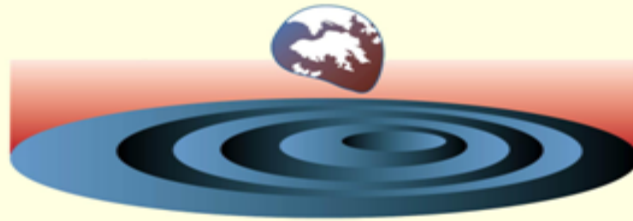


Area of Excellence (AoE) Centre for
Marine Environmental Research & Innovative Technology (MERIT)
and School of Biological Sciences (SBS), The University of Hong Kong (HKU)

Postgraduate Research Training Workshop 2011



Building Your Academic Career

Kenneth M. Y. Leung

Some successful cases:

Video - <http://www.hku.hk/award/index.html>

Career Choices after MPhil or PhD

- School teacher (>HK\$24K)
- Environmental consultant (>\$15K)
- Inspector/officer in the government (EPD, AFCD, FEHD etc.) (>\$15-30K)
- Staff in a green group (>\$10K)
- Research scientist (>\$10K)
- **Postdoctoral Researcher (>\$13K-30K) → (Research) Assistant Professor (Tenure Track) (>\$45K-60K)**
 - Assistant Prof (\$57K-80K)
 - Associate Prof (\$70K-100K)
 - Prof (\$90K - \$120K)
- Others

Building your academic career...

