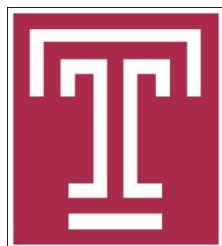


教学，科研，服务和管理的权衡

吴杰

计算机与信息科学系
天普大学



提纲

- 引言
- 经历
- 教学
- 科研
- 服务
- 管理
- 总结



引言

- 教学 (T), 科研 (R), 服务 (S), 和管理 (A)

- 对你的预期和期望是什么?
- 定期的重新评估 (例如每年一次)

- 职业生涯各阶段的时间分配

T:30	R:60
S:10	A:0

T:20	R:50
S:20	A:10

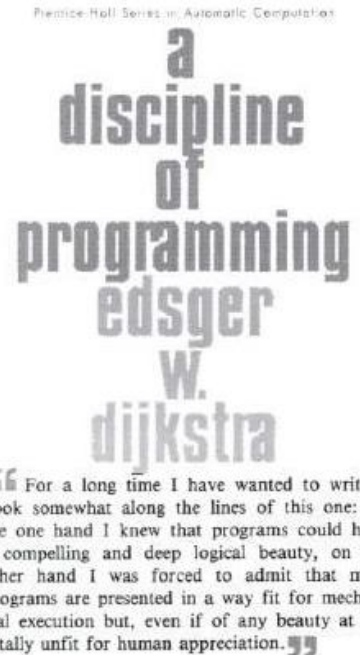
...

T:10	R:30
S:10	A:50

—————→ 时间

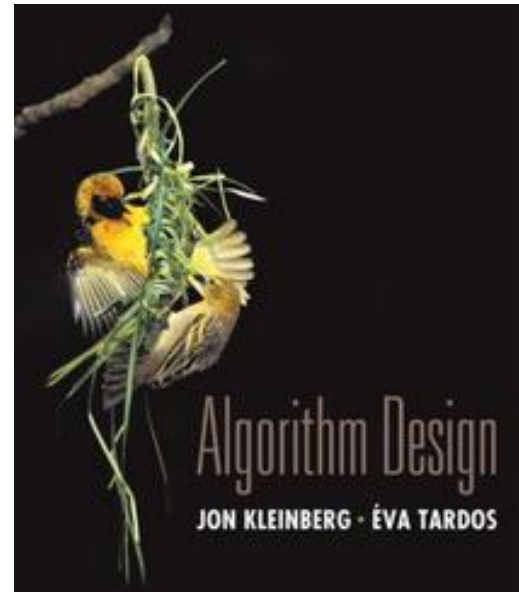
经历

- “普通的” 教育背景
 - 中学三年(1975-78)
 - 本科/硕士， 上海科技大学 (SUST), 1982/1985
 - 博士, 佛罗里达大西洋大学 (FAU), 1989
- “中/小规模学校的” 教学经验
 - SUST (1985), FAU (1989), 天普大学 (2009)
- “第一次”
 - 学习编程语言: Algol 60 (1976)
 - 使用英文书: 程序设计规范 (1982)
 - 教授课程: Pascal (1985)



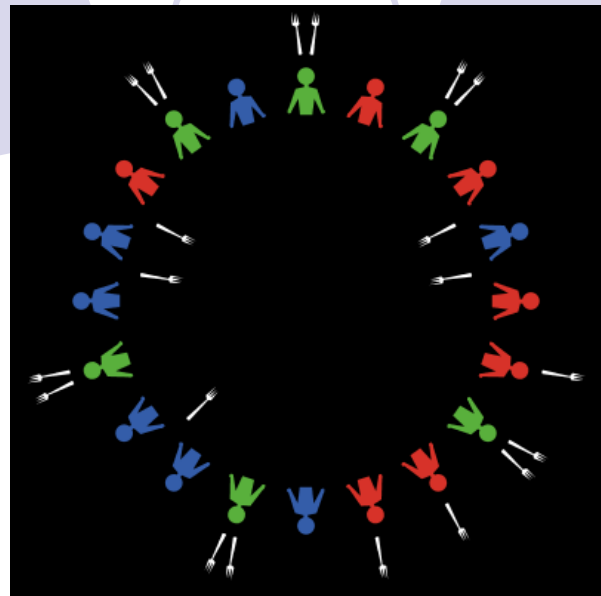
教学

- 高品质的学习过程 (learning experience)
 - 教授
 - 学生
- 深度与广度
 - 科研专题
 - 一般课题
- 教学与研究的关系
 - 在职业生涯中，尽早开始教学



