

“环境力学文摘”，第2期，2015年3月15日

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新闻报道

[基金委主任杨卫受访谈基金“新政”的那些事](#)

(摘自科学网)

科技体制改革的大幕，也正在国家自然科学基金委员会（以下简称基金委）徐徐拉开。

日前，国家自然科学基金委员会发布了《关于2015年度国家自然科学基金项目申请与结题等有关事项的通告》，规定2015年起，各类项目申请经费分为直接费用和间接费用两部分，《2015年度国家自然科学基金项目

指南》所列资助强度为直接费用与间接费用之和。

2015年的基金新政还有哪些奥秘？基金资助首度出现直接经费、间接经费，有哪些原因？日前，《中国科学报》记者就此采访了基金委主任、中科院院士杨卫。

让经费使用更透明

为什么基金委要首度在资助中公开列出直接经费、间接经费？

对此，杨卫认为，这正是基金委践行科研经费管理改革的重要举措。他表示，直接经费是指发生在具体研发项目中的费用；间接经费是用于改善为科研活动投入的各种支撑条件的费用，如依托单位为科研项目提供的现有仪器设备及房屋，水、电、气、暖消耗等以及绩效支出等。目前，国际上对资助分为直接经费和间接经费，是一种比较通用、普遍的科研经费管理办法。因为研究者进行学术研究需要一定的辅助条件，如果用间接经费来支付这部分费用，既能让科研经费使用更加透明化，也能提高学校或机构（办公室、实验室及水电开支基本在学校或机构产生）的积极性。

一般来说，美国的科学基金会通过与各个高校进行谈判，来确定间接经费在整个资助经费中所占的比例。“通常，谈判学校科研水平越高，所在地区经济发展水平越高，间接经费所占比例就会相对较高，比如斯坦福大学等名校在这方面就会占据一定优势。”杨卫指出。但这也容易导致各个高校的间接经费比例不一，而直接经费是根据科研项目本身确定的，并不因客观原因有差别。于是，不同的高校竞争一样的项目时，越有名望、当地经济水平越高的高校申请时需要的总体经费会越高，因此其申请项目的竞争性就下降。

杨卫指出，今年科学基金正式引入“间接经费”这一概念，意义重大。基金委暂定对于500万元以下的项目间接经费的比例设置为20%；500万元至1000万元的项目间接经费是13%；而1000万元以上的项目是10%。这个设置比例的原则是，有了这一块间接经费，能更好地为科研人员提供服务。当然，将来间接费用比例会和依托单位的经费使用情况、科研诚信等挂钩。而这也是国际惯例。

“间接经费”普遍反响较好

当然，杨卫也表示，现在提出的间接费用的比例是否合理，还须看以后的实施情况，并非一成不变。

“需要提醒大家注意，这一部分由依托单位掌握的间接经费以后可能会成为基金委监督各单位科研经费管理的‘抓手’，未来基金委会通过审计和评级等相关配套制度，促进各依托单位提高其经费管理水平。”杨卫说。

他进一步表示，此前他们也在一些机构、专家中组织了深入的调研。从目前反馈的意见来看，依托单位基本都是比较欢迎的，但在科研工作者中则存在不同看法。有人十分欢迎，也有人存有疑虑。

“有些人指出，在基金资助里设置直接、间接经费，是否意味着在总经费不变的情况下，科研人员的经费会变少？这里我们要说明的是，间接经费中有一块与绩效相挂钩，依托单位，也就是学校或机构可以对项目的主研人员在这一部分给予适当倾斜。”杨卫说。

取消劳务费比例限制

那么，本次实施的基金新政，还有哪些亮点？

事实上，劳务费的问题一直是学界争议的焦点。因为对一些野外科考的科研人员来说，雇佣向导、搬运设备、住宿都会产生费用，这些都是在科研活动中产生，理应报销。但是过去由于担心科研人员在这方面造假，一般的科研经费对劳务费的占比有相对严格的比例限制。这一次，基金委出台的新的管理办法，就取消了劳务费的比例限制。

杨卫介绍，接受科学基金资助的科研人员可据实列支，只要人员数量、工作时间和应得收入准确合理，劳务费在总经费中所占的比例可以提高，灵活性较过去有了很大提高。未来，基金委也会依据发展情况，进一步调整资助强度及经费使用规则和比例，不断完善制度。

