CURRICULUM VITAE

NAME: Victor D. Obot
TITLE: Professor of Mathematics (Tenured)
College of Science and Technology
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EDUCATION:

Ph. D. Geophysics 1987. University of Tulsa, Tulsa, Oklahoma.
M. Sc. Physics 1978. Wright State University. Dayton, Ohio.
B. Sc. Physics 1975. Eastern Mennonite University. Harrisonburg, Virginia.

PROFESSIONAL EXPERIENCE:

Professor of Mathematics, Texas Southern University, Houston, Texas. 2004 to present.
Associate Dean, College of Science and Technology, Texas Southern University, Houston, Texas. 2008 to 2009
Interim Assistant Dean, College of Science and Technology, Texas Southern University, Houston, Texas. 2002 to 2008.
Associate Professor of Mathematics, Texas Southern University, Houston, Texas. 1997 to 2004
Assistant Professor of Mathematics, Texas Southern University, Houston, Texas. 1989 to 1997
Assistant Professor of Technology, Texas Southern University, Houston, Texas. 1986 to 1989.
Research Geophysicist, Digicon Geophysical Company, Houston, Texas. 1984 to 1986
Instructor in Physics, University of Tulsa, Tulsa, Oklahoma. 1979 to 1984

PUBLICATIONS:

Ravi-Persad Sawh, Roy Weinstein, Drew Parks, **Victor Obot**, "Nanometer Cerium: A significant improvement over platinum in bulk YBCO superconductor," IEEE Trans. Applied Superconductivity, Vol. 19, No. 3 (2009) 2941 – 2944

Ravi-Persad Sawh, Roy Weinstein, Drew Parks, **Victor Obot,** Alberto Gandini, "Sub-micron non-superconducting deposits that fail to act as pinning centers in textured YBCO superconductor," IEEE Transactions on Applied Superconductivity, Vol. 17, No. 2 (2007) 3705-3708

Ravi-Persad Sawh, Roy Weinstein, **Victor Obot**, Drew Parks. Alberto Gandini, Harley Skorpenske, "Self-assembling nano-diameter needlelike pinning centers in YBCO, utilizing a foreign element dopant," J. of Physics Conference Series 43(2006) 239 – 242.

Pamela Denkins, Gautham Badhwar, **Victor Obot**, Bobby Wilson, Olufisayo Jejelowo, "Radiation transport modeling and assessment to better predict radiation exposure, dose, and toxicological effects to human organs on long duration space flights," Acta Astronautica, Vol. 49, No. 3-10 (2001) 313-319

R. Weinstein, R. P. Sawh, J. Liu, D. Parks, **V. Obot**, and C. Foster, "Threshold for creation of ionization pinning centers in YBCO by heavy ions," Physica C: 357-360 (2001) 743-746

R. Sawh, R. Weinstein, Y. Ren, **V. Obot**, and H. Weber, "Uranium fission fragment pinning centers in melt-textured YBCO,"" Physica C: 341-348(2000) 2441-2442.

R. Weinstein, Y. Ren, J. Liu, R. Sawh, D. Parks, C. Foster, and **V. Obot**, "Permanent high field magnets of high temperature superconductor" in High Magnetic Fields: Applications. Generation. Materials., Hans J. Schneider-Muntau, ed. (World Scientific Press, Singapore, 1997). P. 99

R. Weinstein, J. Liu, Y. Ren, R. Sawh, D. Parks, C. Foster, and **V. Obot**, "Very high trapped fields: cracking, creep, and pinning centers" in Proc. 10th. Anniv. HTS workshop on physics, materials and applications., B. Batlog, et. al., eds. (World Scientific Press, Singapore, 1996) P.625

R. Weinstein, D. Parks, R. Sawh, **V. Obot**, J. Liu and G. D. Arndt, "Magnetic bumper-tether system using zero field cooled Y123," in Proc. 3rd. International Symposium on Magnetic Suspension Technology, NASA Conference Publication 3336, Part 1, N. J. Groom and C. P. Britcher, eds. (Washington D. C: NASA, 1996) P. 207

V. Obot, R. Weinstein, Y. Ren, J. Liu, R. Sawh and G. Johnson, "Development and Fabrication of High T_c Trapped Field Magnets" Jour. National Tech. Assoc., 69(3) 17, (1995)

J. Liu, R. Weinstein, Y. Ren, R. Sawh, C. Foster and **V. Obot,** "Very high field quasi-permanent HTS magnet with low creep" Proc. 1995 International Workshop on Superconductivity, Maui, Hawaii, USA (World Scientific Press, Singapore, 1995) P. 353

R. Weinstein, Y. Ren, J. Liu, **V. Obot,** R. Sawh, and C. Foster, "Progress in Jc pinning and grain size for trapped field magnets", Adv. in Superconductivity VI., T. Fugita and Y. Shiohara, eds. (Springer-Verlag, 1994) P. 855

R. Weinstein, Y. Ren, J. Liu, **V. Obot,** R. Sawh, C. Foster, and A. Crapo, "Effects of high energy irradiation of MT Y123 on Jc, trapped field, creep, and the irreversibility line", Proc. International Workshop on Superconductivity, Kyoto, Japan. 1994

Y. Ren, J.Liu, R. Weinstein, **V. Obot,** and C. Foster, "Quasi permanent superconducting magnet of very high field", J. Appl. Phys. 74(1), 718, (1993)

R. Weinstein, I. Chen, J. Liu, **V. Obot,** J. Xu, and C. Foster, "Permanent magnets of high Tc superconductors", J. Appl. Phys. 73(10), 6533, (1993)