玩转教学

- 算法：座位问题
 - 几对夫妻坐在同一张圆桌。
A的邻居要么和**A**同性别，要么是**A**的配偶。



hhhhwww, hhwwhhww, hwwhwwhh, hwhwhwhw

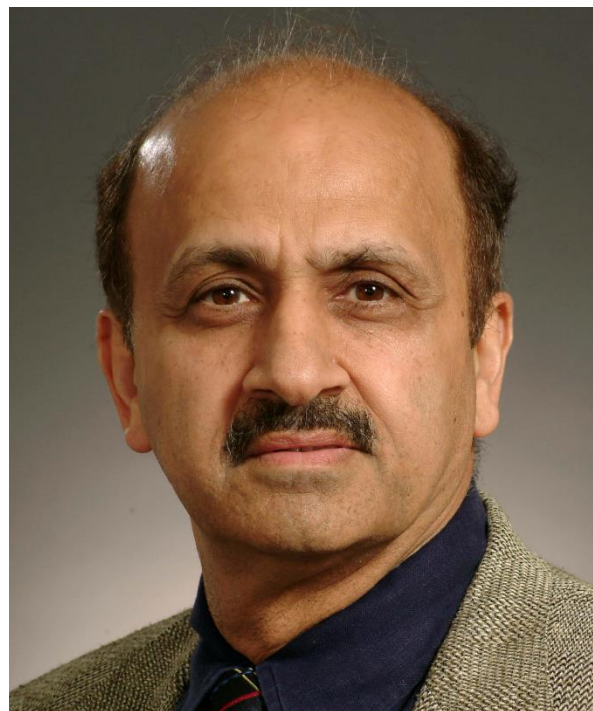
- 写一个程序可以快速产生出所有“合理的”字符串。
- 最终结果：一篇文章和国际研究合作。

