Karnataka Jnana Aayoga
(Karnataka Knowledge Commission)
Government of Karnataka

Is Organizing a

State Level Workshop on
“Unmanned Aerial Systems for Governance”

Date: 27-28 October 2016

Co-Sponsored by
National Institute of Advanced Studies

Venue: JRD Tata Auditorium,
National Institute of Advanced Studies
Indian Institute of Science Campus
Bangalore - 560 012

BACKGROUND

Unmanned Aerial Systems (UAS) or mini drones have vast applications in civilian sector apart from military uses. The various civilian applications are urban mapping and surveys, monitoring of agricultural crops, crop survey, disaster management, coastal surveillance, forest survey and inspection, power and pipeline inspection, engineering site inspection, homeland security, water and pollution monitoring, aerial photography, mine monitoring, event security and crowd monitoring, medical kit transportation and many many more. A few countries have already deployed these systems for a few civilian applications and the results show benefits compared to conventional methods. Our Country has begun to realize the potential and need for deploying UAS technologies in civilian and governance sector. The deployment of UAS for governance is expected to democratize and empower governance right at the grass-root level by giving real-time reliable data for immediate decision making. The effective deployment of such technologies would certainly propel our state and our country to reach greater heights.

There are a few technological and logistical challenges that need to be addressed in order to deploy these systems in our national air space. Realizing its importance many enthusiasts are developing these systems for hobby purpose, data collection and aerial photography; however these systems are not being effectively used for societal applications. Most of the components are being imported and there is a need for encouraging indigenous development in this niche area to encourage Indian Industry. Introduction of courses on UAS technologies into the
engineering curriculum at university level would help in building up of capacity within our country which in turn will support the Indian Industry in meeting global challenges.

**ORGANISED BY KARNATAKA JNANAAYOGA (KJA)**

- Karnataka Jnana Aayoga (KJA) (www.karnataka.gov.in/jnanaayoga) has been formally notified by Government of Karnataka in December, 2013. KJA aims to provide professional and knowledge recommendations for improving governance in state, benefit to society and enabling citizens of Karnataka. As an independent professional-expert body, KJA Members bring new ideation, undertake extensive brain-storming and wide consultations on important and relevant issues for the state’s development and make specific actionable recommendations to the government.

- KJA has already submitted many recommendations/reports to the government – Establishment of Karnataka-GIS (through IT/BT Department); Establishment of Cauvery Gallery in Mysore University (through Tourism Department); Establishment of a Biodiversity Park at Madivala Lake (through Forest and Environment Department); recommendations on Education Technology usage and Edusat Utilisation in HE institutions; recommendations for a Karnataka Sports Policy; a pilot project for medicinal plants pharmacopeia and traditional health knowledge; results of a pilot on studying archaeological sites using Remote Sensing and GIS etc. Apart from these, KJA is in the process of formulating recommendations for a Karnataka Skill Development Plan, Karnataka State Education Policy, Karnataka Public Health Policy, developing a unique Nursing Training Simulator, recommendations for arts administration and management and study for digital archive of heritage and culture in the state etc.

- KJA has recognized that Unmanned Aerial Systems (UAS) are important technology and application elements for society and that UAS will make an impacting drive for governance and betterment of society. To come out with a comprehensive recommendation report on UAS Technology, Applications and Policies that will help the Govt. of Karnataka to develop the sector comprehensively and also use UAS in governance, KJA has constituted an Expert Study Group on ‘UAS technology, Applications and Policy: A Karnataka Vision’ with the following objectives- one, bring out a comprehensive report on UAS Technology, Applications and Policies as a strategy plan for the nation where Karnataka can lead; two, undertake specific demonstrative application projects in the state, involving departments of the Karnataka Government, where examples of UAS value gets demonstrated end-to-end for governance and Karnataka-GIS AND three, UAS research and technology can get embedded into the higher education system of the state.

**CO-SPONSORED BY NATIONAL INSTITUTE OF ADVANCED STUDIES**

- National Institute of Advanced Studies (NIAS) (www.nias.res.in) was conceived and founded in 1988 by the late Mr. J. R. D. Tata, who sought to create an institution to conduct advanced multidisciplinary research. The Institute is unique in its integrated approach to the study of intersections between science and technology, philosophy, social issues and leadership. NIAS nurtures a broad base of scholars, managers and leaders who would respond to the complex challenges that face contemporary India and global society, with insight, sensitivity, confidence and dedication.
• The current aims of NIAS are to integrate the findings of scholarship in the natural and social sciences as well as technology, the humanities and arts through multi-disciplinary research on the complex issues that face Indian and global society, and to assist in the creation of new leadership with broad horizons in all sectors of society by disseminating the conclusions of such research through appropriate publications and courses as well as through dialogues with leaders and the public.

• NIAS addresses advanced technologies and policies – issues of societal interest and requiring fresh and new outlook and perspectives. NIAS has experts in UAS and GIS/Remote Sensing technologies/policies. NIAS aims to develop a common-good vision for UAS.

SCOPE AND OBJECTIVES OF THE WORKSHOP

KJA is organizing a 2-day State Level Workshop at NIAS on October 27-28, 2016. The workshop will have experts discuss on UAS and also for industries to show-case UAS products and technologies.

