许宝騄及林家翘四位杰出数学家、清华校友的名字命名，每年邀请数学领域最顶尖的学者来校作报告。

陈省身讲座，以纪念他在几何与拓扑方面的历史性影响；
华罗庚讲座，以纪念他在数论、代数和分析方面的基础性贡献；
许宝騄讲座，以纪念他在统计和概率发展过程中的开创性贡献；
林家翘讲座，以表彰纪念他在应用数学中的开创性贡献。

自 2011 年启动至 2020 年 5 月，39 位国际上最具影响力的数学家做客四大冠名讲座，贡献了 89 场学术报告，其中包括 4 位菲尔兹奖得主——法国里昂大学 Cedric Villani 教授、美国范德堡大学的 Vaughan Jones 教授、法国高等科学研究所 Laurent Lafforgue 教授，以及剑桥大学 Caucher Birkar 教授。

丘镇英讲座

2007 年由丘成桐先生设立，继承父亲"融合中国和西方文化"的愿望，支持和邀请世界顶尖数学家来华举办讲座和从事学术研究。讲座开设十余年来，已邀请包括国际著名数学家张寿武教授、美国哈佛大学 Wilfied Schmid 教授在内的数十位世界顶尖学者作报告。

叶承耀、叶家祺讲座

2019 年由香港著名学者叶承耀先生及其子叶家祺先生设立，每年聘请国际著名教授来数学中心访问并作讲座，涉及数学、物理、哲学和心理学等领域。2019 年 6 月 26 日晚，中国科学院高能物理研究所所长、中国科学院院士、俄罗斯科学院外籍院士、第三世界科学院院士王贻芳教授在清华大学主楼接待厅向全校师生作了一场题为"探索无穷"的特别报告。

现代数学系列报告

现代数学系列报告于 2012 年 3 月设立，每周五下午邀请国内外专家学者做一小时学术专题系列报告，旨在介绍国际数学领域最新研究成果和前沿进展，并致力搭建中国学者与国内外同行进行快速学术交流的重要学术平台。自 2012 年至今，该系列报告已举办百余场，邀请的报告人中包括国际数学界知名教授学者，如加拿大卡尔顿大学 Abbas Momeni 教授、英国帝国理工学院 Amihay Hanany 教授、美国堪萨斯大学蒋云峰教授等。2020 年举办 11 场线上报告，报告人包括德国波恩大学 Albrecht Klemm 教授、德国比勒菲尔德大学 Alexander Grigoryan 教授、中山大学朱熹平教授等数学家。

短期课程

中心短期课程自 2010 年始开设，邀请国内外访问学者在到访期间开设课程，介绍数学领域研究前沿，加强与校内外、海内外学者的沟通交流，营造包容开放的国际化氛围，搭建学术交流和人才培养平台。课程面向高校师生、学者开放，在一定程度上开阔研究者和学生们的研究视野，启迪学术思维，提升学术素养和科研水平。2010 年至 2019 年，中心共开设短期课程 455 门，平均每年开设 50 余门。

讨论班

数学中心每周定期邀请到访中心的访问学者作学术报告并讨论交流，组织和开展了弦理论、几何表示论、几何分析、应用数学等方向的讨论班，吸引大量来自国内外院校的优秀数学人才进行学术交流。目前已开设的讨论班包括 Algebraic Geometry（AG，代数几何学）、Geometry and Physics Seminar（GPS，几何与物理研讨班）、Algebraic Geometry, Duality and Strings（ADS，代数几何、对偶和弦）、Computational & Applied Mathematics Seminar（CAM，计算与应用数学研讨班）等。

历年来访学术大师

David Aldous	英国皇家学会会士，美国科学院外籍院士、加州大学伯克利分校教授
James Arthur	沃尔夫奖得主、加拿大多伦多大学教授
Michael Aschbacher	沃尔夫奖得主、美国加州理工学院教授
Yoav Benjamini	以色列科学与人文学院院士、特拉维夫大学教授
Michael Berry	沃尔夫奖得主、英国皇家学会院士、欧洲科学院院士、美国科学院外籍院士、英国布里斯托尔大学教授
Peter Bickel	美国国家科学院院士、美国人文与科学院院士、荷兰皇家人文与科学院院士、美国加州大学伯克利分校教授
Caucher Birkar	菲尔兹奖得主，英国剑桥大学教授
Jean-Pierre Bourguignon	欧洲科学院院士、欧洲研究理事会主席
Yann Brenier	美国加州大学伯克利分校教授
Lawrence D. Brown	美国国家科学院院士、美国人文与科学院院士、宾夕法尼亚大学教授
Luis Caffarelli	沃尔夫奖得主、美国国家科学院院士、美国人文与科学院院士、得克萨斯大学奥斯汀分校教授
NgôBảoChâu	菲尔兹奖得主、美国芝加哥大学教授
金芳蓉	美国人文与科学院院士、加州大学圣地亚哥分校教授
John Coates	英国皇家科学院院士、剑桥大学教授
Henri Darmon	加拿大皇家科学院院士、麦吉尔大学教授
David Donoho	美国国家科学院院士、美国人文与科学院院士、法国科学院外籍院士、美国斯坦福大学教授
Pavel Exner	欧洲科学院院士、捷克科学院院士、捷克理工大学教授
Bradley Efron	美国国家科学院院士、美国人文与科学院院士、美国国家科学奖章得主、斯坦福大学教授
Bjorn Engquist	瑞典皇家科学院院士、挪威科学与文学院院士、美国得克萨斯大学奥斯汀分校教授
Hélène Esnault	莱布尼茨奖得主、康托奖得主、德国柏林自由大学教授
Laurent Fargues	法国科学研究中心研究员
Hillel Furstenberg	沃尔夫奖得主、以色列希伯来大学教授
David Gross	诺贝尔物理学奖得主、美国加州大学圣巴巴拉分校教授
Richard S.Hamilton	美国国家科学院院士、美国人文与科学院院士、哥伦比亚大学教授
Leonidas Guibas	美国工程院院士、美国人文与科学院院士、国际计算机协会会士、斯坦福大学教授

Martin Hairer	菲尔兹奖得主、英国伦敦帝国理工大学教授
Nigel Hitchin	英国皇家科学院院士、牛津大学教授
季向东	上海交通大学物理系主任、美国马里兰大学教授
Vaughan Jones	菲尔兹奖得主、美国国家科学院院士、美国人文与科学院院士、范德堡大学教授
Sergiu Klainerman	美国国家科学院院士、美国人文与科学院院士、普林斯顿大学教授
Maxim Kontsevich	菲尔兹奖得主、德国高等研究所教授
Motoko Kotani	前日本数学会会长、日本东北大学原子分子材料科学高等研究院院长
Laurent Lafforgue	菲尔兹奖得主、法国科学院院士、法国高等科学研究所教授
Eduard Looijenga	荷兰皇家人文与科学院院士、清华大学数学中心教授
George Lusztig	美国国家科学院院士
Fernando Marques	美国普林斯顿大学教授
Eric Maskin	诺贝尔经济学奖得主、美国普林斯顿高等研究院教授
James Mirrlees	诺贝尔经济学奖得主、英国剑桥大学教授
David Mumford	菲尔兹奖得主、沃尔夫奖得主、美国国家科学院院士、美国布朗大学荣誉教授
Hiraku Nakajima	日本学士院奖、日本学术振兴会 JSPS 奖、美国数学会柯尔奖得主，日本东京大学教授
Stanley Osher	美国国家科学院院士、美国 ACM 计算和应用数学奖得主、加州大学洛杉矶分校教授
George Papanicolaou	美国国家科学院院士、斯坦福大学教授
Adrian E. Raftery	美国国家科学院院士、美国人文与科学院院士、爱尔兰皇家科学院荣誉院士、美国华盛顿大学教授
Michael Rapoport	欧洲科学院院士、德国波恩大学教授
Kenneth Ribet	美国数学会会长、美国人文与科学院院士、加州大学伯克利分校教授
Donald Rubin	美国国家科学院院士、美国人文与科学院院士、原哈佛大学统计系教授、清华大学数学中心教授
Remo Ruffini	相对论天体物理国际中心联合体 (ICRANet) 主任
Wilfried Schmid	美国人文与科学院院士、哈佛大学教授

学术条件

丘成桐数学科学中心

清华大学丘成桐数学科学中心十余年来，不断发展，现已有教师 70 人，博士后 37 人，学生 114 人。目前教学科研办公区分布于校内静斋、宁斋和近春园西楼，设有教师办公室、教室、研讨室、报告厅、会议室、资料室、行政办公室等。数学中心教师、学生和访问学者在自由、开放、浓郁的学术氛围中潜心研究学术问题。