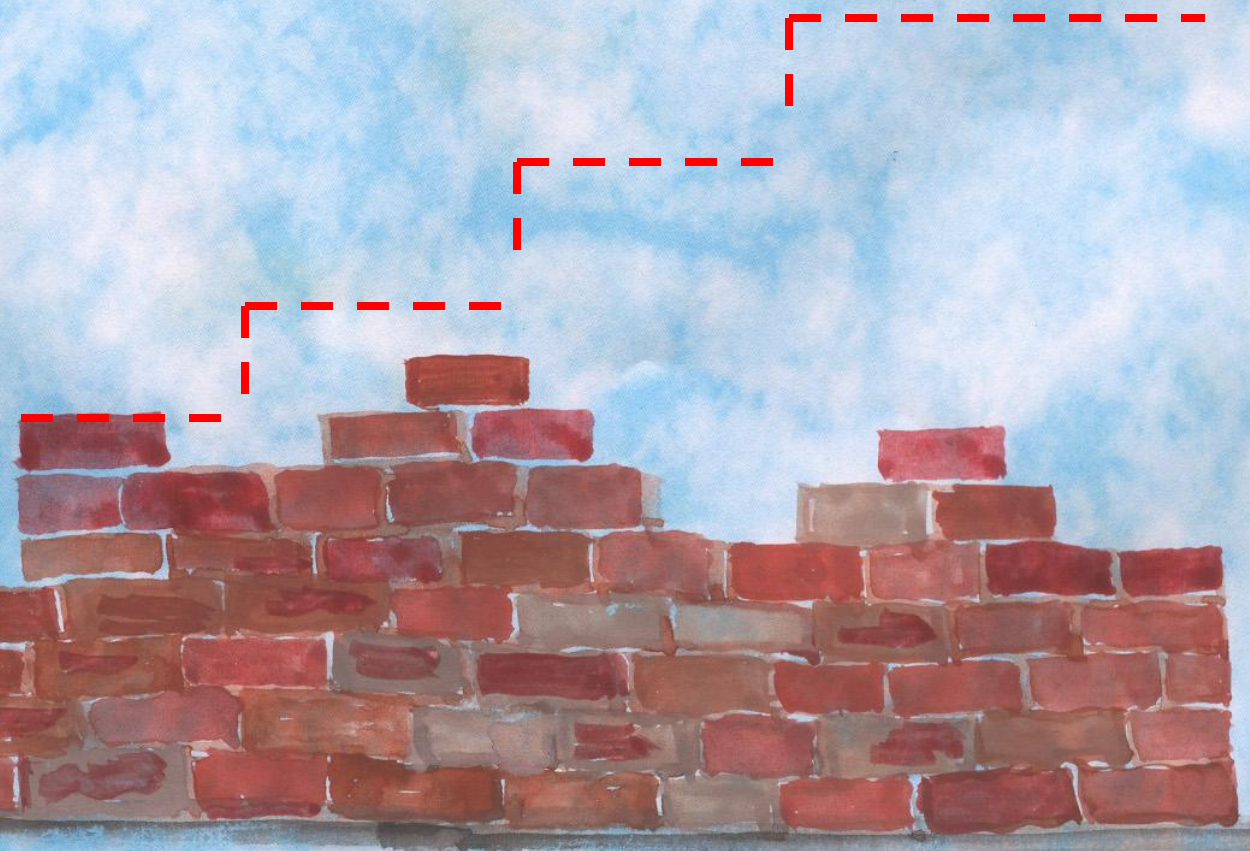
Undergraduate

MPhil

PhD

Postdoctoral
Researcher

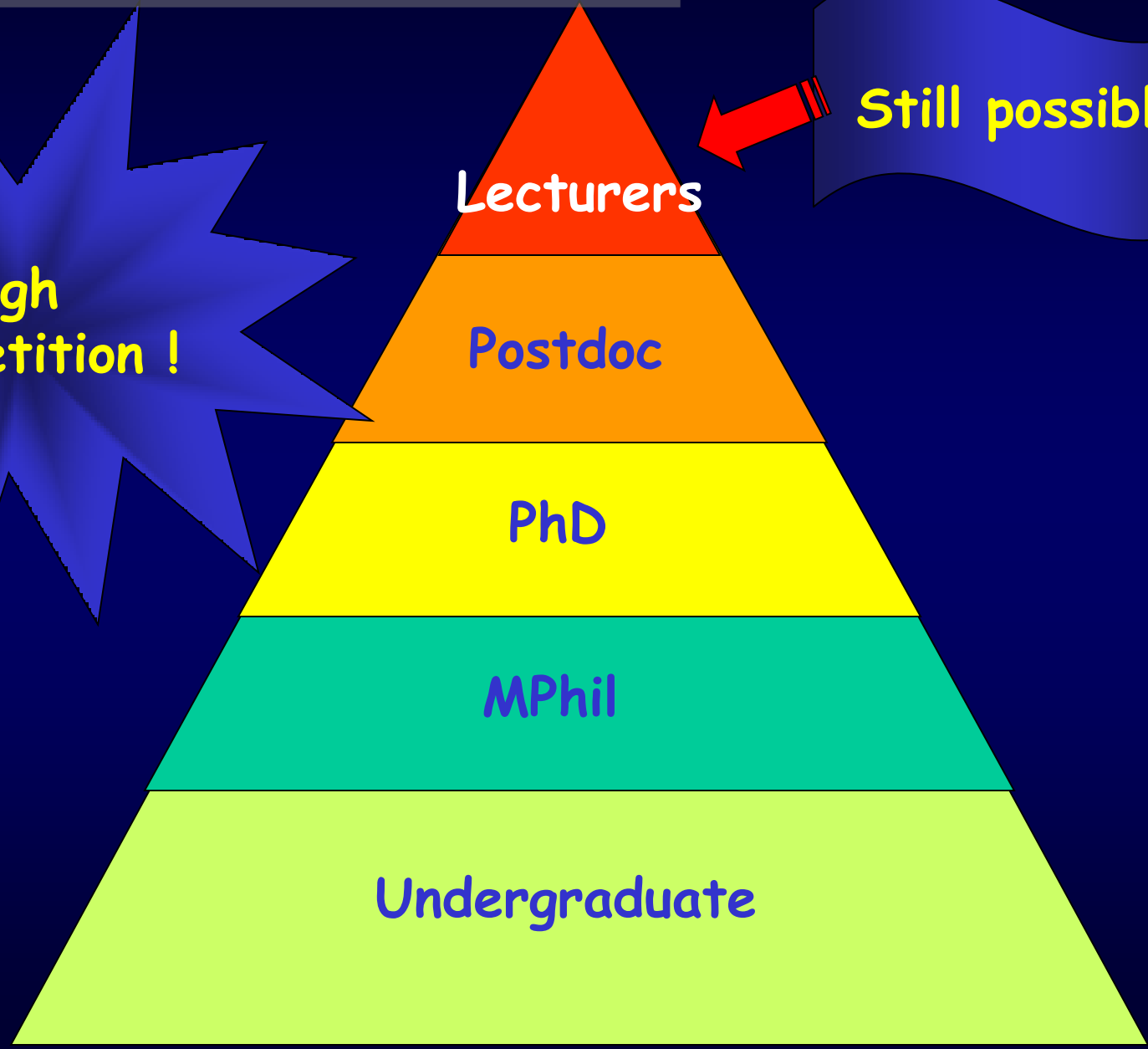
Assistant
Professor



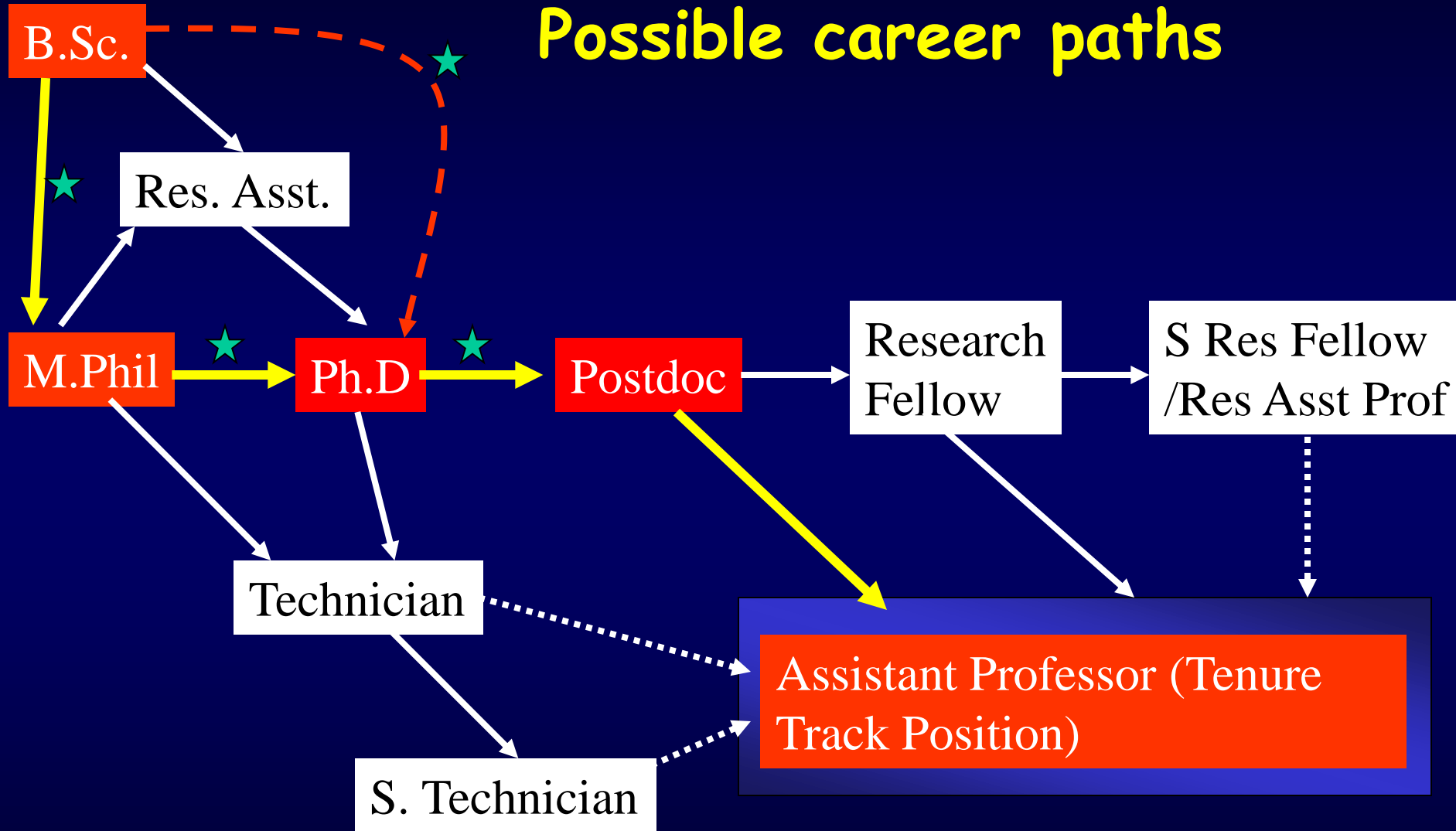
'Marry' science, why?