杨卫还表示，此外，在新的科学基金相关管理办法中，规定“直接经费”中的国际合作与交流费、会议费

及差旅费在总额不变的前提下，可以打通使用，科研人员在经费使用的自主性上变强。

近年来，基金委获得财政拨款经费呈不断增加的态势。2014年，科学基金实际到款比2013年增加了20%。展望未来，杨卫表示，希望未来科学基金、基金委在促进中国科学界的原始创新方面发挥更大作用。

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学术会议

第11届全国环境力学学术会议

中国力学大会-2015将于今年8月15-18日（15日报道）在上海交通大学召开。大会组委会已批准“环境力学专业委员会”的分会场。在去年天津的全国环境力学学术研讨会上，专委会已确定将全国环境力学学术研讨会办为专委会的系列会议，并改名为“全国环境力学学术会议”。为此，专委会决定将今年的力学大会 环境力学分会场 定为“第11届全国环境力学学术会议”，并已得到力学学会和力学大会的认可和批准。

现在，力学大会的征稿工作已开始，希望各位委员 积极组织投稿，并积极宣传，争取广大环境力学工作者投稿参加 这次力学大会环境力学分会场，即“第11届全国环境力学学术会议”。投稿要求，参见下面的学会“关于批准设立中国力学大会-2015分会场的通知”及附件，同时，也可访问力学学会网站关于力学大会-2015的会议专栏。

附：力学学会 关于批准设立中国力学大会-2015分会场的通知

尊敬的环境力学专业委员会负责人：

在你们的大力支持下，中国力学大会-2015征集分会场和专题研讨会工作得到全国力学界的积极响应。

有关您专业委员会/工作委员会/工作组申请的【第11届全国环境力学学术会议分会场】获得批准。请您专业委员会/工作委员会/工作组做好分会场组织工作。现将有关事宜及要求通知如下：

一、会议时间：2015年8月15—18日（8月15日报到）

二、会议地点：上海交通大学

三、分会场活动安排

邀请和组织本学科领域的国内外专家作邀请报告。分会场于2015年8月17日全天举行。分会场设置情况及联系方式见附件1。

四、分会场组稿方式

分会场由相关负责人自行约稿，在大会规定的时间内，汇总报告摘要和全文，通过电子邮件发送至大会秘书处。摘要和全文格式请见附件2、附件3。

五、截稿日期

摘要接收截止日期：2015年4月30日

全文接收截止日期：2015年6月15日

六、近期工作安排

大会网站将于近期开通，请登录以下网址：

<http://cctam2015.cstamconferences.org/>

查看并确认分会场信息是否准确，如需更改，请与大会秘书处联系。感谢你们的支持！

七、大会秘书处联系方式

联系人：刘洋（中国力学学会办公室）

电话：010-82543903, 62559209 传真：010-62559588

电子邮箱：liuyang@cstam.org.cn

6TH INTERNATIONAL CONFERENCE ON APPROXIMATION METHODS AND NUMERICAL MODELLING IN ENVIRONMENT AND
NATURAL RESOURCES

(June 1-5, 2015 , Pau, France)

Website: <http://mamern15.sciencesconf.org/>

Important dates:

Abstract submission and Registration opened- 1st September, 2014

Abstract submission closes - 1st February, 2015

Notification of acceptance of abstracts - 6th February, 2015

Early registration closes - 6th March, 2015

Registration closes and payment deadline-24 th April, 2015

All accepted papers will be published as a proceedings with an ISBN number. A printed copy of the proceedings will be given at the conference. Selected papers will be published after a refereeing process in a special issue of the journal Mathematics and Computers in Simulation. We would like to request you to mark MAMERN VI - 2015 dates in your Scientific Calendar. Kindly inform your colleagues who might be interested in attending the conference.

