Associate/Full Researcher - Radio Astronomy Digital Instrumentation - Radio Astronomy Laboratory
University of California, Berkeley

Job Title	Associate/Full Researcher - Radio Astronomy Digital Instrumentation - Radio Astronomy Laboratory
Department	
Institution	University of California, Berkeley Berkeley, California
Date Posted	Jul. 22, 2019
Application Deadline	8/31/2019
Position Start Date	Available immediately
Job Categories	Professor Associate Professor
Academic Field(s)	Astronomy and Astrophysics
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Job Description

Recruitment Period

Open date: May 3rd, 2019
Last review date: Tuesday, Jul 16, 2019 at 11:59pm (Pacific Time)

Applications received after this date will be reviewed by the search committee if the position has not yet been filled. Final date: Saturday, Aug 31, 2019 at 11:59pm (Pacific Time)

Applications will continue to be accepted until this date, but those received after the review date will only be considered if the position has not yet been filled. Description

The Radio Astronomy Laboratory (RAL) at the University of California, Berkeley seeks applications for

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a full-time (100%) Associate/Full Researcher in the areas of radio astronomy research and digital instrumentation, with an expected start date of July 2019.

Position Description:

The UC Berkeley Radio Astronomy Lab is seeking a highly motivated individual to conduct research in radio astronomy, designing advanced radio astronomy instrumentation for HERA (the Hydrogen Epoch of Reionization Array) and several other radio telescope arrays, as well as further the Collaboration for Astronomy Signal Processing and Electronics Research (CASPER) by developing open-source software and hardware for the radio-astronomy community.

The primary responsibilities for this position are:

* Design and develop the next generation spectral-imager (correlator) for HERA.

Develop open-source high-level tools for FPGA and GPU based instrumentation used in Radio Astronomy, including general purpose libraries and hardware specific infrastructure in collaboration with international CASPER collaborators.
Lead the development, testing, and deployment of novel instrumentation within UC Berkeley's Radio Astronomy Laboratory (RAL). These instruments may include, spectrometers, correlators, beamformers, transient-processing systems (pulsar and fast radio bursts), SETI, and other DSP systems used by single-dish and synthetic-aperture radio telescopes.

* Design and develop space based radio astronomy instrumentation, collaborating with UCB's Space Sciences Lab, NASA, ESA, CSIRO, and the Breakthrough Foundation

Participate in project meetings with staff and graduate student researchers.

Mentor, supervise and train graduate and undergraduate student researchers, postdocs and research associates, as well as visiting scientists and students.
Perform independent research in the field of astronomy, write research reports and publish peer-reviewed journal articles.
Lead the preparation of proposals to seek additional research funding.

Basic Qualifications (required at the time of application):

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Applicants must have a Ph.D. or equivalent international degree.

Additional Qualifications (required at the start of appointment): Minimum of six years research experience.

Preferred Qualifications:
Applicants must have a Ph.D. or equivalent international degree in electrical engineering, computer science, astronomy, physics, or closely related field.
A record of publishing in refereed journals, and successful grant applications.
At least ten (10) years of experience working in a research lab.
Strong communication skills in order to write routine reports and correspondence, speak effectively before groups of customers or employees of organizations.
Experience in high-throughput digital signal processing systems, including FPGA- and GPU-based processing elements.
Proficiency with: Python, C, Verilog, VHDL, CUDA, MATLAB & Simulink.
Commitment to collaborative development of open-source software.
Experience with high-speed Ethernet networks.
Experience in high-level design and deployment of radio-astronomy instrumentation.
Familiarity with the previous work of the Collaboration for Astronomy Signal Processing and Electronics Research.
Proficiencies with hardware description languages applied to Field Programmable Gate Arrays (FPGAs).

Starting salary based on appointed rank and step will be commensurate with experience.

Three letters of reference will only be solicited for finalists. All letters will be treated as confidential per University of California policy and California state law. Please refer potential referees, including when letters are provided via a third party (i.e., dossier service or career center), to the UC Berkeley statement of confidentiality ([url=https://apptrkr.com/get_redirect.php?id=1541487&targetURL=http://apo.berkeley.edu/evalltr.html" rel="nofollow]http://apo.berkeley.edu/evalltr.html) prior to submitting their letters.

To apply, please visit the following link: [url=https://apptrkr.com/1541487" rel="nofollow]https://aprecruit.berkeley.edu/JPF02148

Position will remain open until filled.

Please address inquires to Dr. David DeBoer,

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University of California, Berkeley

[url=https://apptrkr.com/get_redirect.php?id=1541487&targetURL=mailto:ddeboer@berkeley.edu" rel="nofollow]ddeboer@berkeley.edu

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rel="nofollow]http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct
Job location Berkeley, CA

Document requirements
Curriculum Vitae - Your most recently updated C.V.
List of Publications

Reference requirements

* 3 required (contact information only)

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Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

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University of California, Berkeley
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