Richard Schoen	沃尔夫奖得主、美国科学院院士、美国人文和科学院院士、斯坦福大学教授、加州大学欧文分校教授
Jean-Pierre Serre	菲尔兹奖得主、沃尔夫奖得主、阿贝尔奖得主
David Siegmund	美国国家科学院院士、美国人文与科学院院士、古根海姆奖得主、斯坦福大学教授
Stephen Smale	菲尔兹奖得主、沃尔夫奖得主、美国密歇根大学教授
Stanislav Smirnov	菲尔兹奖得主、瑞士日内瓦大学教授
Joel Smoller	古根海姆奖得主、美国密歇根大学教授
Gilbert Strang	美国人文与科学院院士、麻省理工学院教授
Clifford Taubes	美国国家科学院院士、美国人文与科学院院士、邵逸夫数学奖得主、美国哈佛大学教授
Henry Tye	香港科技大学高等研究院院长
S. R. Srinivasa Varadhan	美国国家科学院院士、美国人文与科学院院士、英国皇家学会会士、美国纽约大学教授
Stefaan Vaes	比利时皇家科学院院士、法朗基奖获得者、比利时鲁汶大学教授
Cedric Villani	菲尔兹奖得主、法国里昂大学教授
Claire Voisin	欧洲科学院院士、法国法兰西学院教授
王贻芳	中国科学院院士、中国科学院高能物理研究所所长
Wendelin Werner	菲尔兹奖得主、瑞士苏黎世联邦理工学院教授
Edward Witten	菲尔兹奖得主、美国普林斯顿高级研究所教授
姚鸿泽	美国国家科学院院士、美国人文与科学院院士、哈佛大学教授
Don Bernard Zagier	荷兰皇家人文与科学院院士、法国法兰西学院教授
张寿武	美国人文与科学院院士、古根汉姆基金奖奖得主、美国普林斯顿大学教授
张益唐	加州大学圣塔芭芭拉分校教授
张伟	美国麻省理工学院教授、ICCM 数学奖金奖得主

静斋

静斋

近春园西楼

宁斋正门

北京雁栖湖应用数学研究院

北京雁栖湖应用数学研究院（Beijing Institute of Mathematical Sciences and Applications，BIMSA)，是在北京市委市政府的指导和支持下，由北京市科学委员会和北京怀柔区委区政府推动成立的新型研发机构。按照"国家战略、世界一流、国际引领"的要求，坚持高起点定位、高标准建设。由清华大学丘成桐数学科学中心作为主责单位筹建，依托清华数学现有力量，利用清华相关学科的综合优势，联合中科院数学与系统科学研究院及北京数学与应用数学及其交叉领域等优势单位，采用新的科研组织形式和人才引进模式推动中国数学科学发展，促进数学与工程应用、产业化的对接融通，提升数学支撑创新发展的能力和水平，为中国科技发展提供核心源动力。截止 2021 年 3 月，已引进数学科研人才 44 人，举办各类研讨报告 129 场，学科活动围绕几何拓扑、密码学、机器学习、数学物理、动力系统及金融数学等方向。

清华三亚国际数学论坛会址

清华三亚国际数学论坛,是清华大学在海南省三亚市建设的一个国际性、综合性的数学会议中心。论坛园区占地面积140亩,建筑面积约30000平方米,集会议、餐饮和住宿为一体。

2009 年初,海南省组团赴美进行高层次人才引进。在美期间与哈佛大学教授、国际数学大师丘成桐先生进行会谈。会谈中丘成桐先生提出,国际数学界最有名的数学会议中心加拿大班夫国际数学站和德国奥博沃尔法赫数学所在世界数学科学发展的关键时期曾经发挥过非常重要的作用,中国应该借鉴这样的模式,在亚洲建设第一个国际数学会议中心。

2009 年 7 月和 9 月,时任国家领导人先后会见丘成桐教授,对中国建设国际数学论坛明确表示支持。2010 年 6 月,清华大学与海南省达成合作共识,并明确"清华三亚国际数学论坛"选址在三亚市,清华校友企业家史维学捐建。

2013 年 12 月 18 日,清华三亚国际数学论坛落成并正式启用,论坛包括一个超过 9000 平方米的会议主楼,一个图书馆和 170 个房间的住宿区,并配备相应的餐饮设施和基本休闲设施。截至目前,清华大学丘成桐数学科学中心每年负责组织、举行数学学科国际会议 30-40 个,同时还支持与数学相关的其他学科的学术性会议在论坛召开。

清华三亚国际数学论坛,是清华大学支持发展数学学科的重要组成部分。该会议中心的建立,填补了亚洲国际性数学论坛的空白,对加强国际数学界的学术交流,促进中国乃至亚洲地区数学人才的培养具有重要的里程碑意义。

合作伙伴

2007– 至今	新世界发展有限公司
2008–2014	泰康保险集团股份有限公司
2012–2013	伟俊佛学基金有限公司
2013–2014	广州恒大实业集团有限公司
2013–2018	西蒙基金
2015–2016	东润公益基金会
2015–2016	广州省合生珠江教育发展基金
2017–2019	台湾新光国际创业投资股份有限公司
2017–2019	深圳市 TCL 公益基金会
2017–2019	青岛汇泉王朝大饭店有限公司
2017–2019	南京盘龙广告文化有限公司
2017–2021	广州富力地产股份有限公司
2018–2027	香港中文大学（深圳）基金会
2019	衡水金苑房地产开发有限责任公司

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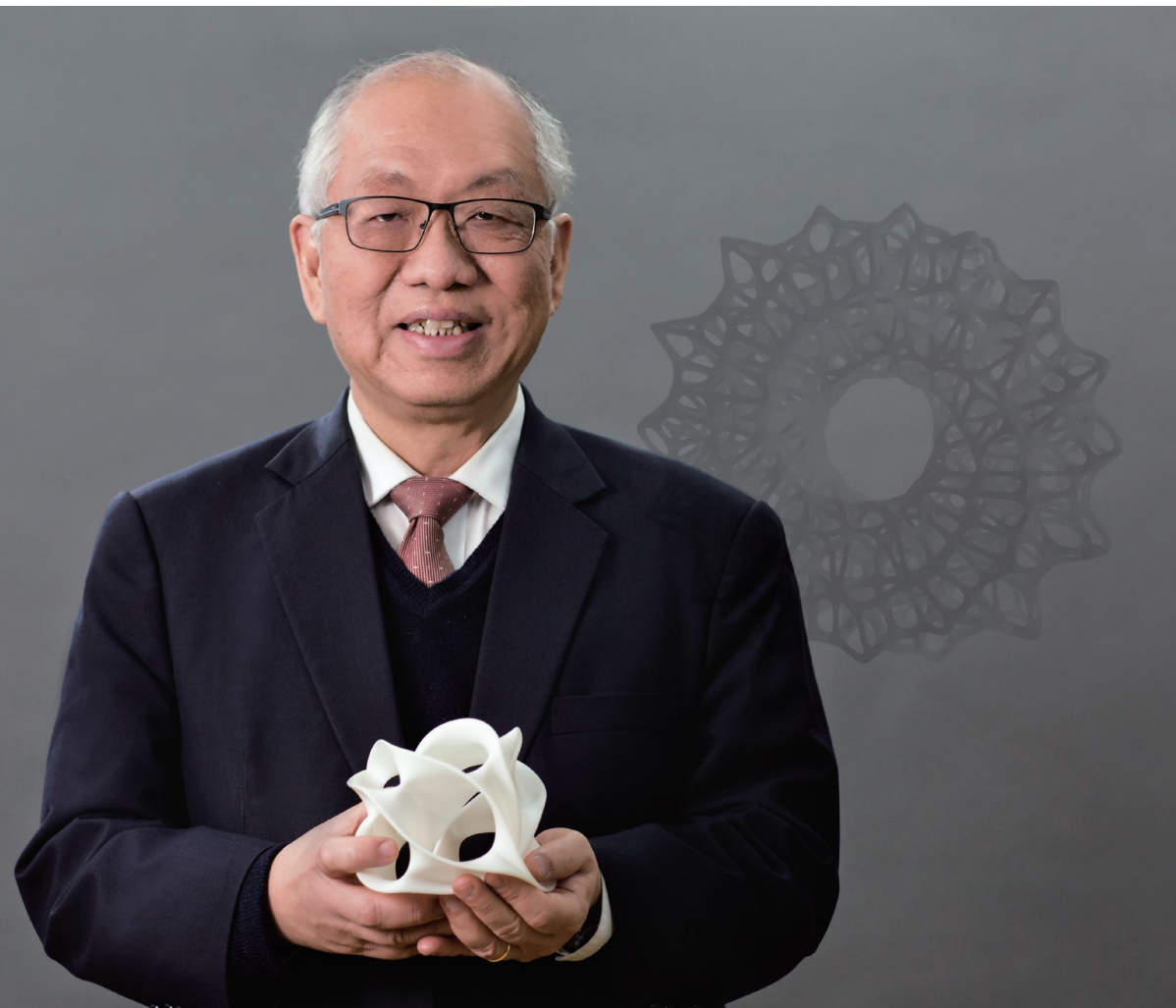010-62797712
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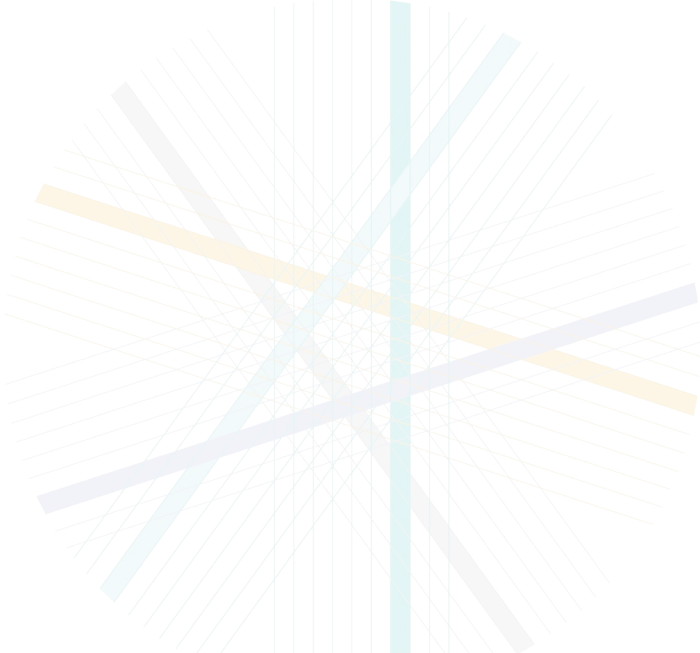
Message from the Director

