

Résumé of VICTOR MIGENES

Personal:

Born- August 10, 1959
Place- Brooklyn, New York (USA)
Marital Status- Married, 2 children
Languages - Fully proficient in Spanish
Nationality-United States of America and Australian

Mailing Address: (Present work)

Brigham Young University
Physics and Astronomy Department
ESC-N145
Provo, Utah 84602
USA
office telephone: +1-(801) 422-2233
office fax : +1-(801) 422-0553
email (internet): vmigenes@byu.edu

Education:

- Ph.D., Astrophysics & Astronomy, University of Pennsylvania, Philadelphia, PA. September/1982-March/1989. Thesis title: "A Three-year Study of the OH Masers in Orion-KL and its correlation with the Ammonia emission", Supervisor: Ken Johnston (Naval Research Laboratories).
- M.S., in Astronomy, University of Pennsylvania, Philadelphia, PA. May/1988.
- B.S., Physics, University of Puerto Rico, Rio Piedras, P.R., Cum Laude Honor Graduate. August/1977 to May/1981.

Awards and Honours:

- Sistema Nacional de Investigadores (Mexico): Nivel II, 2009-2012
- Sistema Nacional de Investigadores (Mexico): Nivel I, 1999-2009
- Perfil PROMEP-SEP (Secretary of Education, Mexico), 2000 - 2012
- Center of Excellence Award, Japan's Ministry of Education, Science, Sports and Culture, 1995-1997.
- Fontaine Fellow, University of Pennsylvania, 1982-1984.

- Ella Nichols Pawling Fellow, University of Pennsylvania, 1982-1985.

Skills and Qualifications:

Project Management	Conflict Management
Organization	Critical Decision
Public Speaking	Technical Writing
Windows:MS-Office (Word, PowerPoint, Excel)	Unix/Linux: OpenOffice
Instruction and Training	Teamwork
Problem Solving	Negotiation
Mathematics & Statistics	Programming: Fortran & Python
Student Recruitment	MathLab

Professional Experience:

- Jan/2015 to Present, Adjunct Professor, Brigham Young University, Department of Physics and Astronomy.
- Jan/2009 to Dec/2014, Full Professor, Brigham Young University, Department of Physics and Astronomy. (\$118000.0 dollars/year)
- Aug/2014 to present, Adjunct Professor, Utah Valley University, Department of Physics.
- Aug/2014 to present, Adjunct Professor, Salt Lake Community College, Department of Physics.
- Member of the NASA-ADAP Star and Exoplanetary System Formation Panel, Evaluating research grants for 2013, 2014, August/2013-2014
- Member of the Executive-UCTF, since 2012. Task Force organized by AAPT, APS and AAS to review the undergraduate curriculum and propose a more modern program
- Committee on Diversity in Physics, AAPT, since 2010 (previously Committee on Minorities in Physics)
- Member of Consejo Nacional de Ciencias y Tecnologia (CONACyT) Panel Evaluating Graduate Programs in Astronomy for accreditation, Apr/2013.
- Member of P & A Department's Graduate Committee (Recruiting Coordinator), Apr/2009 - Aug/2014.
- Member of BYU's Undergraduate Admission Committee, Sep/2009 - Feb/2014.
- Nov/1997 to Dec/2010, Professor Titular "A" (Tenured Full Professor).
- Apr/2004 to Dec/2008, Director of the Department of Astronomy of the University of Guanajuato.