- Enjoy great freedom, with self-fulfilling job nature (neither routine nor boring)
- Learn & generate new knowledge
- Teach & help students
- Meet different people
- Discover the world
- Have nice salary
- Serve the society etc.

However, the fact is

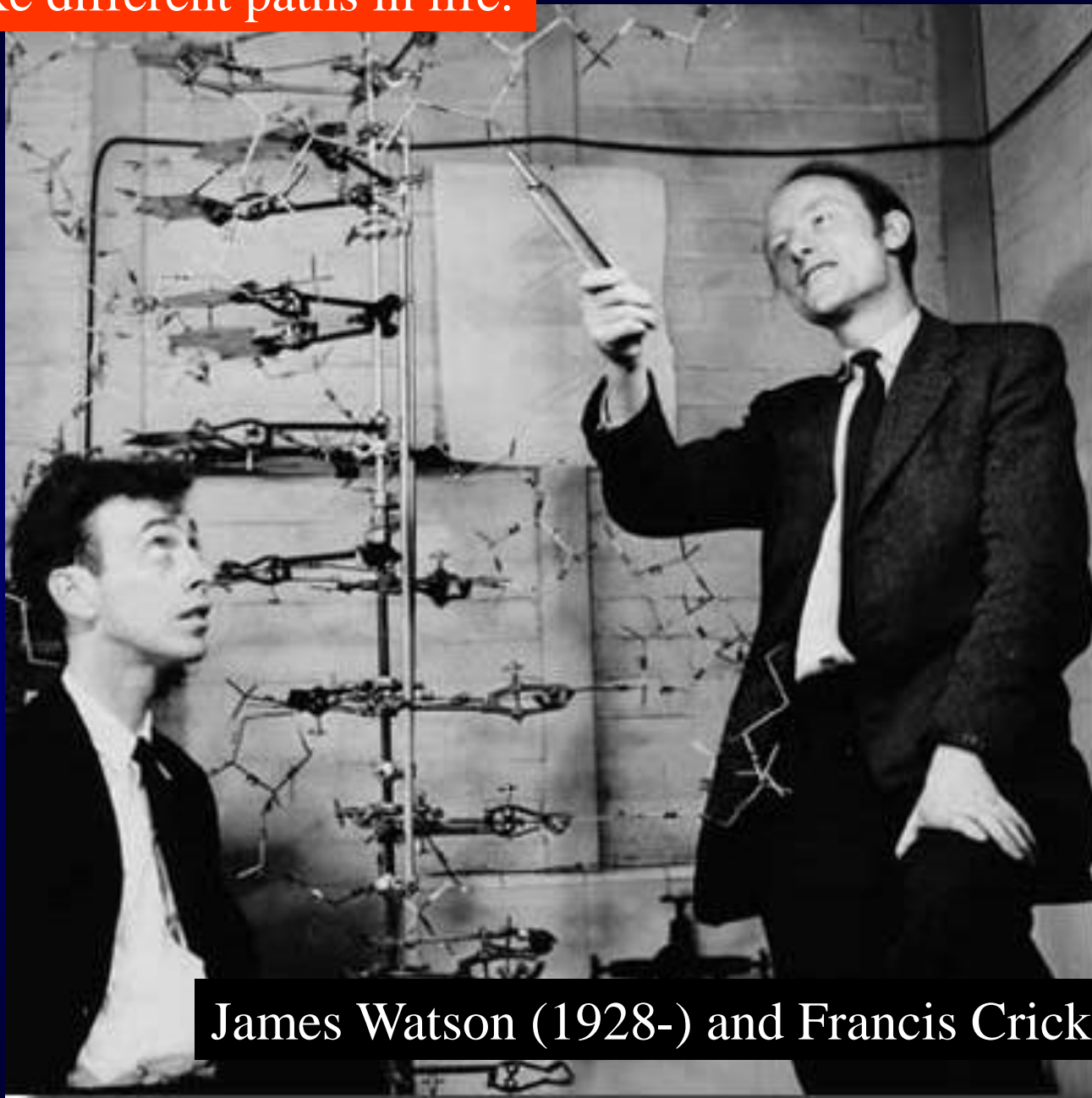


Possible career paths



★ Scholarships/Fellowships

We all take different paths in life.



James Watson (1928-) and Francis Crick (1916-2004)

Essential traits of an academic

- Self-motivated & career-minded
- Knowledge lover, creative, responsible, hard working, persistent & optimistic
- Conscious & proactive learner
- Good communicator in English
- Good planner & time manager
- Good team player
- Network builder
- Opportunistic



Can you tell the meanings of the logo?



Can you suggest the functions of the hair on the claw of this Chinese mitten crab?

溫故知新

Standing on giant's shoulders – Review and innovate

大胆假設，小心求証。
還要夠快！

Don't hesitate to hypothesize and test the hypothesis with care. However, you must do this as fast as possible.

Pave the successful path — commit to your decision !

Undergraduate

MPhil

PhD

Postdoctoral
researcher

Assistant
Professor



1. Establish life-long habits

- Read wide and in depth; **think hard**
- Always write down your questions/idea
- Often **talk to people**, especially academics, about your questions/idea
- Always **ask questions** (e.g., in seminars)
- Grasp chances to talk to successful academics.

2. Work hard and be persistent

- Important traits of a successful scientist.
- Failure is the mother of success!
- Depression is normal but don't allow staying too long under such an odd situation.
- **Rule: $\text{Return} = P \cdot (1 + I\%)^{\text{year}}$**



Warren Buffett

| p | I | years | Return |
|-----|-------|-------|--------|
| 100 | 0.25 | 1 | 125 |
| 100 | -0.20 | 1 | 80 |
| 80 | 0.25 | 1 | 100 |
| 80 | 0.56 | 1 | 125 |

Pave the successful path

3. Be a good communicator

- Scientific world mainly uses English for communication.
- Improve language skill in both writing and oral presentation.
- Essential to **create an English environment.**

4. Be creative

- A good question or bright idea is worth billions!
- Creativity is built upon previous knowledge (standing on Giants' shoulders).
- Positive momentum is essential: Never stop at just having the ideas, but should quickly move on testing them.
- Never try, never know!



