

# ACHIEVEMENT HIGHLIGHTS 2012 / 13

## GOALS:

TO ACHIEVE RESEARCH  
BREAKTHROUGHS THAT WILL  
TRANSFORM OUR FUTURE

TO FOSTER THE NEXT GENERATION  
OF BRILLIANT PHYSICISTS

TO SHARE THE TRANSFORMATIONAL  
POWER OF THEORETICAL  
PHYSICS WITH THE WORLD



# ADVANCING FUNDAMENTAL RESEARCH

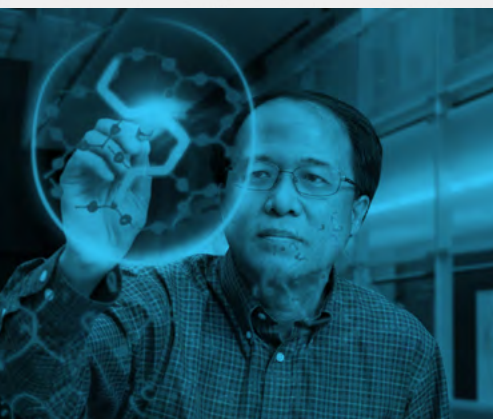
TACKLING THE BIG QUESTIONS AT THE FRONTIERS OF THEORETICAL PHYSICS.

## GLOBAL SCIENTIFIC EXCELLENCE

An independent international study on research excellence ranked Perimeter 5<sup>th</sup> in physics overall, and 2<sup>nd</sup> in theoretical physics worldwide. [excellencemapping.net](http://excellencemapping.net)

Researchers published **397 papers** in 2012/13.

Since 2001, researchers have published **2,500+ papers** in **60 journals** with **77,000+ citations**.



## 150 SCIENTISTS

The world's largest community of theoretical physics researchers.

Re-appointed **Neil Turok** as Director, and appointed him to the Lazaridis Bohr Chair in Theoretical Physics.

Recruited **5 new faculty**, bringing the total to **32**; **12** are cross-appointed with Canadian universities.

Appointed **12 new Distinguished Visiting Research Chairs**, bringing the total to **34** – among them, Stephen Hawking.

Faculty earned **11 major prizes and honours**.

Daive Gaiotto won the **New Horizons in Physics Prize** from the Fundamental Physics Prize Foundation.

Kendrick Smith shared in the **Gruber Prize** for his work with the Wilkinson Microwave Anisotropy Probe (WMAP), mapping the universe's oldest light.



Held **10 conferences** attended by **700 scientists**.

Hosted **400+ visiting scientists**.

**81,000+ unique visitors** from **170 countries** accessed **6,700+ online talks** on pirs.org.

Forged **3 new partnerships**: with TRIUMF and SNOLAB, Israel's Weizmann Institute, and Italy's International School for Advanced Studies (SISSA).

# TRAINING THE NEXT GENERATION

DRAWING THE VERY BRIGHTEST YOUNG PHYSICISTS FROM ACROSS THE GLOBE TO TRAIN AT PERIMETER.



perimeter scholars INTERNATIONAL

In 2012/13, the groundbreaking Perimeter Scholars International (PSI) program trained **29 students**, including **10 women**, from **15 different countries**.

PSI has graduated **125 students** from **37 countries** since 2009.

Perimeter hosts the **largest community** of theoretical physics postdocs in the world. Postdocs have total research independence, with mentorship from senior scientists.

In 2012/13, **20 new postdoctoral fellows** were recruited, bringing the community to **44**.

There were **39 PhD students** at Perimeter in 2012/13; **6 completed their doctorates**.

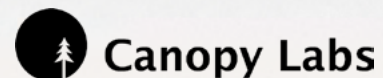


## SEEDING THE FUTURE

Perimeter alumni go on to work in academia, industry, medicine, technology, and more.

In 2012/13, **6 postdocs** obtained **tenure-track positions** at top universities.

Perimeter grads founded **2 new tech companies**, Canopy Labs and Invenia Technical Computing.



## GROWING THE PUBLIC/PRIVATE PARTNERSHIP



Created the **Anaximandros Scholarship** for exceptional young physicists with donations from the **Hellenic Heritage Foundation** and the **Savvas Chamberlain Family Foundation**.

Attracted over **\$1.6 million** from individuals, corporations, and foundations.

Launched **new funding circles** for donors at all levels.

Obtained **\$2.3 million** in research grants in 2102/13.