- Jan/2007 to Dec/2009, Director of the Center for Atmospheric Science of the University of Guanajuato.
- Aug/2004 to May/2006, Chairman of the Graduate Program in Astronomy (Recruiting Coordinator)
- Aug/2002 to May/2004, Member of the Rank and Status Committee
- Aug/1995 to Sept/1997, PDRA at National Astronomical Observatory of Japan. Joined the scientific team of the VSOP Project for Space-VLBI. My duties were not only on continuing research supporting the project but also to help train the staff in the calibration and imaging of VLBI data.
- Oct/1996 to Feb/1997, Lectureship. Tokyo University of Agriculture and Technology, Tokyo, Japan. Teaching how to organize and prepare scientific research/results for oral and written presentation.
- Jul/1992 to Aug/1995, PDRA at CSIRO-ATNF. Liaison between the VLBI operations with the DSN stations and the Australian Telescope. Organize and supervise VLBI observations with the VLBI and world array. Supervise and run the cm and mm Radio-spectroscopy program with the DSN 70m antenna.
- Apr/1989 to Jun/1992, PDRA at Jodrell Bank/N.R.A.L. Worked on calibration and reduction of MERLIN Spectral Line data for visiting observers, and as the VLBI Friend to operate the station during the observing sessions. I prepared calibration data for the observers, helped in the preparation of observing files and help staff members processing data.
- Oct/1988 to Mar/1989, Researcher. Universities Space Research Associates, Washington DC. Working at the Naval Research Laboratories analyzing molecular-interferometric radio observations of star forming regions. **Held Government Secret Security Clearance from Jan/1985 to Jan/1989.**
- Oct/1985 to Oct/1986, Astronomer. Sachs/Freeman Associates, Inc., Landover, MD. Working at the Naval Research Laboratories preparing observations and performing data reduction of Interferometric radio observations of Maser emission in star forming regions. **Held Government Secret Security Clearance from Jan/1985 to Jan/1989.**
- -Sep/1986 to Aug/1988, Lectureship in Astronomy. University of Pennsylvania, Department of Astronomy, Philadelphia. PA. Taught various introductory and intermediate level courses in Astronomy and Astrophysics.
- Sep/1984 to Aug/1988, Lectureship in Physics and Astronomy. Philadelphia Community College, Department of Mathematics & Engineering, Phila., PA. Taught various introductory and intermediate level courses in Physics, Astronomy and Mathematics.

- Jun/1986 to Aug/1986, Lectureship in Physics. Spring Garden College, Department of Science & Engineering, PA. Taught intermediate level courses in Physics and Astronomy.

Successful Grants (most recent):

- CONACyT PDRA-Fellowship for Mexican Young Researcher #250356 : US\$50,000.0, 2015-2017
- Western Alliance to Expand Student opportunities - US\$2,378.0, 2014
- Graduate Studies, Brigham Young University - US\$90,000.0 for 3 years to support a graduate student, 2012
- Western Alliance to Expand Student opportunities - US\$2,256.0, 2012
- Western Alliance to Expand Student opportunities - US\$10,630.0, 2011
- Federal Government Grant - Ecology Institute of Gto, US\$170,000.0, 2010
- Guanajuato State Government Funding, US\$350,000.0, 2008-2010

Statement of Teaching and Outreach Interests:

I find the excitement of the discovery of new knowledge through observation to be very motivating and exhilarating. I try to capture this feeling and use it to convey enthusiasm for the scientific process the university classroom, my research students and in outreach to the community. Students learn best when they are active participants, and my goal is to engage students, no matter what their level.

Since joining the University of Guanajuato's Astronomy Department I have been involved in the design and implementation of four programs of higher learning:

- The Diplomado. This 100 hr course was intended to better prepare Jr. High and High School science teachers for teaching science by updating their knowledge in physics and astronomy.
- The Bachelor in Science program. In 1998 we started the first BSc in Physics offering an astrophysics line of study and undergraduate research, in Mexico.
- The Graduate program. In 2004 we designed and developed what is the 3rd graduate program in Astronomy and Astrophysics in the country. This program offers the research possibilities to work in astrochemistry, astrobiology or simulations and modeling, by combining efforts with the Chemistry, Biology or Mathematics/Physics departments, respectively.

- Graduate Foundation Course. We designed this special course to cover the areas of mathematics, physics and astronomy in order to provide the background knowledge necessary for the first year graduate courses. The undergraduate studies in Mexico vary much in coverage and depth from University program to program and this foundation course “homogenizes” the students with respect to the undergraduate knowledge required in our program.

Supervision of thesis projects & Mentoring of PDRAs (most recent):

(date refers to completion of project)

- Postdoctoral Research Assistant: 1**
- Doctoral Dissertations: 7**
- Master in Science Thesis: 7**
- Bachelor in Science Senior Thesis: 9**