Andrew Warhola (1928
–1987)



René Magritte's (1898-1967)



Mark Rothko (1903-1970)

5. Be a responsible & honest researcher

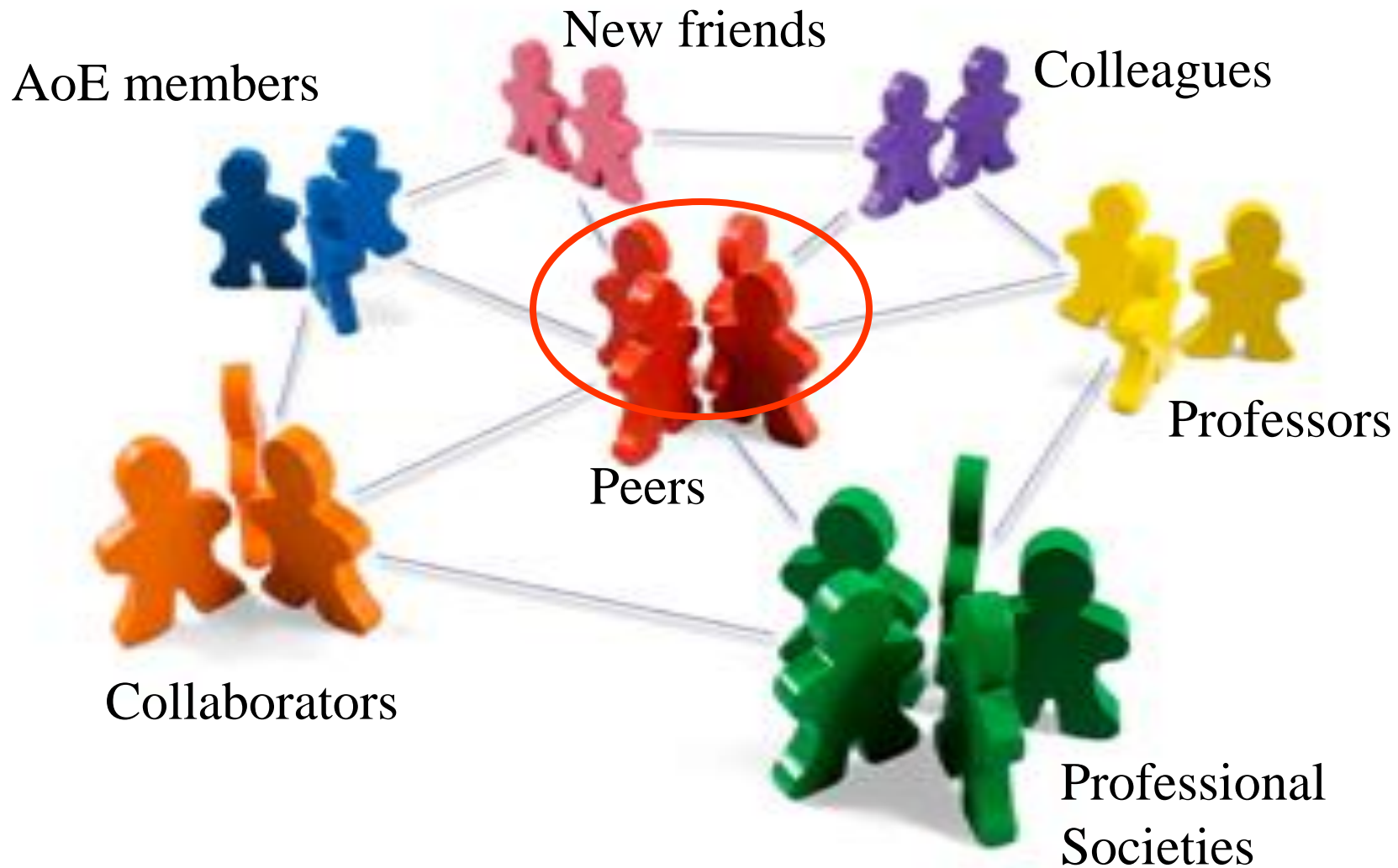
- Stick to your plan & achieve the goal.
- Always meet and discuss with your supervisor(s) about your progress.
- **Finish tasks on time** in satisfactory manner.
- ★ **Be honest** with integrity [Res. Ethic √].
- Your work carries your trademark - **building a good reputation takes years !**

6. Interpersonal skill and networking

- Opportunities increase with the no. of people whom you know well.
- Networking is very important.
- Even though you are good, you still need publicity.



Pave the successful path





250,000 Experts active in the community



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Sign-in free and Explore the Exciting Wo

- Over 1,800,000 Profiles
- More than 3,500 Organizations work
- State of the Art Network Visualizati