Ever since its establishment in the early twentieth century, Tsinghua has always been regarded as the first-class university in China, being famous for its strong disciplines of engineering and applied sciences. Tsinghua University is far-sighted in recognizing the fundamental and strategic role of mathematics in science. In December 2009, Tsinghua University held the Inauguration Ceremony of the Mathematical Sciences Center, and invited me to be the first Director. This invitation carried with it the firm commitment and great expectations from the core leadership of Tsinghua University. This commitment gives me time and the opportunity to fully develop Yau Mathematical Sciences Center. I hope that on the basis of the sustained support, strategic investment and effective management of Tsinghua University, Tsinghua mathematical disciplines will develop into the forefront of Mathematics in the world. Many people have been working very hard for our common goal. I believe that with your support and participation, YMSC will make a significant contribution to mathematicians and mathematical disciplines around the world.

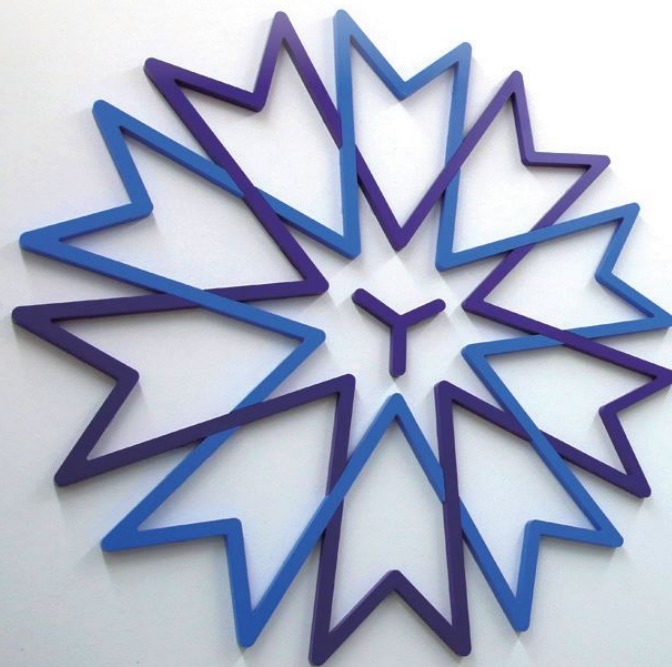Director, YMSC of Tsinghua University

Contents

About YMSC

Tsinghua University established the Mathematical Sciences Center in December 2009. The internationally renowned mathematician Professor Shing-Tung Yau, at the invitation of the university, became the director of the center. China Ministry of Education officially approved the establishment of the Tsinghua University Yau Mathematical Sciences Center in 2014.

Under the leadership of Professor Shing-Tung Yau, in the past decade, YMSC has made substantial developments in terms of building top-notch faculty, selecting and cultivating young talents, conducting cutting-edge scientific researches and completing mathematical discipline construction. The YMSC now ranks among the world-class research centers with significant international influences.

Upholding the 'International, Open and Academic' spirit, YMSC has attracted a large number of top mathematical scholars and cultivated a group of outstanding young talents.

Facts & Figures *

Faculty & Staff	125
Faculty	70
Professors	20
Associate Professors	10
Assistant Professors	40
Foreign Faculty	16
Postdoctoral Researchers	37
Foreign Postdocs	6
Registered Students	114
Undergraduates *	59
PhD Candidates	55

* Data by the end of March, 2021
* Yau Math Talents Undergraduate Program

Research Areas

Mathematical researches at YMSC covers mainly 5 major areas and 3 cross-disciplinary research fields. The research groups of representation theory, number theory, mathematical physics. dynamical systems and random analysis have achieved remarkable original results, earning fames on the international level. The establishment of Yanqi Lake Beijing Institute of Mathematical Sciences and Application or BIMSA in 2020 further extend researches into the applied mathematics area.

Top-Notch Faculty

In the past decade, YMSC has been able to build a top-notch faculty. One of the recent additions, the 2018 Fields Medalist Caucher Birkar joins the team in 2021. Now, YMSC has 70 full-time faculty members, including 16 foreign faculty members. 31 of the faculty members are under the age of thirty-five. Currently, YMSC has 37 postdoctoral researchers, 6 of which are foreigners. It has 55 registered PhD students and 59 undergraduates with Yau Math Talents Undergraduate Program.

Math Talents Incubator

YMSC is dedicated to selecting and educating best math talents for China and the world. The various math competitions and awards have attracted young math learners of various ages, including S. T. Yau High School Science Award, S.-T. Yau College Student Mathematics Contests, New World Mathematics Award, ICCM Medal of Mathematics. Grand events such as International Chinese Mathematical Union, International Congress of Chinese Mathematicians are valuable platforms for great minds. Lectures and talks by prestigious scholars including Master Memorial Lectures, Master Forums, are eye opening and inspiring for younger mathematicians.

International Academic Platform

YMSC signed Memoranda of Understanding with nearly 30 world top universities and research institutes, such as Harvard University, Stanford University and Oxford University. More than 300 mathematicians as well as experts and scholars in related areas visit YMSC each year for exchange and cooperation, including winners of the Nobel Prize, the Fields Medal and Wolf Prize.

Research Achievements

Scholars at the YMSC publish more than one hundred papers on SCI indexed journals each year. By far, 7 papers by 6 YMSC professors were accepted by the top 4 journals in mathematics, including Annals of Mathematics, Inventions Mathematics, Acta Mathematicas, Journal of The American Mathematical Society.

According to the QS World University Rankings by Subject in 2021, Tsinghua's Mathematics ranks at the 18th among the world top universities, which was 43rd in 2016.

Today, mathematical sciences are facing with unprecedented development opportunities, with strong supports from the Tsinghua University. YMSC is determined to cultivate top math talents, achieve original research results and build a most advanced mathematical sciences research center, in a bid to make Tsinghua University one of the most prestigious university in the world.

History

2009

SEP 29 Professor Shing-Tung Yau acted as Chief Professor of "Xuetang Undergraduate Math Class"

DEC 17 Mathematical Sciences Center (MSC) was established with Professor Shing-Tung Yau appointed as the Director. The then CPC Central Committee Political Bureau Member and State Councilor Liu Yandong called Tsinghua University for congratulation, and the then Vice Minister of Education Chen Xi attended the Inauguration Ceremony. International Advisory Board and Academic Committee of MSC were established.

DEC 21 Chen Zhili, the then Vice Chairman of the Standing Committee of the National People's Congress met with Professor Shing-Tung Yau, Terence Chi-Shen Tao (Fields Medalist) and other academic representatives at the Great Hall of the People.

2010

APR 26 Conference celebrating Professor Shing-Tung Yau Winning the Wolf Prize was held. Professor Yau donated all the award money to establish the Shing-Tung Yau Incentive Fund to reward Tsinghua students with outstanding performances in mathematics.

JUN 10 Agreement on building Tsinghua Sanya International Mathematical Forum Conference Center was signed.

SEP 28 MSC organized the Press Conference on the 5th International Congress of Chinese Mathematicians (ICCM 2010) & Events in honor of the 100th Anniversary of the Birth of Loo-Keng Hua and 99th Anniversary of the Birth of Shiing-Shen Chern.

DEC 16 For the first time, MSC organized the Finals & Awarding Ceremony of (The 3rd) S.-T. Yau High School Mathematics Award.

DEC 17 Opening Ceremony of the 5th International Congress of Chinese Mathematicians (ICCM) & Awarding Ceremony of Morningside Medal of Mathematics was held;
Events in honor of the 100th Anniversary of the Birth of Loo-Keng Hua and 99th Anniversary of the Birth of Shiing-Shen Chern were held;
The 2nd New World Mathematics Awards Ceremony was held.

DEC 20 The 1st S.-T. Yau College Mathematics Contest was held.