著名学者：严谨的老师

- Ken Batchner



- Sartaj Sahni



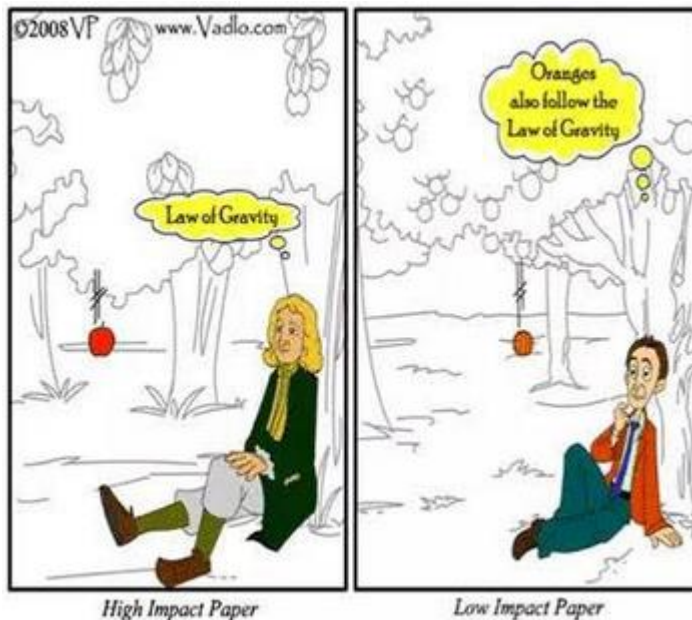
科研



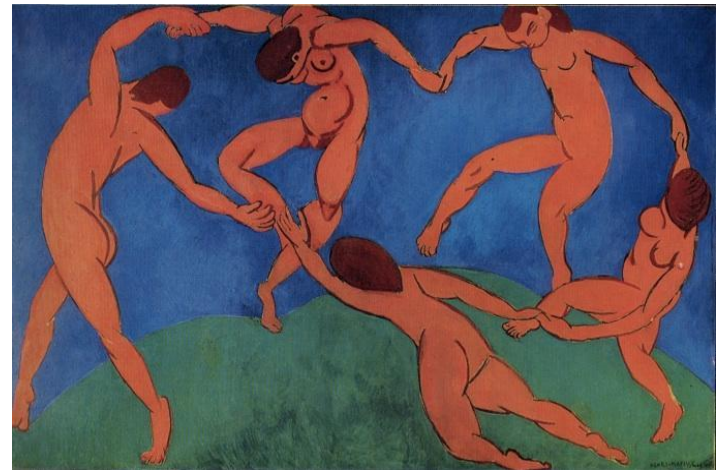
- 重要决定
 - 论文发表 与 基金申请
 - 独立研究 与 合作研究
 - 数量 与 质量
- **CRA 推荐: 质量与影响因子**
 - 最好的**3-5**篇文章
 - **h-指数**的改进
 - 如何评估无形的(**intangible**)质量
- 量变到质变
 - 比喻: 叶子与花朵
 - 莫扎特与贝多芬: 大数量 与 高质量
 - 奥尔夫 (**Orff**) 的布兰诗歌 (**Carmina Burana**) 与 霍尔斯特 (**Holst**) 的行星组曲 (**The Planets**): 少量高质

研究质量

- 原创性
 - 阅读文章与自我创作间的权衡

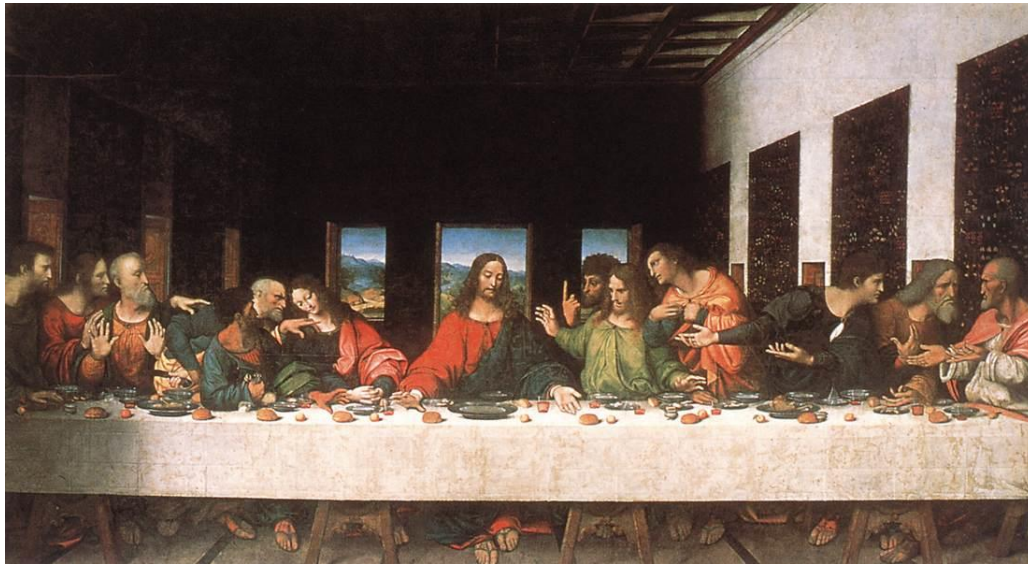


- 源于艺术家的借鉴
 - 抽象(abstraction) + 想象(imagination)



抽象与想象

- 斐波那契序列 ($F_i = F_{i-1} + F_{i-2}$, 1, 2, 3, 5, 8, 13, ...)
 - 2, 4, 6, 10, 16, 26, 42, ...
 - 4, 8, 12, 20, 32, 54, 86, ...
 - 8, 16, 24, 40, 64, 104, 168, ...
- 最后的晚餐(Last Supper)中的斐波那契序列



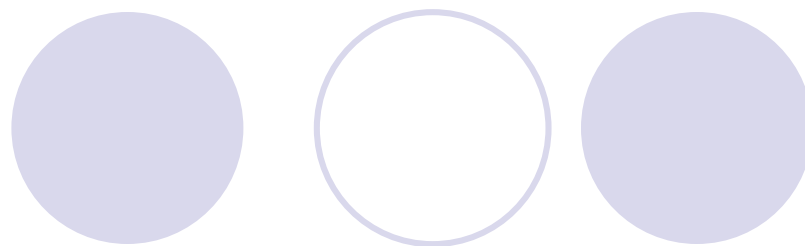
玩转研究

移动计算：开销优化

问题：华盛顿地铁系统的收费标准是由行驶距离而定。例如，一位乘客进入站A，在那里停留X（例如10）个小时，然后由站B离开。票价正比于A，B两站间的距离，而与时间X无关。