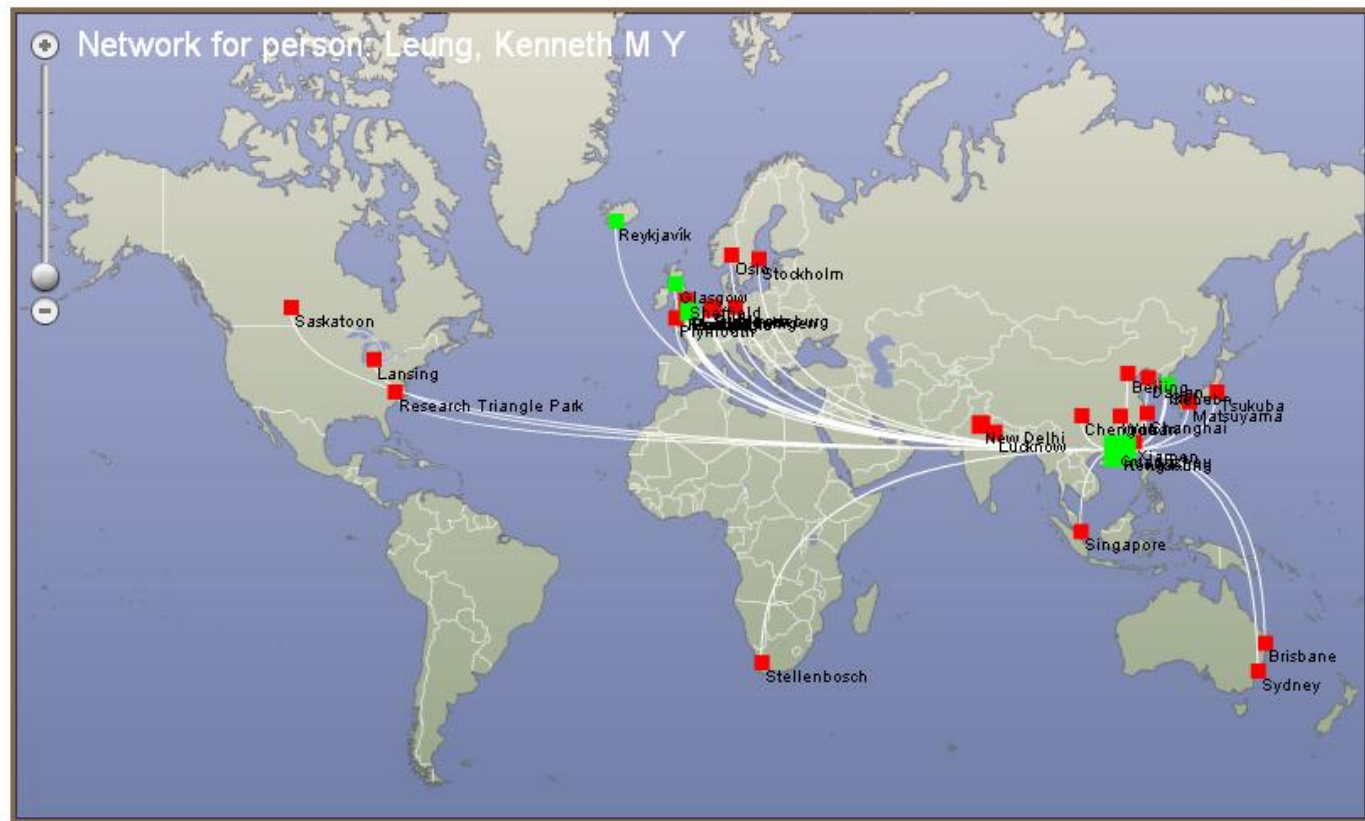
Kenneth Leung

This is a preview profile on Bio collaborate online. Collexis and De

Research Profile (preview)

Chemicals & Drugs

Chemical Water Pollutants



7. Be opportunistic

- Always seek opportunities
- Move quickly
- Make concerted effort
- Create opportunities



8. Be a good time manager

- Complete your postgraduate degree **on time** with high quality and novelty.
- Increase your chance being awarded with scholarships or being employed.
- Remember time is always limited.



Pave the successful path

How does your target university
assess whether she will marry you?

Research

International Standing

Teaching

Services



Assessment Criteria

What is the most important question (big picture) in your research area?

Have you ever said anything interesting to the scientific community? Elaborate

Who should be employed by university?

- Outstanding track record in Research:
 - **Publications**: both quantity and quality counted
 - **Citations**: importance of one's research work
 - **Research grants** and projects
 - Awards given by professional societies
 - Invited presentations at international conferences
- Relevant experience in teaching & services:
 - Demonstrator/tutor/lecturer/scientific outreaching
 - Teaching qualification
 - Research project supervision
 - Administration and management experience

Who should be employed by university?

- **Excellent in research:** Good publications reflect one's scientific achievement and skills in the specialized research area. One is able to work independently & attract research funding.
- **Experienced in teaching, services & team work.**
- Effective communicator (via interview).
- One has an all rounded personality & can adapt to any new environment (i.e. a responsible citizen).
- One has **excellent referees' reports**.

Curriculum Vitae

- To write a good CV ✗
- To **build** a good CV ✓
 - Personal details, education, relevant working experiences, awards, services in learned societies (+ NGOs or Govt'), editorship, reviewers of journals and grant proposals etc.
 - **Research** areas and significances (impacts), lists of publications (quantity and quality: **impact factor, h index, citations**), presentations and invited talks, research grants, collaborations, international standing, future direction
 - **Teaching** experience and training, teaching philosophy, scientific outreaching, supervision of UG or RPG project students

Citation and H-index

ISI Web of KnowledgeSM

All Databases

Select a Database

Web of Science

Additional Resources

Search

Cited Reference Search

Advanced Search

Search History

Marked List (0)

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Search for:

Example: oil spill* mediterranean

AND

Example: O'Brian C* OR OBrian C*

Need help finding papers by an author? Use [Author Finder](#).

AND

Example: Cancer* OR Journal of Cancer Research and Clinical Oncology

[Add Another Field >>](#)

Search

Clear

Current Limits: [\[Hide Limits and Settings\]](#) (To save these permanently, [sign in](#) or [register](#).)

Timespan:



All Years



(updated 2010-03-22)

Step I. Search based on the author name

Web of Science® – with Conference Proceedings

Results Author=(Wu rss)

Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH.

Scientific WebPlus^{BETA} [View Web Results >>](#)

[View Distinct Author Sets for Wu rss](#)

The Distinct Author Set feature is a discovery tool showing sets of papers likely written by the same person. ([Tell me more.](#))

Results: **184**

Page 1 of 19 [Go](#)

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Refine Results

Search within results for

[Search](#)

Subject Areas [Refine](#)

MARINE & FRESHWATER BIOLOGY (98)

ENVIRONMENTAL SCIENCES (97)

TOXICOLOGY (43)

ECOLOGY (17)

ENGINEERING, ENVIRONMENTAL (14)

[more options / values...](#)

- 1. Title: Seasonality of bioaccumulation of trace organics and lysosomal integrity in green-lipped mussel *Perna viridis*
Author(s): Fang JKH, Wu RSS, Zheng GJ, et al.
Source: SCIENCE OF THE TOTAL ENVIRONMENT Volume: 408 Issue: 6 Pages: 1458-1465 Published: FEB 15 2010
Times Cited: 0
[WebBridge](#) [Full Text](#)
- 2. Title: Rapid magnetic-mediated solid-phase extraction and pre-concentration of selected endocrine disrupting chemicals in natural waters by poly(divinylbenzene-co-methacrylic acid) coated Fe₃O₄ core-shell magnetite microspheres for their liquid chromatography-tandem mass spectrometry determination
Author(s): Li QL, Lam MHW, Wu RSS, et al.