DEC 23   The first Conference of Tsinghua Sanya International Mathematical Forum (TSIMF) was held. 17 World top mathematicians attended the opening ceremony and delivered reports at the forum, including Nobel laureate in physics David Gross, Royal Netherlands Academy of Arts and Sciences President Robbert Dijkgraaf, University of California, Santa Barbara Chancellor Henry T. Yang, Harvard Department of Mathematics Chair Prof. Benedict Gross, Chinese University of Hong Kong Pro-Vice-Chancellor Benjamin W. Wah, NTHU President Lijun Chen, former NTHU President Jionglang Liu, the Wolf Prize and the Abel Prize Winner John Tate, and Fields Medalist Prof. Vaughan Johns.

2011

JUL 13   MSC moved into Jin Chun Yuan West Building.

JUL 13   Master Memorial Lecture Series was launched, naming after four great mathematicians: Shiing-Shen Chern, Loo-Keng Hua, Pao-Lu Hsu and Chia-Chiao Lin. Top scholars in mathematics will be invited every year to deliver lectures at Tsinghua University.

SEP 05   Post-doctoral Station was established with the first two postdocs joining MSC.

DEC 19   The 2nd Conference of Tsinghua Sanya International Mathematical Forum & Tsinghua Sanya International Economics Round-table Conference was held.

2012

MAR 02   Modern Mathematics Lecture Series was launched. Domestic and international top mathematicians are invited to give 1-hour lectures each Fridays.

JUN 29   Applied Mathematician Consortium under International Congress of Chinese Mathematicians (CAM-ICCM)) was launched.

AUG 27   Postgraduate Program kicked off and the first five graduate students were enrolled.

DEC 15   The first CAM-ICCM Workshop on Imaging Science was held.

DEC 20   The 5th Shing-Tung Yau High School Mathematics Award was held and included in the Independent Enrollment Plan of Tsinghua University.

2013

JAN 05   The 3rd Conference of TSIMF & 1st Master Forum on Mathematics was held.

MAY 29   MSC signed the Memoranda of Understanding with relevant departments of nearly 30 world top universities and research institutes, such as Harvard University, Stanford University, Oxford University and University of Cambridge.

SEP 18   Professor Shiu-Yuen Cheng and Professor Eduard Looijenga joined MSC as full-time faculty members. Professor Shiu-Yuen Cheng was Dean of the School of Science and Acting Vice-President for Academic Affairs at Hong Kong University of Science and Technology. Professor Eduard Looijenga was Member of the Royal Netherlands Academy of Arts and Sciences, and professor of mathematics at Utrecht University.

DEC 16   S.-T. Yau High School Mathematics Award was renamed S.-T. Yau High School Science Award, adding Physics Award, included by the Independent Enrollment Plan of Tsinghua University.

DEC 16   Liu Yandong, the then Vice Premier of the State Council, met with Professor Shing-Tung Yau and Nobel laureate David Gross.

DEC 18   The TSIMF Facility was inaugurated, Chen Yuan, the then Vice Chairman of the National Committee of the Chinese People's Political Consultative Conference, sent a congratulatory letter. The 4th Conference of TSIMF & Master Forum 2013 was held. 2 Fields Medalists, 3 Nobel laureates, and around 180 international mathematicians, physicists and economists, as well as representatives of teachers and students from universities and research institutions attended the Inauguration Ceremony and the Forum.

2014

FEB 23 The forum "Face to Face Dialogue with World Leading Physicists: After the Higgs discovery, where is fundamental physics going?" was held. Professor Shing-Tung Yau chaired the meeting and discussed the impact of the Higgs particle discovery on basic physics with eight world-renowned physicists.

JUL 21 The 1st S.-T. Yau High School Math Camp was held.

AUG 04 International Conference on "The 60th Anniversary of the Calabi Conjecture: A Workshop in celebration of The 65th Birthday of Shing-Tung Yau" was held.

SEP 01 Yu Pin was promoted to Associate Professor (tenured) under the Teaching and Research scheme (the first promoted to be a tenured track professor under the scheme).

DEC 29 The Ministry of Education officially approved the establishment of YMSC under Tsinghua University.

2015

JAN Part of YMSC faculty and staff moved into Jing Zhai Building.

MAR 19 The YMSC Inauguration Ceremony was held.

JUN 08 Professor Shing-Tung Yau invited an international review panel to review MSC's development and lay down the future plan. The panel consists of six world-famous mathematicians, i.e. Wilfried Schmid, John Coates, Bjorn Engquist, Clifford Taubes, Jun Li and Horng-Tzer Yau.

DEC 27 The String Math 2015 Conference was held in Sanya. Hundreds of well-known string theorists in the world attended the conference, including Professor Shing-Tung Yau, and Fields Medalist Edward Witten.

2016

AUG 01 **String Theory 2016 International Conference** the largest and most important conference in the String Theory, was held.

DEC 17 The 9th S.-T. Yau High School Science Award was held, adding Chemistry Award, Biology Award, and Grand Prize.

2017

APR 04 The logo of YMSC was officially released.

APR 21 The 90th Anniversary of the Establishment of Tsinghua Mathematical Discipline & International Conference on Mathematics was held.

APR 21 Tsinghua University awarded Honorary Doctorate to French mathematician Jean-Pierre Serre.

JUN 09 Professor Shiu-Yuen Cheng was awarded Honorary Fellow of the Hong Kong University of Science and Technology.

DEC 12 The 10th S.-T. Yau High School Science Award & Anniversary Ceremony was held, adding Computer Science Award.

DEC 27 The 1st Annual Meeting of the International Consortium of Chinese Mathematicians (ICCM) was held.

2018

FEB 07 The Ministry of Education officially approved to set up Yau Math Talent Undergraduate Program at Tsinghua University, which shall recruit no more than 30 students each year from the second and third grades of senior high schools.

FEB 24 Doctoral Program in Mathematics for International Students was approved, and the program recruitment started in October, 2018.

APR 01 Professor Akito Futaki, former Dean of the Department of Mathematics, University of Tokyo, joined YMSC as a full-time faculty member.

JUN 30 The 1st Mathematical Physics Summer Camp for Excellent College Students was held.

JUL 04 Professor Shing-Tung Yau was awarded the Marcel Grossmann Award, one of the most important awards in physics.

AUG 22 15 undergraduates, with an average age of 17, including 9 students in the second year of high schools, were enrolled in Yau Math Talent Undergraduate Program.

NOV 16 Professor Donald Rubin, former Dean of the Department of Statistics, Harvard University, and a world-class leading statistician, joined YMSC as a full-time faculty member.

DEC 14 The 11th S.-T. Yau High School Science Award was held, adding the Award of Economic and Financial Modeling.

DEC 22 International Conference on the "40th Anniversary of Calabi-Yau Theory" was held in Jiaoling County, Meizhou City, Guangdong Province;
Inauguration Ceremony of the Calabi-Yau Space Sculpture was held;
The construction plan of "Shing-Tung Yau International Conference Center" was made by the People's Government of Jiaoling County;
The Cooperation Agreement on Distance Education Teaching Station between Tsinghua and Jiaoling and the Cooperation Framework Agreement between Jiaoling County and YMSC were signed respectively.

DEC 27 The 2nd Annual Meeting of the International Consortium of Chinese Mathematicians (ICCM) was held at NTU.

2019

MAR 22-24 The 1st Tsinghua AI Summit was held in Sanya.

MAR 23 Former Chinese Vice Premier Liu Yandong met with Professor Shing-Tung Yau and congratulated on Professor Yau's 70th birthday.

MAR 30 The "You Bring Charm to the World" Lifetime Achievement Award was presented to Professor Shing-Tung Yau.

JUN 09-14 The 8th International Congress of Chinese Mathematicians (ICCM) & Awarding Ceremony of ICCM Medal of Mathematics was held.

JUN 09 The 5th New World Mathematics Awards Ceremony was held.

JUN 26 Professor Wu Hao was awarded Winner of Tsinghua University Young Scholars of Distinction.

JUN 26 The 1st Yip Shing Yiu and Yip Chia-Chi Memorial Lecture was held. Professor Wang Yifang, Academician of CAS, made a special report entitled "Exploring the Infinite".

JUN 29 Newly added research house-"Ningzhai" was unveiled.

AUG 19 Chen Jining, Mayor of Beijing, met with Professor Shing-Tung Yau And entrusted him to lead the establishment of Yanqi Lake Beijing Institute of Mathematical Sciences and Applications (BIMSA).

OCT 17 Prof. Shing-Tung Yau delivered a keynote speech titled The Importance of Mathematics and Basic Sciences to Applied Science at Zhong Guancun Seminars, Beijing.

OCT 19 CPC Central Committee Political Bureau Member and the State Council Vice Premier Sun Chunlan met with Professor Shing-Tung Yau at Zhongnanhai, listening to his report on the Construction of Mathematics Discipline in Tsinghua University and Suggestions for the Development of Mathematics in China.

DEC 07-09 2020 Yau Math Talent Undergraduate Program Entrance Examination was held, and 30 excellent high school students were admitted into the program.

