ECR development

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**SDA² Framework**

Methodological Roadmap for farming ECRs

**Skill Development**
- Hackathons
  - Concept of OceanHackWeek etc.
  - Introductory sessions on Python/Data analysis etc.
- Graduate Student Seminars
- Paper Writing Workshops
- Groups of new+old+mentor

**Awareness**
- Webinars/interactive sessions with leading scientists & subject matter experts
- Short 1-2 day session on emerging topics from experts
- Job opportunities/ active Twitter/Slack channel

**Application**
- Community Paper
  - Timeline based community research paper as a quantified output for the entire exercise (eg from hackathons).

Concept taken from Sanskrit shloka “Vidya Viniyoga vikasa”. It means development through the application of knowledge.
Summer School & Research Foci

ICTP-CLIVAR Summer School on Marine Heatwaves: Global Phenomena with Regional Impacts

24 - 29 July 2023
An ICTP Hybrid Meeting
Trieste, Italy

Registration will open soon!

- **Technical aspects**: Methodologies used to estimate extremes.
- **Drivers** of marine heatwaves: Atmospheric and Oceanic mechanisms
- **Impacts** of marine heatwaves: Cyclones, ecosystems, societal costs
- **Future projections**, attribution and forecast and forecast: trends vs internal dynamics
Implementation of SDA\textsuperscript{2} Framework

First implementation in Summer School on Marine Heatwaves in July 2023

Skill Development
- Hackathons – Pre-school exercise (eg: to develop a code)
- Graduate Student Seminars - Lightning session/online+in-person Poster session/creative sessions
- Hands-on training
- Working groups (ECRs + mentor)

Awareness
- Working Groups discussion.
- Webinars/interactive sessions (with leading scientists & subject matter experts w.r.t. to the WGs)

Application
- Community Paper
  - Timeline based community research paper as a quantified output for the Summer school.
  - Clivar Exchanges/Journal Article
- Product Development