Step II. Click the Citation Report

Web of Science® – with Conference Proceedings

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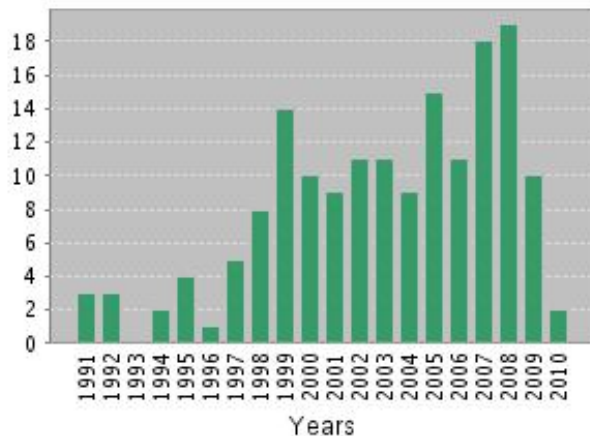
Citation Report

Author=(Wu rss)

Timespan=All Years. Databases=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH.

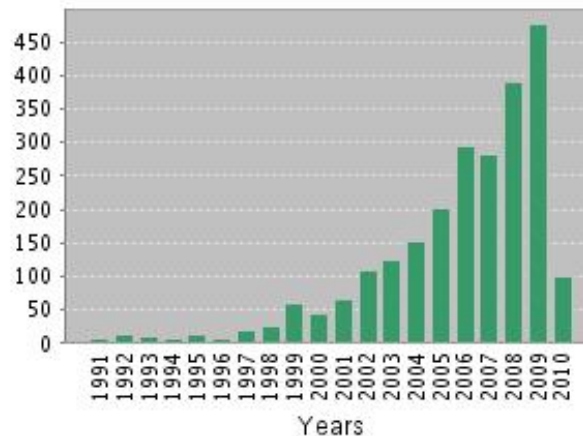
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The latest 20 years are displayed.
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Results found: 184

Sum of the Times Cited [?]: 2,480

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Average Citations per Item [?]: 13.48

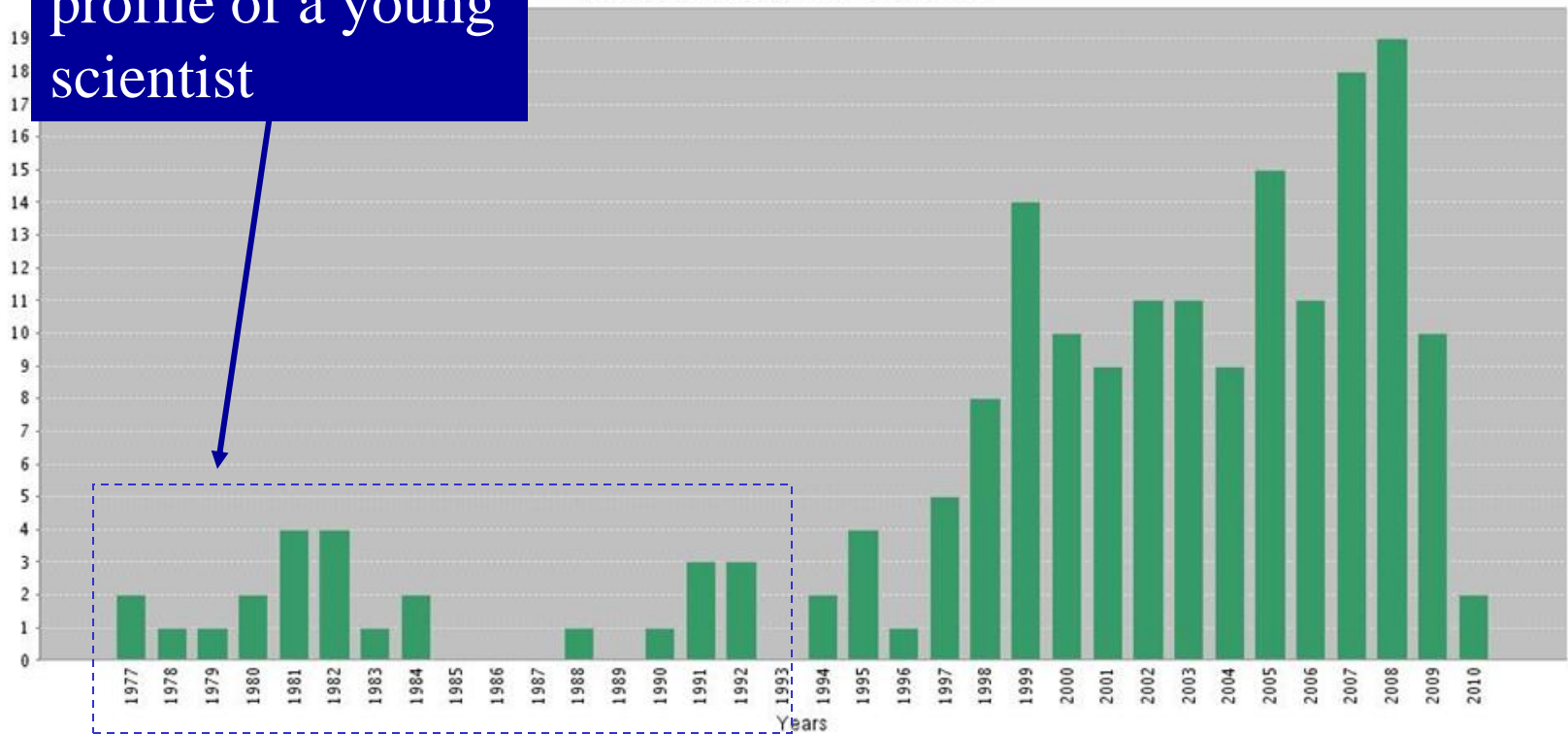
h-index [?]: 25

You can find your h-index

Discrepancies exist if different author names have been used, so you **MUST** use one name only!