DEC 16 Tsinghua Sanya International Mathematics Forum (TSIMF) launched a new series lecture-Contemporary Mathematicians. Martin Hairer, Fields

Medalist and Professor of Imperial College London, John Coates, Fellow of the Royal Academy of Sciences and Professor of The University of Cambridge, and Wilfried Schmid, Fellow of the American Academy of Arts and Sciences and Professor of Harvard University, were the keynote speakers.

DEC 16 The 3rd ICCM Best Paper Award Ceremony was held at TSIMF with16 young scholars winning the awards.

DEC 16 Conference on Graph Theory and its Applications: a Tribute to Professor Fan Rong K Chung Graham 70th Birthday was held at Sanya. She is the Academician of the American Academy of Arts and Sciences and the University of California, San Diego.

DEC 30 Fields Medalist Caucher Birkar from University of Cambridge accepted YMSC offer and promised to join YMSC in September 2020.

2020

JAN 09 Mayor Chen Jining met with Prof. Shing-Tung Yau and IAS Director Robbert Dijkgraaf,who is also the Dean of the Institute of advanced studies, Princeton. Later in the day, Qiu Yong, President of Tsinghua University, met with Prof. Shing-Tung Yau and Robbert Dijkgraaf.

MAR 24 Prof. Shing-Tung Yau at Harvard delivered a lecture Guide to Academic Career Lecture via ZOOM, titled Shiing-Shen Chern: A Great Geometer of 20th Century for students from Tsinghua Xuetang Undergraduate Program and mathematics scholars.

APR 08 Doctoral Program Interview was first held online successfully due to the COVID-19 prevention and control requirement.

JUN 12 BIMSA was established and the signing ceremony of Cooperation and Co construction Agreement with Tsinghua University was held.

JUL. Professor Wuhao won the Tsinghua Best Teacher Award; Professor Wuhao, Qiu Yu and Associate Professor Yang Yilong won Online Teaching Award for the 2019-2020 Spring Semester.

OCT 25 The Finals of the 11th Shing-Tung Yau University Mathematics Competition were held in Tsinghua University.

DEC 7 China Middle School Principals' Summit was co-hosted by BIMSA.

DEC 12-13 The Finals & Awarding Ceremony of the 12th S.-T. Yau High School Mathematics Contest.

DEC 13 2020 S.T. Yau Science Forum were held in Tsinghua.

DEC 18 Post Doctoral Station were established in BIMSA.

DEC 18-19 2020 Masters' Forum were held in BIMSA.
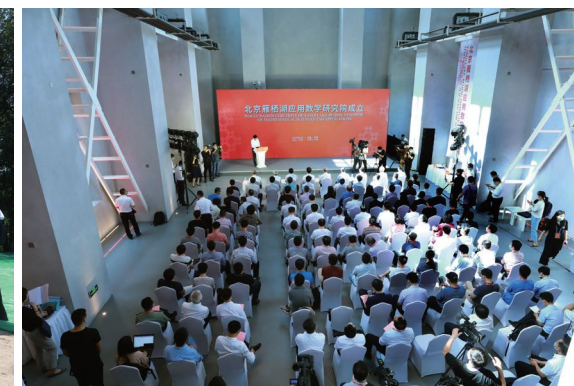
Organizational Structure

International Advisory Committee

Huaidong Cao	Professor at Lehigh University
Ching-Li Chai	Professor at University of Pennsylvania, Academician of Academia Sinica, Taiwan
John Coates	Professor at University of Cambridge, Fellow of the Royal Society (UK)
Lai Tze-Leung	Professor at Stanford University, Winner of COPSS Award, Member of American Statistical Society, Fellow of Institute of Mathematical Statistics, USA
Ari Laptev	Professor at the Institut Mittag-Leffler, Former President of the European Mathematical Society
Jun Liu	Professor at Harvard University, Winner of ICCM Gold Medal of Applied Mathematics, Winner of COPSS Award
Kefeng Liu	Professor at University of California, Los Angeles, Winner of ICCM Gold Medal of Mathematics, Winner of Guggenheim Fellowship
Stanley Osher	Professor at University of California, Los Angeles, Member of US National Academy of Sciences, Winner of Computational and Applied Sciences Award, USACM
Duong H. Phong	Professor at Columbia University, Winner of Bergman Prize in Mathematics
Richard Schoen	Professor at University of California, Irvine, Winner of Wolf Prize in Mathematics, Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences

*a-z Alphabetically arranged by last name

Academic Committee

Chongqing Cheng	Professor at Nanjing University, Distinguished Professor of Changjiang Scholars Program
Shiu-Yuen Cheng	Professor at Tsinghua University, Honorary Fellow of the Hong Kong University of Science and Technology, Member of American Mathematical Society, Winner of Chern Prize in Mathematics
Lei Fu	Professor at Tsinghua University, Distinguished Professor of Changjiang Scholars Program, Distinguished Young Scholars of NSFC
Jixiang Fu	Professor at Fudan University, Distinguished Professor of Changjiang Scholars Program, Distinguished Young Scholars of NSFC, Winner of Chern Prize in Mathematics
Changshou Lin	Professor at Taiwan University, Winner of ICCM Gold Medal of Mathematics, Academician of Academia Sinica, Taiwan
Yat-Sun Poon	Professor at University of California, Riverside
Jie Xiao	Professor at Tsinghua University, Distinguished Young Scholars of NSFC
Zhouping Xin	Professor at the Chinese University of Hong Kong, Winner of ICCM Gold Medal of Mathematics, Winner of US President's Education Awards
Lo Yang	Member of Chinese Academy of Sciences
Xiping Zhu	Professor at Sun Yat-sen University, Distinguished Professor of Changjiang Scholars Program, Distinguished Young Scholars of NSFC, Winner of Chern Prize in Mathematics, Winner of ICCM Silver Medal of Mathematics

*a-z Alphabetically arranged by last name

Faculty

YMSC has attracted and built up a large group of top experts and scholars. By March 2021, it has 70 faculty members including 20 professors, 10 associate professors, 40 assistant professors, 16 of which are foreign faculty members from nearly 10 countries including the United States, the United Kingdom, Germany, France, the Netherlands, Japan, and Chile. 31 faculty members are under the age of 35.

The center currently has 37 postdocs including 6 from abroad.

YMSC boasts a team of world renowned mathematicians, including 2 Fields Medalists, 1 winner of Wolf Prize, Crawford Prize and Marcel Grossman Prize, 2 members of US National Academy of Sciences and American Academy of Sciences and Arts, 1 member of the Royal Netherlands Academy of Arts and Sciences, 2 members of American Mathematical Society, 1 member of the Prize Committee for the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, and 1 honorary fellow of the Hong Kong University of Science and Technology.

Leading Mathematicians

Professor Shing-Tung Yau is Director of YMSC at Tsinghua University, Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, and Foreign Member of Chinese Academy of Sciences. Professor Yau is the William Casper Graustein Professor of Mathematics at Harvard University, and professor of physics at Harvard as well. He was awarded the Fields Medal (1982), Crafoord Prize (1994), Wolf Prize (2010) and Marcel Grossmann Award (2018).

Professor Donald Rubin is Member of US National Academy of Sciences, and Member of American Academy of Arts and Sciences. He was John L. Loeb Professor of Statistics at Harvard University. Professor Rubin has received the Samuel S. Wilks Medal from the American Statistical Association, the Parzen Prize for Statistical Innovation, and the George W. Snedecor Award of the Committee of Presidents of Statistical Societies.

Professor Eduard Looijenga is Member of the Royal Netherlands Academy of Arts and Sciences, and Member of American Mathematical Society. Professor Looijenga was Professor of Mathematics at Utrecht University, University of Amsterdam, and University of Nijmegen in Netherlands.

Professor Shiu-Yuen Cheng is Honorary Fellow of the Hong Kong University of Science and Technology, and Member of American mathematical society. He was Dean of the School of Science and Acting Vice-President for Academic Affairs at Hong Kong University of Science and Technology, and President of the Hong Kong Mathematical Society. Professor Cheng was awarded the Chern Prize at the 2007 International Congress of Chinese Mathematicians and the Sloan Research Fellowships in 1977.

Professor Caucher Birkar is the 2018 Fields Medalist for his proof of boundedness of Fano varieties and contributions to the minimal model problem. He won Leverhulme and the AMS Moore Prize.

Young Mathematicians

YMSC also boasts a group of young talents, beginning to earn fames in the academic circle, including 3 from ChangJiang Scholars Program, 2 NSFC Distinguished Young Scholars, 1 scholar under National High-level Personnel of Special Support Program,2 NSFC Excellent Young Scientists, 1 winner of ICCM Gold Medal of Mathematics, 2 winners of ICCM Silver Medal of Mathematics, 3 Qiu Shi Outstanding Young Scholars, 3 winners of Tsinghua University Young Scholars of Distinction, etc.

Research Achievement

YMSC has gradually formed 5 major research areas and 3 cross- disciplinary research fields.

