

MEMORANDUM OF UNDERSTANDING
between
MINISTRY OF EARTH SCIENCES, GOVERNMENT OF INDIA
&
INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
for the creation of
Samudragupta MoES Chair and James Rennell MoES Young Fellow

This Memorandum of Understanding has been entered into on the 12th day of December 2011 between Ministry of Earth Sciences, Government of India (hereinafter referred to as MoES) on the first part and the Indian Institute of Technology Kharagpur (hereinafter referred to as IITKGP) on the other part.

WHEREAS MoES is interested in academic, research and development programmes leading to capacity building in the areas of Earth System Science, Science of Climate Change and Ocean Science and Technology; and

“HEREAS IITKGP having various Departments, Schools and Centres namely Ocean Engineering & Naval Architecture, Geology & Geophysics, Center for Oceans, Rivers, Atmospheric and Land Sciences is keenly interested in pursuing cutting-edge research and education in areas of Earth System Science, Climate and Ocean Science and Technology. In addition, IITKGP is also involved in various multidisciplinary research activities under Marine Resource Development and Management Programme (MRDM) funded by MoES and is therefore planning to expand its activities in these areas. Therefore, in order to promote excellence and leadership in teaching, research and development in any discipline of Earth System Sciences, Climate Science and Ocean Science and Technology and to facilitate wider and deeper interaction between MoES and faculty and students of IITKGP; both parties hereby agree to establish the “Samudragupta MoES Chair” (or “Chair”, for short) and James Rennell MoES Young Fellow at IITKGP.

1. Objectives:

The establishment of the Chair is expected to:

1. Promote excellence and leadership in teaching, research and program development including societal applications in Earth System Science, Science of Climate Change and Ocean Science and Technology.
2. Facilitate wider and deeper interactions of IITKGP faculty, students and researchers with MoES and its organizations and other academic and research organizations in developing multipronged multidisciplinary understanding on next-generation of coupled atmosphere-ocean-land interactions and their impact on living beings.

2. Terms and Conditions:

The creation and operation of the Chair and Fellowships will be subject to the following terms:

1. **Grant:** The MoES agrees to give a grant of ₹150 lakhs to IITKGP to help fund the endowment used to establish the Chair in any discipline of Earth Systems Science, Atmospheric or Ocean Sciences, Remote Sensing and other related activities. All the necessary and required rules and

instructions under the GFR with respect to sanction and utilization of non-recurring grant-in-aid will be followed by IITKGP.

2. The appointment against the Chair will be governed by the guidelines approved by the Board of Governors (BoG) of IIT Kharagpur and any subsequent amendments to it by the BoG. The guidelines as given in Annexure 2 satisfy the norms of Chair Professors as approved by the BoG.
3. **Eligibility** IITKGP shall appoint "the Chair" with a track record of being outstanding teacher and/or researcher and/or person with commendable experience in research and development aspects in the relevant areas. Anyone who is being considered for Chair position be appointed as "regular" faculty, "visiting" faculty, "Emeritus" faculty or "Adjunct" faculty positions. The incumbent will be called the **Samudragupta MoES Chair Professor**.
4. To continue and provide in-house scientific support to the Chair activities, one faculty member of IITKGP will be provided with top up fellowships and shall be designated as **James Rennell MoES Young Fellow**.
5. The activities of the **Samudragupta MoES Chair Professor** and **James Rennell MoES Young Fellow** are outlined in Annexure – 1. The incumbent to **James Rennell MoES Young Fellow** shall ensure the continuance of the activities of Chair.
6. The detailed guideline for the **selection, tenure of appointment and continuance etc.** as per the approval of Board of Governors of IIT Kharagpur of the **Samudragupta MoES Chair Professor** and **James Rennell MoES Young Fellow** and their tenure are given in Annexure – 2.
7. The interest from the endowment for the Chair will be used to pay the salary of **Samudragupta MoES Chair Professor**, his travel, teaching and research related activities for full or part of the year. In addition, the endowment will support top-up salary of one young faculty member/distinguished scientist appointed as **James Rennell MoES Young Fellow** to carry forward the activities of the Chair and support the fellow through facilitating-grants for travel, contingencies and consumables etc.. The salary, top up fellowships and other expenses shall be governed by IITKGP norms. The endowment made available initially by MoES will be invested by IITKGP and its interest shall be used for the purpose of the Chair and its related activities as at Annexure - 3. Any unspent balance, yearly interest accruing to the endowment shall be carried over to the next year and/or reinvested by IITKGP in accordance with its rules/regulations so as to maximize the returns. If IITKGP feels that additional funds are required to meet the functions of the Chair, IITKGP shall take steps to arrange for the same.
8. A committee hereafter known as the **Chair Management Committee (CMC)**, with Dean (Faculty) of IITKGP as Chairman, two faculty members from IITKGP and a representative of the MoES will periodically review the functioning of the Chair, change of modalities in the management of Chair and utilization of funds.
9. IITKGP will submit to MoES the audited statement of accounts and utilization certificate duly certified by the Chairman, CMC towards the receipts and expenditures of funds at the end of each financial year.

10. The incumbents to the **Samudragupta MoES Chair Professor** and **James Rennell MoES Young Fellow** shall prepare and submit Annual Reports of their individual academic and research work by 31st March each year for consideration by the CMC which will subsequently be forwarded by Dean (Faculty), IITKGP to MoES along with the audited statement of accounts and expenditure.

11. **Validity:** The MoU will remain valid for five years. Both the parties may mutually agree to review/extend the MoU after the period of validity

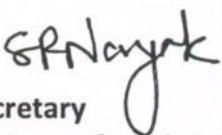
3. Intellectual Property Rights:

1. The matter related to intellectual property rights that arise as a result of research under the MoU will be resolved on case-to-case basis and will be consistent with officially laid down IPR policies of IITKGP and MoES.