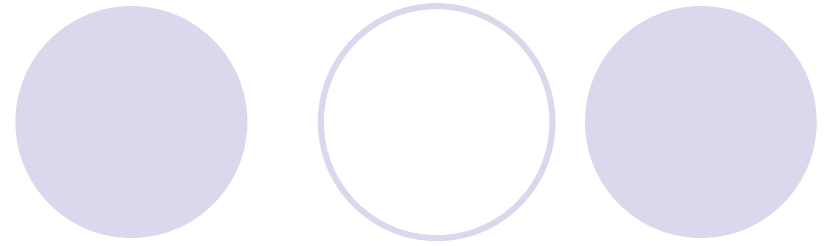
潜在缺陷有哪些？请给出可能的解决方案。

如果像南京一样，将时间X限制在4小时以内，又会发生什么？



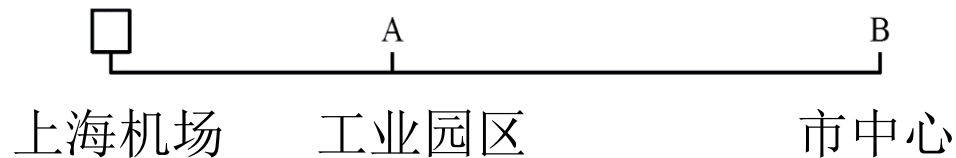
A	B
1, 2 (进)	
	2 (出)
	2 (进)
1 (出)	
1 (进)	
	2 (出)
	2 (进)
1 (出)	
1 (进)	

玩转研究（续）



问题: 在上海国际机场，出租司机至少要等待**4**个小时。这个现象对于乘客直到上海工业园区的司机来说很不公平，因为到工业园区只需**20**分钟，而去市区则要**50**分钟。

- 找一种能同时兼顾乘客与司机利益的解决方法。
- 发现上海国际机场当前解决方案的潜在问题。



服务

- 校内及校外

- 系, 学院, 学校
- 审阅者, 程序委员会委员, 专家组成员(**panelist**), 期刊编委, 特邀主讲人

- 校外更重要的职责

- 大会/讨论会主席
- 大会/讨论会程序委员会主席
- 期刊主编
- 政府机构的项目主任
- **IEEE/ACM**中的主要角色

- 如何选择?

- 个人品味/判断

- 一般原则

- 助理教授(<35):
系内及部分外部服务
- 副教授(<40):
学院及外部服务
- 教授(>40):
学校服务以及其他一些更重要的角色。

玩转服务

- **NSF 项目主任**
 - 任务/时间 管理
 - 动员团体(**community**)
 - 团队合作
- **大会/程序委员会主席**
 - 资源优化配置
 - 用有限的资源提供最好服务
 - 质(论文) 与量(收入)的权衡
 - 分会主席间的协调

- **IEEE HPCA'99**
 - 会议场所的选择
- **NSF NeTS PI meeting'07**
 - 高质量的研讨
- **IEEE IPDPS'08**
 - 专题讲座选择
- **IEEE INFOCOM'11**
 - 繁琐细节
- **IEEE ICDCS'13**
 - 与酒店打交道
- **ACM MobiHoc'14**
 - 餐厅的选择



管理

- 研究生项目主任
- 助理系主任/副系主任
- 系主任
- 院长助理/副院长
- 院长
 - 学院，研究生，本科生, ...
- 助理/副教务长和校长
 - 科研，人事，资讯，国际事务, ...
- 教务长
- 校长



教师与行政管理

- 多数教师认为在校内无发言权，关系一般或较差
- 只有不到**5%**的教师认为他们具有影响力

几乎没有中国人

在卡内基 **R1**（一级科研）大学体系中担任教务长或校长

管理（续）

- 身为系主任的重要性

- 指导系的发展方向
- 将军是从士兵开始（即系主任）

- 系主任最重要的功能

- 教师招聘
- 获取资源

- 品质

- 目标 (Vision)
- 博学 (Knowledge)
- 致力 (Commitment)
- 毅力 (Grit)
- 反应 (Responsiveness)
- 公平 (Fairness)
- 效率 (Efficiency)
- 沟通 (Communication)
- 优先 (Priority setting)
- 决断 (Judgment)
- ...

