

Kenneth W. Cavagnolo

Curriculum Vitae

Observatoire de la Côte d’Azur Boulevard de l’Observatoire B.P. 4229 F-06304, Nice CEDEX 4, France +33 (0)6 87 09 83 67	Citizenship: USA Marital Status: Married Birth-date: Jan. 27 th , 1980 kencavagnolo@gmail.com www.pa.msu.edu/people/cavagnolo/
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Education	Michigan State University Ph.D., Astronomy & Astrophysics	2005 – 2008
	Michigan State University M.S., Astronomy & Astrophysics, <i>magna cum laude</i>	2002 – 2005
	Georgia Institute of Technology B.S., Physics, <i>magna cum laude</i>	1998 – 2002
Research Experience	Opales Postdoctoral Fellow Supervisor: Chiara Ferrari, <i>Obs. Côte d’Azur</i>	2010 – Present
	UW Postdoctoral Fellow Supervisor: Brian McNamara, <i>Univ. of Waterloo</i>	2008 – 2010
	Graduate Research Assistant Supervisor: Megan Donahue, <i>Mich. St. Univ.</i>	2003 – 2008
	Graduate Research Assistant Supervisor: Jack Baldwin, <i>Mich. St. Univ.</i>	2002 – 2003
	Undergraduate Research Assistant Supervisor: James Sowell, <i>Geor. Inst. of Tech.</i>	2000 – 2002
Research Program & Interests	<p>My research program is focused on better understanding the physics of the intracluster and intra-group medium, and the role of feedback from active galactic nuclei & quasars on the formation and evolution of galaxies, galaxy groups, and galaxy clusters.</p> <p>Specific areas of interest:</p> <ul style="list-style-type: none"> • Cosmic magnetic fields • Non-thermal galaxy cluster emission • Black hole accretion physics • Relativistic jets • Cosmological studies of structure formation 	
Honors	<ul style="list-style-type: none"> • Referee for ApJ, ApJL, AJ, CanTAC, & MNRAS • Sherwood K. Haynes Award for Outstanding Graduate Student • MSU College of Natural Science Dissertation Fellow • $\Sigma\Xi$ National Scientific Research Society Member • $\Sigma\Pi\Sigma$ National Physics Honor Society Member • American Astronomical Society Member 	2008 – Present 2008 2007 – 2008 2009 – Present 2001 – Present 2002 – Present

	<ul style="list-style-type: none"> • American Physical Society Member • LOFAR Consortium Member • Perimeter Institute Black Hole Reading Group Member • Dean's List, Georgia Inst. of Tech. 	2002 – Present 2010 – Present 2009 – 2010 1998 – 2002
Scientific Skills	<ul style="list-style-type: none"> • Expert of radio and X-ray data analysis & interpretation • Extensive experience analyzing infrared, optical, UV, and gamma-ray data • Mastery of AIPS, CASA, CIAO, IRAF, OSA, and SAS analysis software • Fluent in HTML, IDL, \LaTeX, and PERL programming languages • Familiar with C, FORTRAN, MYSQL, PYTHON, SUPERMONGO, and TCL • Command of DOS, Linux, Macintosh, and Windows computing architectures • Skillful in computer maintenance, construction, and troubleshooting 	
Observing Experience	Very Long Baseline Array (VLBA) 12 hours observing IRAS 09104+4109 Giant Metrewave Radio Telescope (GMRT) 60 hours observing 15 galaxy clusters Chandra X-ray Observatory (CXO) 21 hour queued observation of IRAS 09104+4109 Very Large Array Radio Telescope (VLA) 39 hours observing 13 giant ellipticals	TBD Jan. 2010 Jan. 2009 Dec. 2008
Accepted Proposals & Grants	VLBA Cycle 10, PI Imaging the Misdirected QSO of IRAS 09104+4109 GMRT Cycle 17–19, Co-I Power and Particle Content of Extragalactic Radio Sources I–III PI: Somak Raychaudhury, <i>Univ. Birmingham</i> GMRT Cycle 17, Co-I Morphology of Steepest Spectrum Radio Sources in Galaxy Cluster Cores PI: Alastair Edge, <i>Durham Univ.</i> NOAO Cycle 2008A, 2009A/B, & 2010A, Co-I Normalization and scatter of the $M - T$ relation for supermassive galaxy clusters PI: Rachel Mandelbaum, <i>Princeton Univ.</i> GMRT Cycle 16, Co-I Content of Giant Cavities in the IGM of Galaxy Clusters PI: Somak Raychaudhury, <i>Univ. Birmingham</i> CXO Cycle 10, PI IRAS 09104+4109: An Extreme Brightest Cluster Galaxy CXO Cycle 10, Co-I Conduction and Multiphase Structure in the ICM PI: Mark Voit, <i>Mich. St. Univ.</i>	2010 2009 – 2010 2009 2008 – 2010 2008 2008 2008