4. Modifications:

Any modifications to this MoU can only be done through mutual consultations and exchange of letters by duly authorized representatives of both parties. The MoU shall be effective from the date of its signing

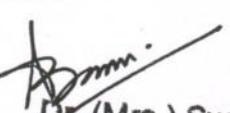
IN WITNESS WHEREOF the parties hereto have set in their hands and signature on the 12th day December 2011


Secretary
Ministry of Earth Sciences
C.G.O. Complex
Lodi Road
New Delhi - 110003

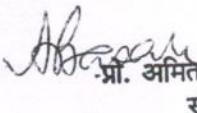

Director
Indian Institute of Technology Kharagpur
Kharagpur - 721 302

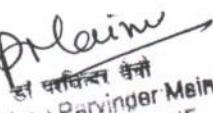
Director
Indian Institute of Technology
Kharagpur

WITNESS:

1. 
Dr. (Mrs.) Swati Basu
Scientist-G

WITNESS:

1. 
प्रो. अमित बसाक/Prof. Amit Basak
संकायाध्यक्ष, (संकाय)
Dean, Faculty
भा.प्रो.सं. खड़गपुर/ IIT Kharagpur

2. 
Dr (Mrs.) Parvinder Meimi
वैज्ञानिक-एक/Scientist-F
गृहीत विज्ञान मंशालय/Min. of Earth Science
भारत सरकार/Govt. of India
नई दिल्ली/New Delhi

2. 
Registrar
Indian Institute of Technology
Kharagpur-721302

Activities of Samudragupta MoES Chair

The activities of the Chair and the Fellows will include but not limited to one or more of the following:

- a) Development of collaborative research programs in selected areas of Earth System Sciences with various national and international organizations;
- b) Development of short-term and long-term interdisciplinary courses in futuristic Earth Science subjects for broader acceptability;
- c) Development of comprehensive energy-water-climate-environment-minerals-observation-forecast system;
- d) Development and implementation of a forward-looking strategic plan for Earth System Science initiatives in IITKGP in sync with MoES and the goals of the IITs.
- e) Organize multiple targeted workshops and seminar series to enhance visibility and broaden the impact of activities in Earth System Sciences on the community at large
- f) Motivate and guide young minds towards futuristic issues related to earth, ocean, atmosphere, rivers, land, and climate sciences.

To accomplish the above, **Samudragupta MoES Chair Professor** will work closely with **James Rennell MoES Young Fellow** in one or more important areas such as but not limited to:

- a) Prediction of Earth related processes employing various modeling systems;
- b) Development of advanced information acquisition and data analytics in Earth System Sciences;
- c) Development of advanced techniques in exploration and resource management;
- d) Development of high-resolution multi-disciplinary state-of-the-art operational prediction systems;
- e) Preparation and dissemination of courses in interdisciplinary areas such as Deep Sea Mining, Mineral and Bio-resource exploration and exploitation, advanced ocean instrumentation, Biophysical modeling and Ecosystem based management;
- f) Advancement of Marine Resource Development and Management (MRDM) program projects (funded by MoES) at IITKGP.

The above activities will help the national agencies to:

- a) Improve safety and efficiency of marine operations, sustain living marine resources for healthy coastal marine and estuarine ecosystems
- b) Improve forecasts of natural hazards and effective mitigation of their effects
- c) Improve predictions of climate change and their effects
- d) Minimize environmental risks from natural resource exploration and utilization

Guidelines for Selection

1. IITKGP shall constitute a Selection Committee comprising of (a) Director, IITKGP as Chairman, (b) two experts from a panel of experts approved by Board of Governors of IITKGP, (c) a nominee of MoES (d) Dean, Sponsored Research & Industrial Consultancy and (e) Dean, Faculty for the purpose of appointing the **Samudragupta MoES Chair Professor** and **James Rennell MoES Young Fellow**.
2. **Samudragupta MoES Chair Professor** shall normally be appointed for a duration of four to six months in a year depending on the requirement of the mandate as detailed in Annexure – 1. The tenure of the Chair will be for a period of three years. IITKGP may consider any individual appointed to the Chair for re-appointment, together with other eligible candidates for a period of up to 3 years for any number of times. The selection process for the **Samudragupta MoES Chair Professor** may involve advertisement/nomination/formation of search committee.
3. **James Rennell MoES Young Fellow** shall normally be appointed for a period of one year from among the existing faculty members, of Departments/Schools/Centres actively engaged in teaching and research in the relevant fields. IITKGP may consider any individual appointed to the fellowship for re-appointment, together with other eligible candidates for any number of times. In the event of reappointment of the same person as the Fellow, the term of such appointment shall be restricted up to a maximum of two (02) years without break subject to annual review of the performance of the incumbent.

Note: These are as per approved norms of Board of Governors meeting held on 30th April 2008 and has been cleared in the BoG Meeting held on 21st August 2011. This particular signed MoU may again be reported to the BoG for specific ratification.

Estimated Annual Budget for Samudragupta MoES Chair

Sl. No.	Budget Heads	Amount (in ₹)
1	Samudragupta MoES Chair: Honorarium to the Chair Professor / Visiting Professor	6,00,000
	James Rennell MoES Young Fellow Top up salary to the Fellow @ Rs. 20,000 per month	
		2,40,000
2	Travel including international travel for Seminars/Symposia / Meetings / Presentations etc. besides travel expenses for Chair if coming from abroad	2,00,000
3	Contingency, Consumables, Accessories, Books etc.	1,60,000
		TOTAL
		12,00,000*

*This is based on an assumption on available amount of ₹12.0 lakhs per year through interest on investment. Budget may be adjusted depending on the amount available in a particular year.