Apart from addressing and discussing various issues related to operation of UAS, the workshop will be a first-off platform for debate and discussion on UAS Technologies, Applications and Policy. Generating technical scenarios, application cases, operational guidelines and policy directions for UAS is the need of the hour – this is the main aim of the workshop. In specific, the seminar will also:

• Review the current status of UAS Technology
• Discuss and learn from best UAS practices, experiences and applications case-studies
• Discuss solutions and approaches which are sustainable and have a long-term perspective with regard to UAS for Governance.
• Look at issues and challenges that go towards creating an eco-system for UAS – including commercial sector in India
• Address broad strategy and guidelines for UAS in Education

UAS SHOW-CASE

It is planned to have a Show-Case of UAS products and technologies – for this registration and requests are mandatory. The KJA SG will limit/select show-casing due to space and time limitations. Interested agencies may fill in the online / offline requests immediately. The online registration link is given below. The selected products/technology will be notified.

EXPECTED OUTCOME OF THE WORKSHOP

The outcome of the workshop will help the Study Group in bringing out a comprehensive study report on UAS Technologies, Applications and Policies. The discussions will help in defining:

• Demonstrative application projects in the state, involving departments of Karnataka Government, where examples of UAS value gets demonstrated end-to-end for governance.
• Roadmap for industrial sector development in UAS addressing commercial aspects of manufacturing and services.
• Roadmap for adoption of UAS research and technology into the higher education system of the state.
• Policy and Practice recommendations for overall UAS eco-system.

WHO SHOULD PARTICIPATE?

The seminar is aimed at bringing together knowledge experts related to UAS who can deliberate on the national perspective with an emphasis on Governance. Experts from the State/Central governments, industries, academia, Societies and R&D institutions are expected to participate and address the issues relating to UAS. Key national experts are also expected to participate. Participation for the workshop will be by registration.

Private sector involved in UAS and its applications can participate and show-case their capabilities. Academia and universities/colleges would also benefit from the workshop.

Registration (Last Date 20 October 2016):

Kindly participate in the Registration / Online UAS Survey by clicking on the link below (or copy and paste the link below in the web browser).

Online Registration: https://www.surveymonkey.com/r/kjausworkshop

For more details, please contact:

Mr. R. Vijay Krishna
Member Secretary, SG-UAS
Karnataka Jnana Aayoga (Karnataka Knowledge Commission),
Government of Karnataka, Room No 438-439, 4th floor, Vikasa Soudha,
Bengaluru - 560 001
Contact No.: +91 80 22268626/ 222035102; Mobile: +91 9243104008
Email: kjauasworkshop@gmail.com
Web: www.karnataka.gov.in/jnanaayoga
TENTATIVE PROGRAMME SCHEDULE
OCTOBER 27, 2016
(0900 HRS ONWARDS)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Activity</th>
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<tbody>
<tr>
<td>09:00-09:30</td>
<td>Registration</td>
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<tr>
<td>09:30-10:40</td>
<td>Inaugural/Opening Session</td>
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<td>10:40-11:10</td>
<td>Tea Break</td>
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<tr>
<td>11:10-11:55</td>
<td>Session 1: Building the Case for UAS in Karnataka</td>
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<td>Focus of the Session:</td>
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<td>• Why UAS are becoming important</td>
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<td>• Thinking and perspective of KJA on UAS</td>
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<td>11:55-13:25</td>
<td>Session 2: UAS Technology Eco-System</td>
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<td>Focus of the Session:</td>
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<td>• Present UAS Technology Readiness Level in the Country</td>
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<td>• Manufacturing / Maintenance, Capability and Capacity</td>
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<td>• Test Facilities for UAS</td>
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<td>• Private Sector Offerings of Technologies</td>
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<td>13:25-14:25</td>
<td>Lunch</td>
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<td>14:25-15:55</td>
<td>Session 3: UAS Applications Perspective for Karnataka</td>
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<td>Focus of the Session:</td>
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<td></td>
<td>• Application Perspectives of UAS</td>
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<td>• Potentials of applications in Karnataka</td>
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<td>15:55-16:25</td>
<td>Tea Break</td>
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<td>16:25-17:40</td>
<td>Session 4: UAS Policy and Regulations</td>
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<td>Focus of the Session:</td>
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<td>• DGCA Policy</td>
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<td>• State UAS Policy</td>
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<td>• UAS Certification and Training</td>
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OCTOBER 28, 2016

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<tr>
<th>Time</th>
<th>Session/Activity</th>
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<tr>
<td>09:30-10:30</td>
<td>Session 5: UAS in Higher Education</td>
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<td>Focus of the Session:</td>
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<td>- Embedding UAS in HE</td>
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<td>- R&amp;D for Future UAS Technologies and Applications</td>
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<td>- Participation of Universities of Karnataka in UAS</td>
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<td>10:30-11:00</td>
<td>Tea Break</td>
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<tr>
<td>11:00-12:30</td>
<td>Concluding Panel: UAS - Way Forward</td>
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<td>12:30-13:00</td>
<td>Closing Remarks and wrap-up</td>
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<td>Vote of Thanks</td>
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<td>13:00-14:00</td>
<td>Lunch</td>
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Karnataka Jnana Aayoga  
(Karnataka Knowledge Commission)  
Government of Karnataka  
Date: October 27-28, 2016  
Venue: NIAS

**Offline Registration Form**

1. Name : ____________________________________________________________
2. Designation/Position: ________________________________________________
3. Organization: _______________________________________________________
4. Contact Address with Tel/Fax, Email: ________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
5. Request for Static Display (please give a brief of the products/technology you wish to showcase; please indicate the table space required for display) [selected products/technology will be notified]
   ___________________________________________________________________
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**Registration (Last Date 20 October 2016):**

Kindly participate in the Registration / Online UAS Survey by clicking on the link below (or copy and paste the link below in the web browser).

Online Registration: [https://www.surveymonkey.com/r/kjaasworkshop](https://www.surveymonkey.com/r/kjaasworkshop).

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