- 2017, Brigham Young University, Juan L. Verbena, ”Modeling of the Mass-loss process in OH/IR Stars”, PDRA.
- 2017, Brigham Young University, Brandon Wiggins, ”Maser emission and the ISM of merging galaxies”, PhD. (in process)
- 2016, Brigham Young University, Derek Felli, ”Maser emission and mass-loss processes in C-rich late-type stars”, PhD. (in process)
- 2015, Brigham Young University, Adam Johanson, ”Radio Emission Toward Regions of Massive Star Formation in the Large Magellanic Cloud”, PhD.
- 2014, Brigham Young University, Charles Honick, ”Single Dish Radio Astronomy at BYU: Reaching first Light”, BSc.
- 2014, Brigham Young University, Daniel Blakley, ”Development of a Radio Astronomy System at BYU”, MSc.
- 2013, Brigham Young University, Drake Ranquist, ”Classification of galaxies in the Clowes-Campusano large Quasar group”, BSc.
- 2012, Brigham Young University, Stephen Clouse, ”H₂O Megamasers: Measuring the Mass of the black hole in the active nucleus of Markarian 1210”, BSc.
- 2012, Brigham Young University, Blake Stauffer, ”OH MASER Emission form OH/IR Stars”, BSc.
- 2012, University of Guanajuato, Alma Ruiz, ”Infrared and Radio Study of the Mass-loss processes in Oxygen-rich Late-type Stars: Models and Observations”, PhD.

Affiliations:

- American Astronomical Society

- International Astronomical Union
- Astronomical Society of Australia
- American Association of Physics Teachers

References:

- Dr. Moody J. Ward: Brigham Young University
Department of Physics & Astronomy
ESC-484
Provo, Utah. 84602
USA
fax: +1 (801) 422-0553
email: jmoody@physics.byu.edu

- Dr. Robert C. Davis: Brigham Young University
Department of Physics & Astronomy
ESC-215
Provo, Utah. 84602
USA
fax: +1 (801) 422-0553
email: davis@byu.edu

- Dr. Roger Coziol: University of Guanajuato
Department of Astronomy
Apdo. Postal 144
Guanajuato, CP36000
GTO., MEXICO.
fax: +52-(473) 732-0253
email: rcoziol@astro.ugto.mx

- Dr. Klaus Peter Schröder: University of Guanajuato
Department of Astronomy
Apdo. Postal 144
Guanajuato, CP36000
GTO., MEXICO.
fax: +52-(473) 732-0253
email: kps@astro.ugto.mx

- Dr. Shinji Horiuchi: Canberra Deep Space Communication Complex
CSIRO
PO Box 1035, Tuggeranong
ACT 2901. Australia
fax: +61 2 6201-7845
email: shoriuchi@cdscc.nasa.gov

Statement of Research:

As a radio astronomer I am very interested in the areas of Star Formation, Inter Stellar Medium, Stellar Evolution and Late-type Stars, Galaxy Evolution and MASER physics. MASERs have proven to be powerful probes to study the kinematical and dynamical conditions in: star forming regions (protostellar disks), late-type stars, supernova remnants, the central regions of exotic galaxies and even comets. I am also interested in other molecular emission like NH_3 , CS and CCS to study the dense and clumpy medium in which protostars form. Finally, I also collaborate in high resolution studies of the radio emission in radio stars. I have extensive experience in interferometry, data reduction, analysis and mapping with instruments like the VLA, MERLIN, EVN, VLBA, DSN, APT and ATCA.

Publications (most recent):

- Publications in International and Refereed journals: > 70
- Proceedings from National and International Conferences: > 100
- Citation Index No.: > 1700
- Referee for National or International Journals: 8
- Referee for International or National Grants Programs: 70
- h-index: 20

- Wiggins, B.K., Migenes, V. & Smidt, J., 2015, "Assessing the Hydroxyl-Water Vapor Megamaser Connection. I. Water Emission Toward OH Megamaser Hosts". ApJ. (submitted)
- Migenes V, Slysh, V.I, Ruiz-Velasco, A., Val'tts, I. & Alakoz, V.A., 2015, "VLBA survey of OH masers in star forming regions: image broadening". ApJ. (submitted)
- Johanson, A.K. and Migenes, V., 2015 "Massive Young Stellar Objects with UCHII Regions in the Large Magellanic Cloud", ApJ., (in preparation)
- Felli, D., Migenes, V., & Ruiz-Velasco, A., 2015, "The Detection of OH-MASER Satellite lines in High-mass Star Forming Regions", ApJ., (in preparation)
- Migenes, V., Masson, C.R., and Johnston, K.J., 2015, "The OH Maser Emission in Orion-KL: Epochs 1986 and 1987", Ap.J., (in preparation)
- Wiggins, B.K., Smidt, J., Whalen, D.J., Wesley, E., Migenes, V. & Fryer, C.L., 2014 "Assessing the Observability of PoP III Hypernovae and Pair-Instability Supernovae", Utah Academy of Sciences, Arts and Letters, (accepted)
- Rodríguez-Esnard, T., Migenes, V., & Trinidad, M.A., 2014, "Accretion disks in the IRAS 23151+5912 Region", ApJ. 788, 176
- Johanson, A.K., Migenes, V., and Breen, S. 2014, "Detection of Water Masers toward YSO Candidates in the LMC", ApJ. 781, 78
- Dickey, J.M., et al., 2013, "GASKAP - The Galactic ASKAP Survey", PASA, 30, 3