Conference Themes:

Alternative water sources

Direct Potable Reuse

E-technology in urban water management

Granular sludge processes

Integrated chemical and biological treatment

Resource Recovery from Wastewater

Treating Complex Industrial Wastewaters

Water Technology for Densely Populated and Rapidly Growing Cities

Contact: [Etienne Ahusborde](mailto:Etienne.Ahusborde@univ-pau.fr)

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Tel : 33 540 175 055

Fax : 33 559 407 555

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[第二十七届全国水动力学研讨会](#)

(2015.11.6-11.11 江苏南京)

会议将邀请各方面专家作大会报告，还将进行学术交流和有关考察活动。欢迎广大水动力学工作者踊跃参加会议，并广泛提出在经济建设中迫切需要解决的水动力学问题，使工程设计单位与教学科研单位紧密协作，共同攻关，为建设小康社会服务。本届研讨会将与第五届海峡两岸水动力学研讨会同时联合互动举行。

1. 征文范围

(1) 水电和河流动力学；(2) 船舶与海洋工程水动力学；(3) 理论与计算流体力学；(4) 近代测试技术；(5) 工业流体力学；(6) 海洋与大气动力学；(7) 传热、传质、环境；(8) 水动力学基础研究；(9) 其它与水动力学有关的边缘问题。

2. 征文要求

(1) 请投寄论文摘要一份，专家评审组将根据投寄的摘要内容决定是否录用。论文摘要内容应包括：1. 文章题目；2. 作者姓名、单位、邮编和电话（请附名片1张）；3. 论文内容简要说明（包括文中处理方法及重要

结果)。

(2) 投寄方式: E-mail: nchd@jhydrod.com。

(3) 投寄期限: 摘要投寄截止日期为: 2015年5月20日前; 全文投寄截止日期为: 2015年6月30日前。

3. 注意事项

(1) 投寄的论文应是尚未在公开出版(有刊号)的期刊上发表过。

(2) 全文录用通知将在收到摘要后一个月内寄出。录用的论文将编入《第二十七届全国水动力学研讨会文集》(由出版社正式出版), 并在第二十七届全国水动力学研讨会暨第五届海峡两岸水动力学研讨会上安排交流。

(3) 会议将评出优秀论文20篇, 推荐在《水动力学研究与发展》A辑或B辑上发表。

4. 联系地址: 上海市高雄路185号《水动力学研究与发展》编辑部, 邮编 200011。

电话: 021-63150072

Website: <http://www.jhydrod.com/>

主办单位:

《水动力学研究与进展》编委会 中国力学学会 中国造船工程学会河海大学

承办单位:

河海大学 水利水电学院 环境学院 上海《水动力学研究与进展》杂志社 中国力学学会水动力学专业组 上海造船工程学会船舶流体力学专业委员会

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论文成果

[A numerical simulation of the effects of snow particle shapes on blowing snow development](#)

论文信息: Huang N., Sang J. and Han K. 2011. A numerical simulation of the effects of snow particle shapes on blowing snow development [J]. JOURNAL OF GEOPHYSICAL RESEARCH, VOL. 116, D22206, doi:10.1029/2011JD016657. (SCI收录, 影响因子3.135)

全文地址: http://apps.whoofknowledge.com/Search.do?product=UA&SID=Q2qzmF5LgTrPjDub2VK&search_mode=GeneralSearch&prID=606437e7-2b89-4459-a99a-8ef443e38bed

ABSTRACT:

Snow particle shape is an important factor affecting the development of blowing snow. In this paper, we established a numerical model of blowing snow development and compared the changes in numbers of endurance spherical, ellipsoidal, star, hexagonal prism, and cylindrical snow particles in the air with time and their transport rates with time and height during the development. The following are the major conclusions. (1) The effects of snow particle shapes on the numbers of endurance snow particles in the air and the transport rates of snow vary so dramatically, even in a few orders of magnitude, that snow

particles should not be simplified as spheres or ellipsoids in simulation. (2) In the logarithmic wind field, the potential energy of spherical snow particles obtained from wind at higher heights is much greater than that of star snow particles at lower heights. Thus, the snow particles with greater energy can eject more snow particles when precipitating to the snow bed. (3) The five snow particles differ in their duration to reach dynamic equilibrium but not in the variation of the numbers of endurance snow particles in the air and the snow transport rates with time. (4) At dynamic equilibrium, the number of endurance snow particles in spherical, ellipsoidal, and star shapes and their heights and transport rates with time are at least one order of magnitude larger than those of the endurance snow particles in hexagonal prism and cylindrical shapes.