成为一个良好的管理者

- 乐队指挥

- 通晓乐理，乐器演奏者之和



- 球队教练

- 曼联前教练：佛格森爵士



玩转管理

- 最佳近似

(棘手的危机事件)

- 判断 (judgment)
- 时机 (timing)

- 案例: 信托管理

- 直接信任
- 间接信任

- 机制设计 (mechanism design)

- 将个人利益与团体 (系) 利益结合

- 案例: 助教分配

- 将信用机制 (credit) 与滑动窗口机制 (slide window) 结合



其他事项

- 无可替代
 - 努力工作
- 面临新的“任务/机会”
 - 任务优先化
 - 留有一定余地（时间）
 - 重要性与急迫性
 - 优化在线/离线安排

- 如何获得更多的时间
 - 少睡
 - 多运动
 - 并行处理
 - 快速环境切换(content switch)



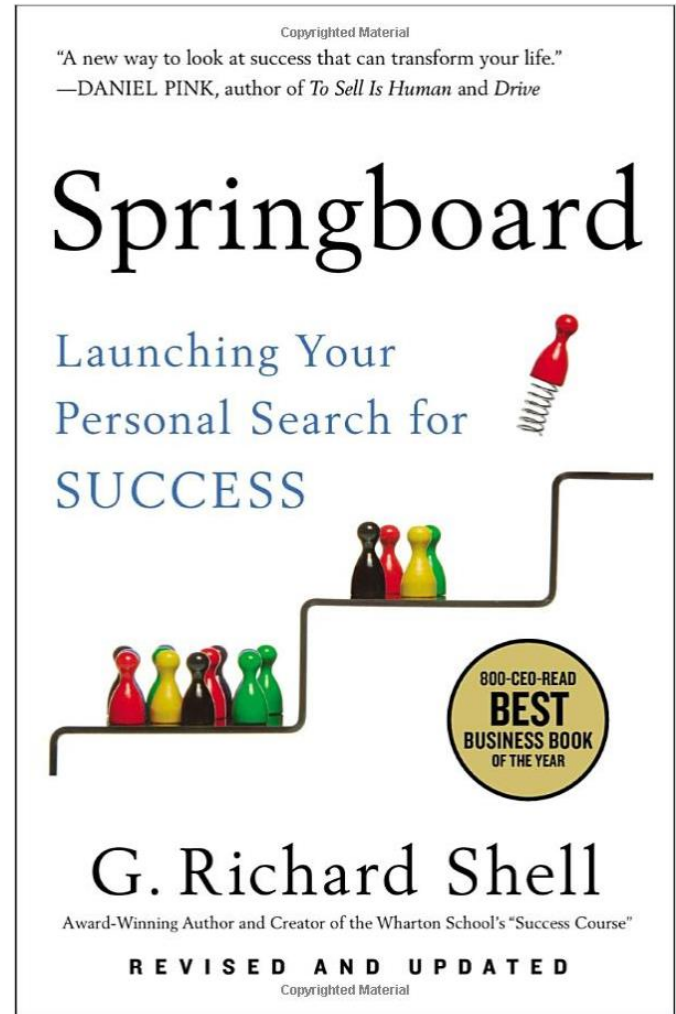
人生的均衡

成功

- 物质的成就
- 精神上的满意/满足

科学与人文

- 案例：参加会议
 - 体验当地文化（如美食）和购物
 - 参观博物馆，出席音乐会或体育赛事



成功与快乐

成功 ≠ 快乐

- 有意义的工作，亲情，健康

快乐的等级

- 短暂(**Momentary**)快乐
避免“美梦”(happiness dream)
- 整体(**Overall**)快乐
注意期望差距 (expectation gap)
- 精神(**Spiritual**)快乐
比自我更高的目标

林语堂：生活的艺术

Copyrighted Material
"A richly, enjoyably wise and suggestive book."
— *The New York Times*

The Importance of Living



The Classic Bestseller
That Introduced Millions
to the Noble Art of Leaving
Things Undone

Lin Yutang

Copyrighted Material

总结

- 助理教授
 - $T + R + S$
- 副教授
 - $T + R + S$
- 教授
 - $T + R + S + A$
- 系主任
 - $T + R + S + A$
- 院长及更高层
 - $S + A$



