

# Initial Attempt at defining the duties of a South African URSI National Committee Member

Alan Robert Clark

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## 1 What is URSI?

URSI [www.ursi.org](http://www.ursi.org), or *Union Radio-Scientifique Internationale*, or (the) International Union of Radio Science was established in 1919 and is a foundation member of the International Council of Scientific Unions (ICSU). In South Africa, ICSU affairs are administered by the NRF—National Research Foundation—and represents over 30 Scientific Unions present in South Africa. It is effectively an international “Window of Science” of activities in South Africa. Although we all would perhaps like to see the South African ICSU to be doing a lot more for South African Science, it is to be pointed out that ICSU-SA is (or should be, and that’s up to us!) a showcase for South African Science.

URSI attempts to bring together all aspects of “Radio Science”, and is therefore multi-disciplined in nature, pulling together disciplines that would not ordinarily be “talking to each other”, but should be. (Mainly the Electrical Engineering and the Physics fraternities.)

URSI consists of 10 “Commissions” that overview specific areas of “Radio Science”. The full list of the Commissions, and their interest areas is to be found at [www.ursi.org/](http://www.ursi.org/).

In short:

Commission A:	Electromagnetic Metrology
Commission B:	Fields and Waves
Commission C:	Signals and Systems
Commission D:	Electronics and Photonics
Commission E:	Electromagnetic Noise and Interference
Commission F:	Wave propagation and Remote Sensing
Commission G:	Ionospheric Radio and Propagation
Commission H:	Waves in Plasmas
Commission J:	Radio Astronomy
Commission K:	Electromagnetics in Biology & Medicine

which is a *vast* area of research. Indeed, one of the great advantages of being an URSI RadioScientist is the broadening of the mind by the simple exposure to the fantastic work done by other RadioScientists in South Africa.

The South African URSI National Committee has a Member for each Commission except H, and includes an Alternate Member in the interests of “Capacity Building” (See later).

URSI have “General Assemblies” (a mega-conference) every three years at which new work, and “reviews” of Radio Science of the previous three years are presented.

## 2 Primary purpose of the National Committee

To “network” the researchers, and collate the research output of those researchers for South Africa, within their “Commissions”.

### 3 Duties of a National Committee Member

1. Attend the Annual meeting of the URSI National Committee, generally in mid-April in the NRF Boardroom in Pretoria.
2. “Network” all researchers that are involved with research in your Commission’s area in South Africa: actively identify them in academia and in industry. This is a broadening exercise! You will be amazed at what you do not know is going on, even in your own field, in your own country!
3. Collate the research outputs (publications) of all researchers for each *calendar* year. (The simplest way to do this is via the Annual Reports that most research institutions produce anyway: just ask to be included on the mailing list—my own approach is to maintain a BibTeX database, on the Web eg: [ytdp.ee.wits.ac.za/ursi](http://ytdp.ee.wits.ac.za/ursi).)
4. Produce an “Annual Report” of the previous year’s activities (by the end of February of the current year, for submission to the South African URSI secretariat, so that it can be circulated before the annual April meeting):
  - Identifying the people involved (with some contact info) in research in the Commission’s area.
  - Detailing any notable activities.
  - Listing the publications of those involved.

Note that some Commissions have correctly pointed out that the research that they are involved with, although it is Radio Science, produces publications in unrelated journals: eg a breakthrough in an antenna design in Commission J may result a publication about a new Quasar, rather than the antenna modification.

5. Every three years produce a Consolidated Report for the URSI General Assembly.
6. Generally promote URSI as an organization and source of information.
7. “Capacity Building”: In order to fulfill the duties of a National Committee Member, one has to be fairly-well versed with the “whos-who” in your particular field of research. In addition, one is also expected to have the “oversight” necessary to produce the “bigger picture” of the work done in the Commissions’ ambit. Because of history, this is entrenched in the White Male, and it is important to transfer this capacity to Designated People as much as is possible, and to identify suitable Designated Persons who are keen enough to serve as Members, or Alternates.

### 4 Conclusion

The genesis of this document stems from my appointment as Commission B Member of the South African National Committee of URSI, not knowing what URSI *really* was (heard of it, certainly, noticed that it seemed rather self-important, but not appreciating what it did). I certainly did not know what *I* was *really* meant to do, and gathered this information through the usual process of “osmosis”.

It is my hope that this document will ease the appointment of new RadioScientists to the South African National Committee of URSI, and convince them of the importance of the role that they are volunteering for.

A unifying project currently underway which impacts heavily on all Commissions in South Africa is the SKA—Square Kilometer Array [www.ska.org](http://www.ska.org) and particularly [www.ska.ac.za](http://www.ska.ac.za). It affects all aspects of “Radio Science”, and is a perfect example on the impact of URSI in South Africa, and the unifying nature of its work.