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[Recent advances in the dynamical extra-seasonal to annual climate prediction in IAP/CAS](#)

论文信息: Lin Zhaohui, Wang Huijun, and Zhou Guangqing et al., 2004: Recent advances in the dynamical extra-seasonal to annual climate prediction in IAP/CAS, *Advances in Atmospheric Sciences*, Vol.21, No.3, 456-466.

全文地址: http://apps.webofknowledge.com/Search.do?product=UA&SID=P1ccieCXZYWvZDfiUpe&search_mode=GeneralSearch&prID=c2687600-5d81-4d83-aca8-da61c357df72

ABSTRACT:

Recent advances in dynamical climate prediction at the Institute of Atmospheric Physics, Chinese Academy of Sciences (IAP/CAS) during the last five years have been briefly described in this paper. Firstly, the second generation of the IAP dynamical climate prediction system (IAP DCP-II) has been described, and two sets of hindcast experiments of the summer rainfall anomalies over China for the periods of 1980-1994 with different versions of the IAP AGCM have been conducted. The comparison results show that the predictive skill of summer rainfall anomalies over China is improved with the improved IAP AGCM in which the surface albedo parameterization is modified. Furthermore, IAP DCP-II has been applied to the real-time prediction of summer rainfall anomalies over China since 1998, and the verification results show that IAP DCP-II can quite well capture the large scale patterns of the summer flood/drought situations over China during the last five years (1998-2002). Meanwhile, an investigation has demonstrated the importance of the atmospheric initial conditions on the seasonal climate prediction, along with studies on the influences from surface boundary conditions (e.g., land surface characteristics, sea surface temperature). Certain conclusions have been reached, such as, the initial atmospheric anomalies in spring may play an important role in the summer climate anomalies, and soil moisture anomalies in spring can also have a significant impact on the summer climate anomalies over East Asia. Finally, several practical techniques (e.g., ensemble technique, correction method, etc.), which lead to the increase of the prediction skill for summer rainfall anomalies over China, have also been illustrated. The paper concludes with a list of critical requirements needed for the further improvement of dynamical seasonal climate prediction.

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学术期刊

[Journal of Hydrology, Volume 522](#)

An innovative procedure to assess multi-scale temporal trends in groundwater quality: Example of the nitrate in the Seine–Normandy basin, France

Multi-phase intelligent decision model for reservoir real-time flood control during typhoons

Differences in scale-dependent, climatological variation of mean areal precipitation based on satellite and radar-gauge observations

A methodology for deriving ensemble response from multimodel simulations

Spatial patterns of throughfall isotopic composition at the event and seasonal timescales

Analysis of the mixing processes in the subtropical Advancetown Lake, Australia

Assessing the impacts of climate change and dams on floodplain inundation and wetland connectivity in the wet–dry tropics of northern Australia

Modeling water scarcity and droughts for policy adaptation to climate change in arid and semiarid regions

Hydrological modelling using ensemble satellite rainfall estimates in a sparsely gauged river basin: The need for whole-ensemble calibration

Using a soil topographic index to distribute denitrification fluxes across a northeastern headwater catchment

Seawater intrusion in response to sea-level rise in a coastal aquifer with a general-head inland boundary

Meeting Indigenous peoples' objectives in environmental flow assessments: Case studies from an Australian multi-jurisdictional water sharing initiative

Quantifying changes in age distributions and the hydrologic balance of a high-mountain watershed from climate induced variations in recharge

A GIS-assisted regional screening tool to evaluate the leaching potential of volatile and non-volatile pesticides

Water balance of a lake with floodplain buffering: Lake Tana, Blue Nile Basin, Ethiopia

Spatio-temporal variability of global soil moisture products

A new approach for continuous estimation of baseflow using discrete water quality data: Method description and comparison with baseflow estimates from two existing approaches

Estimates of net infiltration in arid basins and potential impacts on recharge and solute flux due to land use and vegetation change

Detection, quantification and modelling of small-scale lateral translocation of throughfall in tree crowns of European beech (*Fagus sylvatica* L.) and Norway spruce (*Picea abies* (L.) Karst.)