The five main research areas are
- Representation theory, algebraic geometry and number theory
- Geometry and topology
- Analysis, partial differential equation (PDE) and dynamical systems
- Probability theory and applied mathematics
- Mathematical physics

The three cross-disciplinary research fields are
- Mathematical Physics
- Mathematics & Engineering
- Mathematics & Social Science

The center publishes around 100 papers each year. So far, 6 professors published 7 papers on the Top 4 Best Mathematics Journals, including Annals of Mathematics, Inventions Mathematics, Acta Mathematicas and Journal of The American Mathematical Society

1.Li, Junbin;Yu, Pin Construction of Cauchy data of vacuum Einstein field equations evolving to black holes. Ann. of Math. (2)181 (2015), no. 2,699–768
2.Miao, Shuang; Yu, Pin On the formation of shocks for quasilinear wave equations. Invent. Math. 207 (2017), no. 2, 697–831
3.Dyatlov, Semyon; Jin, Long Semiclassical measures on hyperbolic surfaces have full support. Acta Math. 220 (2018), no. 2, 297–339
4.Bohan Fang, Chiu-Chu Melissa Liu and Zhengyu Zong, On the Remodeling Conjecture For Toric Calabi-Yau 3-orbifolds, Journal of the American Mathematical Society
5. King, A., Qiu, Y. Cluster exchange groupoids and framed quadratic differentials. Invent. math. 220,479–523 (2020)
6.J. Xue, D. Dolgopyat, Noncollision singularities in a planar two-center-two-body problem, Acta Math., 224 (2020), 253–388
7.Lecouturier, E. Higher Eisenstein elements, higher Eichler formulas and rank of Hecke algebras. Invent. math.223,485–595 (2021)

Study at YMSC

Undergraduate Program

Tsinghua Xuetang Undergraduate Math Class started in September 2009, with Mr. Shing-Tung Yau as the chief professor. In 2018, the Yau Mathematical Talents Undergraduate Program started recruitment. In 2021, Tsinghua University kicked off Yau Leading Math Talents Program, with Qiuzhen College as its incubator.

Tsinghua University offers 4-year undergraduate program in mathematics and applied mathematics. The required courses for a bachelor degree, covering 5 areas, include basic mathematics, applied mathematics, probability and statistics, computational mathematics, operations research and cybernetics. The freshmen and the sophomores are required to complete core subjects, including mathematical analysis, advanced algebra, ordinary differential equations, abstract algebra, complex analysis, measurement and integration, probability theory etc.. The junior and senior students will be encouraged to select the research area, according to the strength and interest. Capable students are encouraged to select more advanced graduate courses and undertake scientific research if they reach the undergraduate required grades. Tutorial Team will offer academic and life guidance, so that students could find the right path for the mathematical study.

Xuetang Math Class

Xuetang Math Class, with Mr. Shing-Tung Yau being the Chief Professor, is one of the first six Tsinghua Xuetang Talents Programs. The ultimate goal of the Math Program is to nurture a new generation of leading Chinese mathematicians. The program seeks to recruit and train college students who are motivated to pursue their careers in mathematical research, providing them with superior training and opportunities to work with mathematical masters, so that they can become leading mathematicians in the future.

Until 2020, a total of 165 students graduated from Xuetang Math Class. 40 students chose in Tsinghua for further education, while some 100 students went abroad. 8 were enrolled into Harvard University, 6 to MIT, 7 to Columbia University, 8 to Princeton University, 6 to UC Berkeley, 8 to Ecole Normale Super Paris France and a few were enrolled into Sandford University, Yale University, Caltech, Université Paris VI and University of Paris-Sud.

Qiuzhen College

Qiuzhen College were established in march, 2021, headed by Mr. Shing-Tung Yau. It's supposed to be the incubator of the next generation top mathematicians, under the guidance of Tsinghua Yau Leading Math Talents Program. Yau Mathematical Talents Undergraduate Program set up in 2018 were merged into Qiuzhen College.

Tsinghua Yau Leading Math Talents Program

Tsignhua University launched Yao Leading Math Talent Program in early 2021. The new scheme plans to recruit from around world no more than 100 middle school students, who show great potentials in math study, while have excellent comprehensive performances. The program include 3-year undergraduate program, 2-year graduate program, plus 3 post graduate program, from bachelor, master to doctor. It's open mainly to the first and second year of China senior high-school students, with some exceptions for the outstanding third-year students of junior high school. To overseas students, students above 10th grade can apply, with exceptions for outstanding 9th graders. The freshmen at Tsinghua University can apply as well.

Yau Mathematical Talents Undergraduate Program

In February 2018, the Ministry of Education approved Tsinghua University to establish Yau Mathematical Talents Programs to select and cultivate young math talents. Yau Mathematical Talents Program recruit students from senior high school who have excellent academic performance, particularly in mathematics. No more than 30 students will be admitted each year. Applicants are required to take comprehensive test, disciplinary competence test and psychological test. Students under the program are required to complete the 4-year undergraduate study in the major of mathematical sciences and applied mathematics.

Values of Qiuzhen College

•Master mathematicians will get involved in the education of the next generation mathematician. Headed by Shing-Tung Yau, Qiuzhen College boasts a team of world top mathematicians, offering students the top-level academic guidance.

•A comprehensive curriculum is designed for young learners, including not only challenging math, physics and computer science classes, but also literatures and arts. The goal is to broaden the eyes and minds through studying different subjects, such as mathematical history, science history, China history and classic literature. Each semester, 12 top scientists will share their latest findings in the frontier research areas, inspiring students think and explore.

•In a bid to attend every students' needs, Qiuzhen College features small-size classes. It will introduce top scholars from abroad and from YMSC to teach different subjects. Young scholars will be appointed as Academic Tutor, each responsible for attending 5 students, about their study, as well as other daily issues.

•Education at Qiuzhen College is individualized and personalized, according to the needs of different ages and different personalities. Students may have opportunities of visiting top overseas universities for the winter/summer school. The older students will be introduced to top overseas mathematicians for further study.

Graduate Program

With an aim to cultivate excellent mathematical research talents, YMSC started to recruit graduate students in the fields of pure mathematics and applied mathematics in 2012. Now, it has 55 registered graduate students, mainly PhD. Up to March 2021, there had been 26 graduates of YMSC Postgraduate Program. Some of the graduates seek advanced study at the world-famous universities such as New York University, Norwegian University of Science and Technology, Université Paris VI, Hong Kong University of Science and Technology. And some chose to be high school teachers and make contributions to secondary education in China.

PhD students are recruited under the "application-review" system in a bid to select the best students through the comprehensive assessment. In the process of recruitment, the applicant's basic qualities, academic ability, academic interest and so on are comprehensively examined. In order to ensure the fairness and openness of the recruitment process, collective decisions are made by the admission committee available for university inspection. Applicants' appeals are also allowed.

Graduate Mathematics Education of Tsinghua University focuses on doctoral training of the following majors: Pure Mathematics, Applied Mathematics, Computational Mathematics, Probability and Mathematical Statistics. Both master and bachelor could apply for the PhD program, 3-4 years and 4-6 years respectively. Doctoral Mathematics Education of Tsinghua University offers a PhD in Science.

Tutors will coach PhD students to form a personal curriculum and plan the dissertation. A PhD student is required to take related courses, learning mathematical theories and methods, broadening knowledge spectrum, and improving abilities of analyzing and solving problems independently. After reviewing literature and understanding the current research trends, PhD students

will choose their own research areas. They'll be able to attend discipline-specific workshops and international conferences. They are expected to carry out scientific research independently, produce original research results, and complete both PhD dissertations and dissertation defenses.

YMSC Doctoral Program in Mathematics for International Students

In February 2018, the Graduate School of Tsinghua University approved YMSC Doctoral Program in Mathematics for International Students. This program is designed to nurture international candidates into promising researchers with solid theoretical foundation, deep expertise, global perspective and strategic vision in their chosen areas of research fields. They are expected to develop the ability of conducting original researches of the advanced subjects, and push the frontiers of mathematical research. The training plan, curriculum design, and teaching methodologies are as advanced as those of other world-class universities. Qualified applicants are encouraged to apply for Chinese Government Scholarship and YMSC Graduate Student Scholarship.

At present, 5 International students from University of Cambridge, Imperial College London, University of Manchester and Russia's Southern Federal National University have been enrolled in the program.

Financial Assistance

Tsinghua University offers various financial assistances for students, including stipend program, work-study program, scholarship, financial aid and emergency aid.

YMSC offers Doctoral Fund for International Meetings and for Short-term Overseas Visits, the Publication Fund for Outstanding Doctoral Dissertations.

Also available are Merit-based Scholarship and International Graduate Student Scholarship. A full scholarship recipient of Merit-based Scholarship will be awarded 48,000 RMB per year (before tax), and a half scholarship recipient will be awarded 24,000 RMB per year (before tax). The typical duration for this merit-based scholarship is 3 years.

Open Educational Resources

YMSC seeks a free, real, open and fair academic atmosphere. It has various academic exchange programs including Master Forums, Special Reports, Modern Mathematics Lectures, Mini-courses and Seminars. Outside the campus, Tsinghua Sanya International Mathematics Forum (TSIMF), holding the similar concept of Banff International Research Station and the Mathematical Research Institute of Oberwolfach, is a unique world-class mathematical forum in Asia located in Sanya, the capital city of China's island province Hainan. The latest established BIMSA deals in researches of Applied Mathematics and started to host related academic activities. These events and facilities offer an easy access to top level mathematical academic exchanges and resources for young students and for the public.