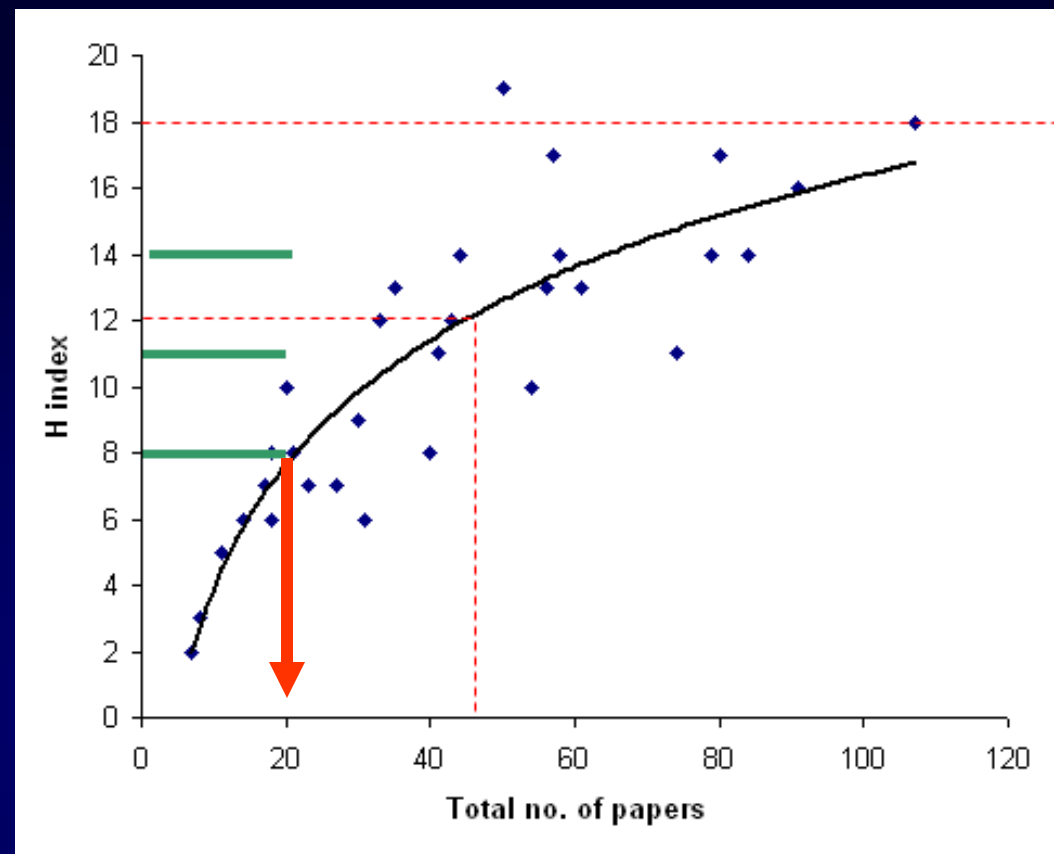
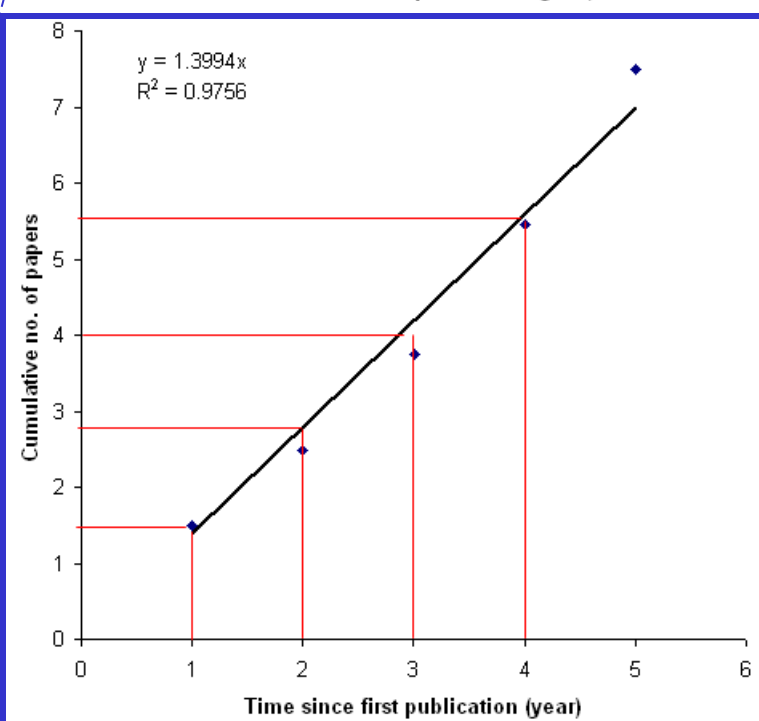
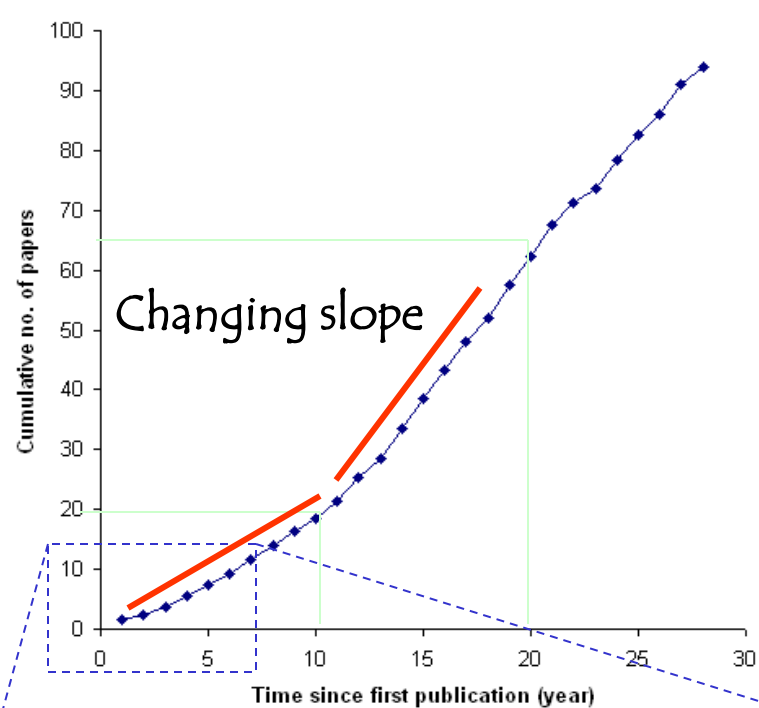
The production profile of a young scientist