结论（续）

- 质量，样式，及品位的重要性

- 充满激情，享受工作

- 不要偷工减料 (**cut corners**)

- “你可能在某个时刻蒙蔽所有人，也可能在所有时刻蒙蔽某些人，但不可能在所有时刻蒙蔽所有的人”

- 人生的均衡

- 事业，家庭，和健康



费城近期会议



CALL FOR PAPERS

- The 45th Annual Conference -

2016 International Conference on Parallel Processing (ICPP-2016)

<http://www.kkant.net/icpp2016>

Philadelphia, PA August 16-19, 2016

Sponsored by

The International Association for Computers and Communications (IACC)

In cooperation with

Temple University, Philadelphia, PA

Scope

Parallel and distributed computing is a central topic in science, engineering and society. ICPP, the International Conference on Parallel Processing, provides a forum for engineers and scientists in academia, industry and government to present their latest research findings in all aspects of parallel and distributed computing. ICPP 2016 will be organized around the following tracks:

- Algorithms
- Applications
- Computer Architecture
- Cyberphysical Systems
- Data Center & Cloud Computing
- IO, Storage & File Systems
- Performance, Reliability, Dependability
- Programming Models & Languages

Paper Submission

Paper submissions should be formatted according to the IEEE standard double-column format with a font size 10 pt or larger. Each paper is strictly limited to 10 pages in length. Submissions should represent original, substantive research results. See the conference website for electronic paper submission instructions.

Important Dates

Paper Submission Deadline **February 26, 2016**
Author Notification **May 06, 2016**
Final Manuscript Due **June 03, 2016**

Workshops

Workshops with more focused scope will be held on Aug 16. Proposals should be submitted to Pavan Balaji (balaji@anl.gov) and Anne Benoit (Anne.Benoit@ens-lyon.fr) by Oct 16, 2015

Proceedings

Proceedings of the conference and workshops will be available on CD or USB at the conference and will be submitted to IEEE Xplore and CSDL.

Further Information

Please contact Jie Wu (jiewu@temple.edu), Krishna Kant (kkant@temple.edu), or Hong Jiang (jiang@cse.unl.edu)



IEEE Conference on Communication and Network Security

17 - 19 October 2016 // Philadelphia, PA USA

CALL FOR PAPERS



IEEE Conference on Communications and Network Security (CNS) provides an outstanding forum for cyber security researchers, practitioners, policy makers, and users to exchange ideas, techniques and tools, raise awareness, and share experience related to all practical and theoretical aspects of communications and network security.

Particular topics of interest include, but are not limited to:

- Anonymization and privacy in communication systems
- Biometric authentication and identity management
- Computer and network forensics
- Data and application security
- Data protection and integrity
- Availability of communications, survivability of networks in the presence of attacks
- Key management and PKI for networks
- Information-theoretic security
- Intrusion detection and prevention
- Location privacy
- Mobile security
- Outsourcing of network and data communication services
- Physical layer security methods, cross-layer methods for enhancing security
- Secure routing, network management
- Security for critical infrastructures
- Security metrics and performance evaluation
- Security and privacy for big data
- Security and privacy in body area networks
- Security and privacy in content delivery network
- Security and privacy in cloud computing and federated cloud
- Security and privacy in crowdsourcing
- Security and privacy in the Internet of Things
- Security and privacy in multi-hop wireless networks: ad hoc, mesh, sensor, vehicular and RFID networks
- Security and privacy in peer-to-peer networks and overlay networks
- Security and privacy in single-hop wireless networks: Wi-Fi, Wi-Max
- Security and privacy in smart grid, cognitive radio networks, and disruption/delay tolerant networks
- Security and privacy in social networks
- Security and privacy in pervasive and ubiquitous computing
- Social, economic, and policy issues of trust, security, and privacy
- Traffic analysis
- Usable security for networked computer systems
- Vulnerability, exploitation tools, malware, botnet, DDoS attacks
- Web, e-commerce, m-commerce, and e-mail security

Accepted and presented technical papers will be published in the IEEE CNS 2016 Conference Proceedings and submitted to IEEE Xplore® as well as other Abstracting and Indexing (A&I) databases. See the website for author requirements of accepted authors.

Important Dates:

Paper Submission (extended): ~~20 April~~ 2016 27 April 2016
Notification Date: 1 July 2016
Final Paper: 13 July 2016

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