YMSC offers a series of public courses covering Algebra, Number Theory, Topology, Geometry and Geometric analysis, Imaging science, Computational Mathematics, Applied Mathematics, Mathematical Physics, Statistics, and other frontiers in mathematics and interdisciplinary fields, providing students with a wealth of mathematical theoretical knowledge and exposing them to cutting-edge research in mathematics. The courses are open to Chinese college students from mainland China, Hong Kong and Macao, benefiting Chinese mathematical higher education. Since 2010, YMSC has offered more than 200 public courses, an average of more than 10 courses each semester.

YMSC is dedicated to young talents selection and education, with the following events:

S.-T. Yau High School Science Award for high school students across the world

Tsinghua Yao MathCamp for high school students

S.-T. Yau College Student Mathematics Contests for college students from mainland China, Hong Kong,Macao and Taiwan

New World Mathematics Award for Chinese undergraduate graduate and PhD students across the world

ICCM (International Consortium of Chinese Mathematicians) Medal of Mathematics

(originally Morningside Awards) for Chinese mathematicians under the age of 45 across the world.

Contests for different-age attract and select best young mathematical talents, guiding them undertake basic science research as early as possible and develop their innovation abilities.

Cooperation and Exchange

International Cooperation

YMSC has been actively developing multi-channel and high-level cooperation and exchanges with universities and research institutes at home and abroad. YMSC have signed Memoranda of Understandings with relevant departments of nearly 30 world top universities and research institutes so as to promote international cooperation and exchange, and uplift the international influence of Tsinghua University. Among those universities are Harvard University, Stanford University, UC Berkeley, University of Oxford, University of Cambridge, and some key domestic universities. More than 300 mathematicians and related field experts from all over the world come to the YMSC to give lectures or engage in research work, and offer short courses each year. In 2019-2020,YMSC organized 6 awards and 42 international conferences, offered about 1400 lectures, brought more than 3000 scholars from home and abroad, a new record for YMSC.

VIP visits

In 2020, scholars from 13 top universities and research institutions visited YMSC, amid the COVID19. 28 scholars started online courses. These visiting scholars come from Harvard University, Massachusetts Institute of Technology, Princeton Institute of Advanced Research, University of Cambridge, Max Planck Institute of Germany, University of Amsterdam, Netherlands, Uppsala University, Sweden, and universities in Hong Kong and Taiwan. The most important visitors included Fields Medalist Caucher Birkar, Fields Medalist Martin Hairer, Fields Medalist Vaughan Jones, NAS Member and AAAS Member Richard Hamilton, NAS Member and AAAS Member Adrian E. Raftery, AAAS Member Wilfried Schmid, AAAS Member Fan Chung, the Royal Society Fellow John Coates, the Royal Academy of Belgium Member Stefaan Vaes, Japan Academy Prize Winner Hiraku Nakajima, CAS Member Wang Yifang, ICCM Gold Medal Winner Zhang Wei.

Academic Activities

Important Events

Special Lecture by Professor Caucher Birkar

From September 4, 2020 to Oct. 9th, Professor Caucher Birkar from University of Cambridge, a Fields Medalist, delivered online lectures titled "Lectures on algebraic geometry".

Special Lecture by Professor Spencer Bloch

On Nov. 25th, 2020, Spencer Bloch, US NAS Member, AAAS Member and AMS member gave an online speech titled "Motivic Gamma Functions".

S. T. Yau Science Forum

On Dec. 13, 2020, S.T. Yau Science Forum were held, attended by 6 top scholars, including Avi Loeb, Andrew Strominger and Cumrun Vafa.

Avi Loeb is the Frank B. Baird Jr. Professor of Science at Harvard University. He had been the longest serving Chair of Harvard's Department of Astronomy, Founding Director of Harvard's Black Hole Initiative.

Andrew Strominger is the director of Harvard's Center for the Fundamental Laws of Nature. He has made significant contributions to quantum gravity and string theory.

Cumrun Vafa is the Hollis Professor of Mathematics and Natural Philosophy at Harvard University.

Master Lectures by Caucher Birkar & Greg Lawler

On Dec. 18-20, 2020, the 11th Master Lectures were held at BIMSA, attended online by the Fields Medalist Caucher Birkar and Greg Lawler, who is a professor from University of Chicago, the US NAS Member and AAAS Member.

Master Forums

TSIMF Master Master Forum was initiated by Professor Shing-Tung Yau in January 2013. Each year, 2 to 4 Master Lectures are delivered by world top scholars at the TSIMF Convention Centre, along with several other workshops. So far, about 1,650 celebrated scholars in mathematics and related academic fields have participated in Master Forums, including 3 Noble Prize laureates, 7 Fields Medalists, 5 Wolf Prize winners and a number of academicians. The scholars have presented about 850 lectures on the frontiers of Mathematics and related disciplines.

Special Lectures

The Special Lecture series was founded by YMSC in 2018. Each year YMSC will invite world renowned scholars in mathematics to give Special Lectures.

Distinguished Lectures

Master Memorial Lecture Series

In 2011, YMSC launched Master Memorial Lecture Series named after four mathematicians of Tsinghua University: Shiing-Shen Chern, Loo-Keng Hua, Pao-Lu Hsu and Chia-Chiao Lin. Each series invites outstanding mathematicians deliver speech on research frontiers.

Shiing-Shen Chern Memorial Lectures

In honor of the fundamental contributions of Shiing-Shen Chern to Geometry and Topology.

Loo-Keng Hua Memorial Lectures

In honor of the fundamental contributions of Loo-Keng Hua to Number Theory, Algebra and Analysis.

Pao-Lu Hsu Memorial Lectures

In honor of the fundamental contributions of Pao-Lu Hsu to Statistics and Probability.

Chia-Chiao Lin Memorial Lectures

In honor of the pioneering achievement of Chia-Chiao Lin in applied mathematics.

Since 2011, 39 influential mathematicians in the world have been invited to deliver 89 academic lectures, including 4 Fields Medalists-Professor Cedric Villani at Université de Lyon, Professor Vaughan Jones at Vanderbilt University, and Professor Laurent Lafforgue at IHES, Professor Caucher Birkar from University of Cambridge.

Chen-Ying Chiou Distinguished Lectures

The Chen-Ying Chiou Distinguished Lecture was founded in 2007 by Professor Shing-Tung Yau in honor of his father Chen-Ying Chiou, carrying the hope of Chinese and Western Culture integration. This lecture series invites outstanding mathematicians to give lectures and engage in academic research. Dozens of celebrated scholars, including Professor Shouwu Zhang and Professor Wilfied Schmid, have been invited to deliver lectures.

Yip Shing Yiu and Yip Chia-Chi Sponsorship Lectures

The Yip Shing Yiu and Yip Chia-Chi Sponsorship Lecture was founded in 2019 by celebrated scholar Yip Shing Yiu and his son Yip Chia-Chi. This lecture series invite world famous professors to give speech in the areas of mathematics, physics, philosophy and psychology and so on.

Modern Mathematics Lecture Series

Modern Mathematics Lecture Series was founded in March 2012. The series invites top international mathematicians to give 1-hour lectures each Friday, aiming to introduce the latest research results and the frontiers of mathematics, and to build an important academic platform for Chinese scholars to communicate with their peers at home and abroad. Since 2012, this lecture series has brought over 100 distinguished scholars to give lectures, such as Professor Abbas Momeni at Carleton University in Canada, Professor Amihay Hanany at Imperial College London and Professor Yunfeng Jiang at University of Kansas. In 2020, YMSC held 11 Modern Mathematics lectures online, inviting Professor Alberto Cattaneo from University of Zurich, Professor Alexander Grigoryan of Universität Bielefeld, Professor Xiping Zhu from Sun Yat-sen University.

Mini Courses

Mini courses were founded in 2010 by YMSC to invite international top mathematicians to give mini-courses during their visits at YMSC. From 2010 to 2021, YMSC has opened a total of 502 mini-courses altogether, with an average of more than 50 courses each year.

Seminars

YMSC faculty members and visiting professors regularly give academic reports and organize seminars each week in such fields as String Theory, Geometric Representation, Geometric Analysis, and Applied Mathematics, attracting a large number of outstanding math talents from domestic and international universities for academic exchange. The past seminars include AG (Algebraic Geometry), GPS (Geometry and Physics Seminar), ADS (Algebraic Geometry, Duality and Strings), CAM (Computational and Applied Mathematics Seminar) etc..