Published Items in Each Year



| | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X |
|----|-------------|-----------|---------|-------------|--------------|-----------------|------------|-----------|----|---|---|---|---|----|----|----|----|----|---|
| 4 | ISI | Non-self | Average | Publication | Publication | Papers per year | | | | | | | | | | | | | |
| 5 | Total Paper | Sum Cited | Cited | % NC/AC | Citation/Pap | H index | Start year | Career gr | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 6 | 1 | 23 | 240 | 187 | 77.9 | 10.43 | 7 | 1998 | 9 | 3 | 2 | 4 | 1 | 2 | 1 | 2 | 4 | 3 | |
| 7 | 2 | 31 | 92 | 64 | 69.6 | 2.97 | 6 | 1992 | 15 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 2 | 2 | |
| 8 | 3 | 58 | 555 | 277 | 49.9 | 9.57 | 14 | 1986 | 21 | 1 | 0 | 0 | 1 | 2 | 2 | 0 | 1 | 1 | |
| 9 | 4 | 91 | 787 | 472 | 60.0 | 8.65 | 16 | 1982 | 25 | 4 | 4 | 2 | 1 | 1 | 3 | 3 | 7 | 7 | |
| 10 | 5 | 30 | 175 | 99 | 56.6 | 5.83 | 9 | 1999 | 8 | 5 | 1 | 4 | 5 | 2 | 4 | 5 | 3 | | |
| 11 | 6 | 51 | 708 | 520 | 73.4 | 11.61 | 13 | 1980 | 27 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 3 | 3 | |
| 12 | 7 | 356 | 180 | 50.6 | 4.81 | 11 | 1991 | 16 | 1 | 1 | 1 | 0 | 0 | 2 | 2 | 3 | 0 | | |
| 13 | 8 | 748 | 505 | 67.5 | 17 | 14 | 1978 | 29 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | |
| 14 | 9 | 3 | 189 | 545 | 24.9 | 5.64 | 19 | 1985 | 22 | 2 | 5 | 2 | 4 | 9 | 4 | 6 | 9 | 9 | |
| 15 | 10 | 7 | 18 | 81.8 | 3.14 | 2 | 1995 | 12 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | | |
| 16 | 11 | 18 | 104 | 85.2 | 6.78 | 6 | 1988 | 19 | 1 | 2 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | | |
| 17 | 12 | 80 | 194 | 61.4 | 10.05 | 17 | 1987 | 20 | 1 | 0 | 1 | 1 | 4 | 0 | 0 | 0 | 2 | | |
| 18 | 13 | 27 | 98.9 | 6.67 | 7 | 1988 | 19 | 98.9 | 1 | 1 | 0 | 3 | 0 | 0 | 2 | 1 | 1 | | |
| 19 | 14 | 21 | 3 | 82.0 | 17.71 | 8 | 1997 | 10 | 1 | 1 | 2 | 2 | 4 | 0 | 1 | 2 | 2 | | |
| 20 | 15 | 43 | 40 | 5.5 | 9.25 | 12 | 1986 | 21 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | | |
| 21 | 16 | 3 | 3 | | | | | 14 | 1 | 3 | 1 | 6 | 2 | 3 | 1 | 1 | 4 | | |
| 22 | 17 | 5 | 5 | | | | | 17 | 1 | 0 | 2 | 7 | 6 | 1 | 3 | 0 | 4 | | |
| 23 | 18 | 5 | 5 | | | | | 28 | 3 | 0 | 0 | 3 | 1 | 3 | 1 | 4 | 4 | | |
| 24 | 19 | 5 | 5 | | | | | 21 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | | |
| 25 | 20 | 6 | 6 | | | | | 6 | 1 | 0 | 0 | 3 | 2 | 2 | | | | | |
| 26 | 21 | 3 | 3 | | | | | 22 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | | |
| 27 | 22 | 1 | 1 | | | | | 6 | 3 | 1 | 5 | 0 | 2 | 3 | | | | | |
| 28 | 23 | 1 | 1 | | | | | 23 | 1 | 1 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | | |
| 29 | 24 | 4 | 4 | | | | | 29 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 30 | 25 | 84 | 84 | | | | | 28 | 1 | 2 | 0 | 3 | 4 | 4 | 4 | 3 | 4 | | |
| 31 | 26 | 41 | 382 | 283 | 74.1 | 9.32 | 11 | 1986 | 21 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 32 | 27 | 107 | 1070 | 566 | 52.9 | 10 | 18 | 1994 | 13 | 1 | 1 | 6 | 6 | 12 | 16 | 14 | 5 | | |
| 33 | 28 | 18 | 361 | 260 | 72.0 | 20.06 | 8 | 1988 | 19 | 1 | 1 | 3 | 0 | 2 | 1 | 0 | 0 | | |
| 34 | 29 | 11 | 71 | 68 | 95.8 | 6.45 | 5 | 1992 | 15 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | | |
| 35 | 30 | 79 | 559 | 365 | 65.3 | 7.08 | 14 | 1988 | 19 | 3 | 1 | 2 | 0 | 0 | 1 | 3 | 3 | | |
| 36 | 31 | 20 | 213 | 132 | 62.0 | 10.65 | 10 | 1998 | 9 | 2 | 0 | 1 | 5 | 1 | 1 | 2 | 5 | 3 | |
| 37 | 32 | 18 | 171 | 131 | 76.6 | 9.5 | 6 | 1996 | 11 | 1 | 0 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | |
| 38 | 33 | 54 | 437 | 346 | 79.2 | 8.09 | 10 | 1993 | 14 | 1 | 0 | 0 | 0 | 5 | 12 | 4 | 5 | | |
| 39 | | | | | | | | | | | | | | | | | | | |
| 40 | | 53 | 482 | 289 | 69 | 10 | 11 | | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| 41 | | | | | | | | | | 1 | 2 | 4 | 5 | 7 | 9 | 12 | 14 | 16 | |
| 42 | | | | | | | | | | | | | | | | | | | |

Analyses based on the data from some biologists of local Us



H index (Hirsch 2005, PNAS 102: 16569-72):
 For Assist. Prof., $h \sim 8$ [20 papers]
 For Assoc. Prof. and tenure, $h \sim 12$ [40+ papers]
 For Professor, $h \sim 18$ [> 100 papers]

In average, at least 1-2 papers published annually for young scientists. But, successful ones will speed up to 3-5 papers per year.

(Leung, unpublished data)

What can you do now? **Build your CV !**

- **Good plan: thesis structure (novel idea & essential skills) + delivery of milestones**
 - **Completion on time**
 - **Publish papers**
 - **Good English**
 - **Talk to people**
 - **Ask questions**
 - **Build network**
 - **Win awards**
 - **Serve societies**
 - **Be competitive**
 - **Seek opportunities**

Kenny at 33 yrs old (AP) in NZ



Act NOW !

**Make some
goals &
plan how to
achieve
them !**



Opportunity is reserved for those who are well prepared

Questions & Answers