	Spitzer Cycle 5, Co-I Star Formation and AGN Feedback in BCGs PI: Megan Donahue, <i>Mich. St. Univ.</i>	2008
	Spitzer Cycle 5, Co-I Infrared Properties of a Control Sample of Brightest Cluster Galaxies PI: Megan Donahue, <i>Mich. St. Univ.</i>	2008
	NSF Grant, Co-I Star Formation in the Universe's Largest Galaxies PI: Mark Voit, <i>Mich. St. Univ.</i>	2008
	CXO Cycle 9, Co-I Quantifying Cluster Temperature Substructure PI: Mark Voit, <i>Mich. St. Univ.</i>	2007
	VLA A-configuration Cycle, Co-I Radio Feedback in Clusters and Galaxies PI: Brian McNamara, <i>Univ. Waterloo</i>	2007
Students Advised	Clif Kirkpatrick, Ph.D. candidate, <i>Univ. Waterloo</i> The 2-Dimensional metal abundance distributions in galaxy clusters	2008 – 2010
	Mina Rohanizadegan, Ph.D. candidate, <i>Univ. Waterloo</i> Understanding SMBH accretion and spin	2008 – 2010
	Jason King, Undergraduate research, <i>Univ. Waterloo</i> Quantifying scatter in the $P_{\text{jet}}\text{-}P_{\text{radio}}$ relation	2010
	Brad Whuiska, Undergraduate research, <i>Univ. Waterloo</i> Finding the largest galactic cores in the <i>HST</i> archive	2009
	Rob Myers, Undergraduate research, <i>Univ. Waterloo</i> In search of galaxy cluster radio galaxies in the 400 deg ² Survey	2009
Outreach	Non-thermal Phenomena in Colliding Galaxy Clusters Conference Local Organizing Committee	2010
	International Year of Astronomy Organized observing nights, talks, and workshops in Waterloo, ON	2009
Teaching Experience	Substitute Instructor Course: "Visions of the Universe"	Fall 2006
	Honors Physics Tutor Course: "Introductory Honors Physics I & II"	Summer 2003
	Graduate Teaching Assistant Course: "Visions of the Universe"	2002 - 2003
References	Megan Donahue, donahue@pa.msu.edu Tenured faculty, Michigan State University	517-884-5618

G. Mark Voit, voit@pa.msu.edu Tenured faculty, Michigan State University	517-884-5619
Brian McNamara, mcnamara@uwaterloo.ca Tenured faculty, University of Waterloo	519-888-4567 ext. 38170
Chris Carilli, ccarilli@nrao.edu Chief Scientist, National Radio Astronomy Observatory	575-835-7306
Jack Baldwin, baldwin@pa.msu.edu Associate Chair of Astronomy, Michigan State University	517-884-5611
Mike Wise, wise@science.uva.nl Chief Scientist, LOFAR Radio Observatory	05-2159-5564
Paul Nulsen, pnulsen@cfa.harvard.edu Research Scientist, Center for Astrophysics at Harvard University	617-495-7043
Chiara Ferrari, ferrari@oca.eu Adjunct Astronomer, Observatoire de la Côte d’Azur	04-9200-3028

**Personal
Interests**

- Academic: Environmental sciences, “Cradle2Cradle” design, and urban planning.
- Athletics: Triathlons, running, baseball, and Georgia Tech athletics.
- Hobbies: Backpacking, reading, building model airplanes, and raising bonsai trees.