Distinguished Scholars

David Aldous	Fellows of the Royal Society, Member of US National Academy of Sciences, Professor at University of California, Berkeley
James Arthur	Winner of Wolf Prize, Professor at University of Toronto
Michael Aschbacher	Winner of Wolf Prize, Professor at Caltech
Yoav Benjamini	Member of Israel Academy of Sciences and Humanities, Professor at Tel Aviv University
Michael Berry	Winner of Wolf Prize, Fellow of the Royal Society, Member of the Academy of Europe, Member of US National Academy of Sciences, Professor at University of Bristol
Peter Bickel	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Members of the Royal Netherlands Academy of Arts and Sciences (KNAW) , Professor at University of California, Berkeley
Caucher Birkar	Winner of the Fields Medal, Professor at Cambridge University
Jean-Pierre Bourgui-gnon	Member of the Academy of Europe, President of European Research Council
Yann Brenier	Professor at University of California, Berkeley
Lawrence D. Brown	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at University of Pennsylvania
Luis Caffarelli	Winner of Wolf Prize, Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at University of Texas at Austin
Ngô Bảo Châu	Winner of the Fields Medal, Professor at the University of Chicago
Fan Chung	Member of American Academy of Arts and Sciences, Professor at University of California, San Diego
John Coates	Fellow of the Royal Society (UK) , Professor at University of Cambridge
Henri Darmon	Member of the Royal Society of Canada, Professor at McGill University
David Donoho	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Foreign Fellow of French Academy of Sciences, Professor at Stanford University
Pavel Exner	Member of the Academy of Europe, Member of the Academy of Sciences of the Czech Republic, Professor at Czech Technical University
Bradley Efron	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Winner of National Medal of Science, Professor at Stanford University
Bjorn Engquist	Member of the Royal Swedish Academy of Sciences, Norwegian Academy of Science and Letters, Professor at University of Texas at Austin
Hélène Esnault	Gottfried Wilhelm Leibniz Prize Winner, Cantor Medal Winner, Professor at Freie Universität Berlin
Laurent Fargues	Researcher of the French National Center for Scientific Research
Hillel Furstenberg	Winner of Wolf Prize, Member of US National Academy of Sciences, Professor at Hebrew University of Jerusalem
David Gross	Nobel laureate in Physics, Professor at University of California, Santa Barbara(UCSB)
Richard S Hamilton	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at Columbia University
Leonidas Guibas	Member of the US National Academy of Engineering, Member of American Academy of Arts and Sciences, Member of Association for Computing Machinery, Professor at Stanford University
Martin Hairer	Winner of the Fields Medal, Professor at Imperial College London
Nigel Hitchin	Fellow of the Royal Society (UK) , Professor emeritus at Oxford University
Xiangdong Ji	Director of Department of Physics, Shanghai Jiao Tong University, Professor at University of Maryland

Vaughan Jones	Winner of the Fields Medal, Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at Vanderbilt University
Sergiu Klainerman	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at Princeton University
Maxim Kontsevich	Winner of the Fields Medal, Professor at the Institut des Hautes Études Scientifiques
Motoko Kotani	Former President of Mathematical Society of Japan, Director of WPI-AIMR, Tohoku University
Laurent Lafforgue	Winner of the Fields Medal, Fellow of French Academy of Sciences, Professor at IHES
Eduard Looijenga	Member of the Royal Netherlands Academy of Arts and Sciences (KNAW) , Professor at Yau Mathematical Sciences Center (YMSC) ,Tsinghua University
George Lusztig	Member of US National Academy of Sciences
Fernando Marques	Professor at Princeton University
Eric Maskin	Laureates of the Nobel Memorial Prize in Economic Sciences, Professor at Social Science at the Institute for
James Mirrlees	Laureates of the Nobel Memorial Prize in Economic Sciences, Professor at University of Cambridge
David Mumford	Winner of the Fields Medal, Winner of Wolf Prize, Member of US National Academy of Sciences, Professor at Brown University
Hiraku Nakajima	Member of American Mathematical Society, Winner of Japan Academy Prize， Winner of JSPS Prize, Winner of Cole Prize in Algebra
Stanley Osher	Member of US National Academy of Sciences, Winner of Computational and Applied Sciences Award, USACM, Professor at University of California, Los Angeles
George Papanicol-aou	Member of US National Academy of Sciences, Professor at Stanford University

Adrian E. Raftery	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Honorary Member of the Royal Irish Academy, Professor at University of Washington
Michael Rapoport	Member of the Academy of Europe, Professor at University of Bonn
Kenneth Ribet	President of American Mathematical Society, Member of American Academy of Sciences and Arts, Professor at University of California, Berkeley
Donald Rubin	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at Yau Mathematical Sciences Center, Tsinghua University
Remo Ruffini	Director of International Center for Relativistic Astrophysics （ICRANet）
Wilfried Schmid	Member of American Academy of Arts and Sciences, Professor at Harvard University
Richard Schoen	Winner of Wolf Prize, Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at University of California, Irvine
Jean-Pierre Serre	Winner of the Fields Medal, Winner of Wolf Prize, Winner of Abel Prize
David Siegmund	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Winner of Guggenheim Fellowship, Professor at Stanford University
Stephen Smale	Winner of the Fields Medal, Winner of Wolf Prize, Professor at the University of Michigan
Stanislav Smirnov	Winner of the Fields Medal, Professor at University of Geneva
Joel Smoller	Winner of Guggenheim Fellowship, Professor at The University of Michigan
Gilbert Strang	Member of American Academy of Arts and Sciences, Professor at Massachusetts Institute of Technology
Clifford Taubes	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Winner of Shaw Prize in Mathematics, Professor at Harvard University

Henry Tye	Dean of Institute of Advanced Studies, Hong Kong University of Science and Technology, Member of American Physical Society
S. R. Srinivasa Vara-dhan	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Fellows of the Royal Society Professor at New York University
Stefaan Vaes	Member of the Royal Academy of Belgium, Winner of Francqui Prize, Professor at University of Leuven
Cedric Villani	Winner of the Fields Medal, Professor at University of Lyon
Claire Voisin	Member of the Academy of Europe, Professor at Institut de France
Yifang Wang	Member of Chinese Academy of Sciences, Director of Institute of High Energy Physice, Chinese Academy of Sciences
Wendelin Werner	Winner of the Fields Medal, Professor at Swiss Federal Institute of Technology in Zurich
Edward Witten	Winner of the Fields Medal, Professor at the Institute for Advanced Study, Princeton University
Horng-Tzer Yau	Member of US National Academy of Sciences, Member of American Academy of Arts and Sciences, Professor at Harvard University
Don Bernard Zagier	Member of the Royal Netherlands Academy of Arts and Sciences, Professor at the Institute de France
Shou-Wu Zhang	Member of American Academy of Arts and Sciences, Winner of Guggenheim Fellowship, Professor at Princeton university
Yitang Zhang	Professor at University of California, Santa Barbara(UCSB)
Wei Zhang	Winner of ICCM Gold Medal of Mathematics, Professor at Massachusetts Institute Of Technology

YMSC Facilities

YMSC is located at Jingzhai and Jin Chun Yuan West Building, Tsinghua University, with a total area of 4,985 square meters. It includes offices, discussion rooms, lecture halls, conference rooms, reading rooms, a library and a tea break room. YMSC makes great efforts to create a decent environment for faculty members and visiting scholars so that they can focus on scientific research and education.

Yanqi Lake Beijing Institute of Mathematical Sciences and Applications，BIMSA

BIMSA locates in the waterfront of Yanqi Lake, Beijing's northern Huairou District. It was first initiated by YMSC, now cooperated with Tsinghua University and China Academy of Science, with strong supports from Beijing municipal government and Huairou district government. Officially established in the summer of 2020, it aims to build a world-class research institute focusing on applied mathematics and other inter-disciplinary areas. BIMSA now has 44 researchers in the areas of Geometric Topology, Cryptography; Machine Learning, Mathematical Physics, Financial Mathematics and Dynamical System.

Tsinghua Sanya International Mathematics Forum (TSIMF)

Tsinghua Sanya International Mathematics Forum (TSIMF) is an international comprehensive mathematics conference center of Tsinghua University locating in Sanya City, Hainan Province. It covers an area of 140 acres and has a construction area of about 30000 square meters, integrating conference, catering and accommodation.

At the beginning of 2009, Hainan Province sent a delegation to the United States for high-level talents recruitment. During the trip, they held a talk with Professor. Shing-Tung Yau at Harvard University. Professor Yau pointed out Banff International Research Station in Canada and the Mathematical Research Institute of Oberwolfach in Germany have played a very important role in the critical period of the development of world mathematics, and China should draw on their experience to build the country's first international mathematics conference center in Asia.

In July and September 2009, national leaders hold meetings with Professor Shing-Tung Yau and expressed their supports for the initiative. In June 2010, Tsinghua University and Hainan Province reached a consensus on cooperation and decided on the location of the TSIMF, the capital city of Hainan Province. Mr. Shi Weixue, a Tsinghua alumnus and an entrepreneur, donated money for the construction of TSIMF.

On December 18, 2013, TSIMF facility was inaugurated. It includes a conference building of over 9000 square meters, a library, an accommodation area of 170 rooms, as well as relevant catering and basic recreation facilities. Up to now, YMSC has organized about 30-40 international conferences on mathematics, it also supports a number of academic conferences in other disciplines related to mathematics.

TSIMF is an important move that Tsinghua University makes to support the development of mathematics. It is the unique world-class mathematical forum in Asia which promotes the academic exchanges of Chinese Mathematical community. TSIMF has been a milestone for math talents cultivation in China and Asian region.

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