- Rodríguez-Esnard, T., Trinidad, M.A., & Migenes, V., 2012, "Observational Study of the Continuum and MASER Emission of the IRAS Region 19217+1651", ApJ. 761, 158

Conferences & Proceedings (most recent):

- Organization of the National Astronomy Congress in Mexico, April 2005.
- Organization of the IAU Symp 206 "Cosmic MASERS: from protostars to blackholes", in Brazil, March 2002.
- Member of the Local Organizing Committee of "Mapping the Hidden Universe", February 2000, in Guanajuato Mexico.
- Member of the Local Organizing Committee of the Mexican School for Astrophysics, August 1999, Guanajuato.
- Member of the Local Organizing Committee of the XIII Annual Mexican Astronomy Conference, November 1999.
- Member of the Local Organizing Committee of IAU Symp 193 "Wolf-Rayet Phenomena in Massive Stars and Starburst Galaxies", November 1998.
- Member of the Local Organizing Committee of ASPCS 163 "Star Formation in Early-type Galaxies", June 1998.
- Organization of the workshop "Space-VLBI data reduction with AIPS", National Astronomical Observatory, Japan, March 1997.
- Over 250 Public Outreach talks in High Schools, Secondary schools and general public from 1998 to present.
 - Felli, D. and Migenes, V., 2014, "Morphology of Circumstellar Shells Around OH/IR stars", 4C-APS Regional Meeting, Utah Valley University, UT
 - Johanson, A.K. and Migenes, V., 2014, "Radio Emission Toward Regions of Massive Star Formation in the LMC", 4C-APS Regional Meeting, Utah Valley University, UT
 - Wiggins, B.K. and Migenes, V., 2014, "The H₂O and OH Megamaser Connection", 4C-APS Regional Meeting, Utah Valley University, UT
 - Rodríguez, T., Migenes, V. and Trinidad, M.A., 2014, "A study of the water vapor maser emission in the high-mass star forming region IRAS23151+5912", in Proceedings of XIII Symposium and XI Congress of the Cuban Physical Society in Havana Cuba
 - Migenes, V., Rodríguez, T., Trinidad, M.A., 2014, "An accretion disk in the high-mass star forming region IRAS 23151+5912", in Proceedings of 223rd AAS Meeting in Wash DC
 - Johanson, A. and Migenes, V., 2014, "Detection of MASERs toward Young

Stellar Objects in the LMC”, in Proceedings of 223rd AAS Meeting in Wash DC

- Felli, D. and Migenes, V., 2014, ”The morphology and uniformity of circumstellar OH and H₂O Maser shells surrounding OH/IR stars”, in Proceedings of 223rd AAS Meeting in Wash DC

- Honick, C. and Migenes, V., 2014, ”The advancement of radio astronomy at BYU”, in Proceedings of 223rd AAS Meeting in Wash DC

- Wiggins, B., Whalen, D. and Migenes, V., 2014, ”Finding the cosmic explosions: hypernovae and pair-instability supernovae”, in Proceedings of 223rd AAS Meeting in Wash DC

- Johanson, A. and Migenes, V., 2013, ”A Search for Water Masers Toward Massive YSOs in the LMC”, in Proceedings American Physical Society - 4Corners meeting, Denver, CO

- Migenes, V., Rodríguez, T., Trinidad, M.A., 2012, ”The High-mass Star Formation Regions IRAS 19217+1651 and IRAS 23151+5912”, in Proceedings of IAU Symposium 287 - Cosmic Masers: from OH to H₀, Stellenbosch, South Africa. Eds. R. Booth