Evaporative fractions and elevation effects on stable isotopes of high elevation lakes and streams in arid western Himalaya

Estimation of annual forest evapotranspiration from a coniferous plantation watershed in Japan (2): Comparison of eddy covariance, water budget and sap-flow plus interception loss

A soil water based index as a suitable agricultural drought indicator

Investigating the impact of leaf area index temporal variability on soil moisture predictions using remote sensing vegetation data

An index for plant water deficit based on root-weighted soil water content

Dune crests serve as preferential habitats for perennial plants during frequent drought years

Fundamental spatial and temporal disconnections in the hydrology of an intermittent prairie headwater network

The capitalized value of rainwater tanks in the property market of Perth, Australia

Separating the impacts of climate change and human activities on runoff using the Budyko-type equations with time-varying parameters

Global sensitivity analysis for urban water quality modelling: Terminology, convergence and comparison of different methods

Investigating the relationship between unsaturated hydraulic conductivity curve and confined compression curve

Analysis of snowpack accumulation and the melting process of wet snow using a heat balance approach that emphasizes the role of underground heat flux

The contribution of atmospheric rivers to precipitation in Europe and the United States

Fully integrated surface–subsurface flow modelling of groundwater–lake interaction in an esker aquifer: Model verification with stable isotopes and airborne thermal imaging

Diurnal hydrochemical variations in a karst spring and two ponds, Maolan Karst Experimental Site, China: Biological pump effects

Temperature effect on the transport of bromide and E. coli NAR in saturated soils

Effect of diversified crop rotations on groundwater levels and crop water productivity in the North China Plain

Determining the importance of model calibration for forecasting absolute/relative changes in streamflow from LULC and climate changes

Analysis of meteorological droughts for the Saskatchewan River Basin using univariate and bivariate approaches

Continuous cultivation of *Arthrospira platensis* using exhausted medium treated with granular activated carbon

The use of electrical conductivity measurements in the prediction of hydraulic conductivity of unsaturated soils

Direct pore-to-core up-scaling of displacement processes: Dynamic pore network modeling and experimentation

Examining the influence of river–lake interaction on the drought and water resources in the Poyang Lake basin

Evaluation of different parameterizations of the spatial heterogeneity of subsurface storage capacity for hourly runoff simulation in boreal mountainous watershed

A simple model of flow-rate attenuation in sewer systems. Application to urban stormwater source control

Applying bias correction for merging rain gauge and radar data

Water reuse in river basins with multiple users: A literature review

Hydrodynamic parameters estimation from self-potential data in a controlled full scale site

Towards soil property retrieval from space: An application with disaggregated satellite observations

A climate informed model for nonstationary flood risk prediction: Application to Negro River at Manaus, Amazonia

Using long time series of agricultural-derived nitrates for estimating catchment transit times

Examination of groundwater recharge with a calibrated/validated flow model of the deep vadose zone

Sources and pathways of stream generation in tropical proglacial valleys of the Cordillera Blanca, Peru

A holistic, multi-scale dynamic downscaling framework for climate impact assessments and challenges of addressing finer-scale watershed dynamics

Clustering spatio–seasonal hydrogeochemical data using self-organizing maps for groundwater quality assessment in the Red River Delta, Vietnam

Construction of a novel water quality index and quality indicator for reservoir water quality evaluation: A case study in the Amazon region

Historical reconstruction and 2050 projections of water demand under anthropogenic and climate changes in two contrasted Mediterranean catchments

How do I know if my forecasts are better? Using benchmarks in hydrological ensemble prediction

部分期刊最新目录

- Geophysical Research Letters : <http://www.sciencedirect.com/science/journal/03091708>
Journal of Hydrology: <http://www.sciencedirect.com/science/journal/00221694/522>
Advances in Water Resources: <http://www.sciencedirect.com/science/journal/03091708/77>
Environmental Research: <http://www.sciencedirect.com/science/journal/00139351>
Environmental Pollution: <http://www.sciencedirect.com/science/journal/02697491>
Water Resources Research: [http://agupubs.onlinelibrary.wiley.com/agu/journal/10.1002/\(ISSN\)1944-7973/?t=accepted#anchor-feed](http://agupubs.onlinelibrary.wiley.com/agu/journal/10.1002/(ISSN)1944-7973/?t=accepted#anchor-feed)
Annual Review of Environment and Resources: <http://www.annualreviews.org/loi/energy>
Water Research: <http://www.sciencedirect.com/science/journal/00431354>

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