# INSPIRING THROUGH OUTREACH

SHARING THE TRANSFORMATIONAL POWER OF THEORETICAL PHYSICS WITH THE WORLD.



Reached **1 million students** in 2012/13; reached **2.5 million students** and **8,000+ teachers** since 2003.

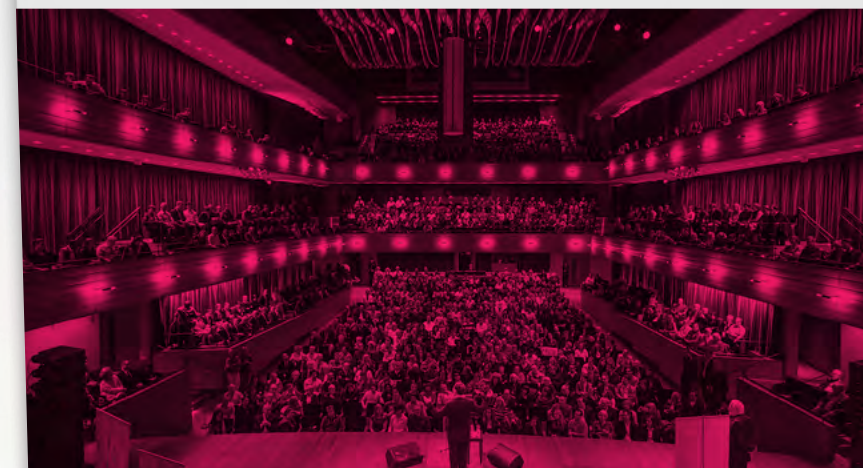
Brought **40 international high school students** to the 11th International Summer School for Young Physicists (ISSYP); **500+ students** have attended ISSYP since 2003 and **70%** credit the program with inspiring them to study science in university.

Delivered **5 GoPhysics! camps** and **10 Physica Phantastica presentations**, reaching **2,200+ students**.

Delivered more than **90 teachers' workshops**, reaching more than **2,500 educators** and **125,000 students**, including Aboriginal youth in remote communities.

Released **Career Moves: Skills for the Journey**, Perimeter's 7<sup>th</sup> educational module, showcasing science- and math-based careers.

Launched Perimeter's educational resources internationally; Singapore's Ministry of Education purchased a full suite of resources, including training to build a **nationwide teachers' network**.



Neil Turok's sold-out Massey Lectures were broadcast across Canada, reaching **over 1 million listeners**. The bestselling companion book, *The Universe Within: From Quantum to Cosmos*, won the **Lane Anderson Award** for science writing.

The Perimeter Public Lecture Series delivered **10 sold-out scientific talks**.

*The Quantum Tamers*, the Perimeter-produced documentary, has been broadcast in **90 countries**.

Perimeter attracted **major media coverage** in 2012/13, including *The Globe and Mail*, *National Post*, *Toronto Star*, *Maclean's*, *The Huffington Post*, *CTV*, *CBC*, *Nature*, *The Walrus*, *TIME Magazine*, *Reader's Digest*, *Wired UK*, and *The Economist*.

TODAY'S THEORETICAL  
PHYSICS IS TOMORROW'S  
TECHNOLOGY.

JUST ONE BREAKTHROUGH  
CAN CHANGE THE WORLD.

**"[Turok] has been instrumental in developing Perimeter's reputation as one of the world's leading centres for cutting-edge theoretical physics as well as public outreach. Unlocking the secrets of the universe is not enough; at Perimeter, they want everyone to share in the joy of discovery."**

- "The God Particle," The Walrus, December 2012

**"In less than 15 years, a global hub for quantum research has been created from almost nothing in Waterloo Region. It includes: the largest theoretical physics institute in the world, the most state-of-the-art labs ever built to fabricate quantum devices and hundreds of researchers recruited from around the globe. Spinoff companies are being created, patents are being filed and luxury hotels and restaurants are springing up to service an incoming scientific class. Quantum is becoming a household word for the general public, who are lapping up science lectures at surprising rates."**

- "The Quest for Quantum Valley,"  
The Waterloo Region Record, April 20, 2013

FOR FURTHER INFORMATION, SEE THE  
2012/13 ANNUAL REPORT TO INDUSTRY CANADA

[www.perimeterinstitute.ca](http://www.perimeterinstitute.ca)

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Gouvernement du Canada

**Canada**

PERIMETER



INSTITUTE FOR THEORETICAL PHYSICS



**Ontario**