R. Weinstein, I. Chen, J. Liu, **V. Obot,** Y. Ren, and J. Wu, "Materials, characterization and applications for high Tc superconducting permanent magnets" Proc. 3rd. World Congress on Superconductivity, Munich, Germany., K. Krishen and C. G. Burnham, eds. (Pergamon Press, N.Y. 1992) P1145

PRESENTATIONS, WORKSHOPS AND OTHER PUBLICATIONS:

B. Wilson, V. Obot, and W. E. Taylor, (2009), **"**A Model for Improving Graduation and Retention Rates for STEM Students at an HBCU" in Models for Success, 3rd Edition (Published by TMCF 2009)

"An Anecdotal Model for Recruitment and Retention of Underrepresented Students into Undergraduate Science and Engineering Programs" Presented at Lunar and Planetary Institute Workshop on Education/Public Outreach Workshop for Scientists. Houston, Texas. March 10, 2002

"A Minority Student Ambassador Program: Innovative Methods for Interactive Science Programs to Urban Area Underrepresented Groups and Minorities" Poster Presentation at 2nd Astrobiology Science Conference, NASA AMES Research Center – April 7 – 11, 2002 (With P. Morris , et. al.)

"TSU Superconductivity Series" A HU-LINC Workshop on Algebra –Integrated Physics and Chemistry with Applications to Space Science for HISD Teachers. June 18 – 29, 2001: June 2 – 14, 2002: June 9 – 20, 2003. (Texas Southern University Campus). Houston, Texas.

Obot, V., Brown, B., Wu, T., Wunsch, G., Miles, A., Morris, P., Lindstrom, M.; Allen, J. 2002. An algebra-integrated physics and chemistry workshop for teachers as a model for increasing the number of minority students in science and engineering. The World Space Congress, October 10-19, 2002, Houston, TX. (COSPAR) Special Session 1-0045-02.

P. A. Morris, O. Garza, M. Lindstrom, J. Allen, J. Wooten, C. Sumners, V. Obot. 2002. An Urban Area Outreach Program For K-5 Children in the Space Sciences. The World Space Congress, October 10-19, 2002, Houston, TX. (COSPAR)Special Session 1-0039-02

Morris, P. A., Lindstrom, M., Obot, V., Sumners, C. 2002. A minority outreach program in an urban area. p. 40 NASA Office of Space Science Education and Public Outreach Conference, June 12-14, Chicago, Illinois.

Ravi-Persad Sawh, **Victor Obot,** Roy Weinstein, Drew Parks, Alberto Gandini, "The Puzzle of Two Different Uranium- Rich Deposits in Textured Y- Ba- Cu- O: One Acts as Pinning Centers and the Other Does Not." Proc. American Physical Society Meeting, March 3 – 7, 2003. Austin, Texas.

P. Smith, M. Lindstrom, J. Allen, C. Sumners, **V. Obot,** and J. Wooten, "An Urban Minority Outreach Program in Space Science: A Collaborative Effort Between NASA/JSC, University of Houston Downtown, Texas Southern University and Houston Museum of Natural Science" Lunar and Planetary Science XXXIII (2002). 1363.

V. Obot and B. Wilson, "NASA Related Research and Outreach Programs at Texas Southern University" Poster Session, Chicago 2004 – A NASA Space Science Missions and Research Workshop. Chicago, ILL. June 28 – 29, 2004.

V. Obot, P. Reiff, P. Morris, and M. Humphrey, (2004) "Mathematical modeling: An integrated algebra, physics and chemistry workshop for teachers as a tool for recruiting science, technology and mathematics students", Eos. Trans. AGU, 84 (47) Fall Meeting Suppl., Abstract ED21C – 0079

P. Morris, A. Garcia, **V. Obot**, J. Allen, P. Reiff, C. Sumners, J. Garcia, and O. Garza, (2004), "A new approach to reach Latino populations in rural and urban settings", Eos. Trans. AGU, 85 (47), Fall Meeting Suppl., Abstract ED43C – 02

P. Morris, J. Allen, C. Galindo, G. McKay, **V. Obot,** P. Reiff, S. Shipp, C. Sumners, (2005) "Forging Successful Partnerships: Improving Collaborative Efforts Between Scientists and Science Education Professionals", Eos Trans. AGU 86(18), Jt. Assem. Suppl., Abstract ED12A - 01

GRANTS:

"Radiation Interuniversity Science and Engineering Program" $75,000. National Aeronautics and Space Administration (NASA). (6/1/2007 – 5/31/2008).

"Science and Technology Enhancement Program (STEP)". $2,500,000. National Science Foundation (NSF) (9/1/2006 – 8/31/2011) Co-PI with Bobby Wilson as PI.

"Radiation Interuniversity Science and Engineering Program" $37,500. National Aeronautics and Space Administration (NASA). (6/1/2006 – 5/31/2007).

"An Educational and Research Outreach Program in Space Science: A Collaborative Effort to Reach Underrepresented Groups" $216,381. NASA (2004 – 2006)

"Achievement of benefits from nanometer size chemical pinning centers in high Tc superconductors" $28,000. ARPATP- Texas Coordinating Board (2004 –2005)

"Magnetic separation of erythrocytes from human blood." $23,809. TSU seed grant (2002).

An urban outreach program in space science: A collaborative effort between NASA, Hispanic serving & HBCU's, and school age minority students" $189,750. NASA (2001 – 2003) (Sub-Contract from University of Houston, Downtown).

"A magnetic bumper/tether system using high temperature superconducting trapped field magnets" $87,300. ATP-Texas Coordinating Board (1997 – 1999)

"A new class of high field, large area permanent superconducting dipole magnets" $55,400. ATP-Texas Coordinating Board (1997 – 1999)

"R and D on detector systems and accelerators." $40,000 TNRLC (1993)

"R and D on Accelerators" $19,000. TNRLC (1992)

"R and D on detector systems and accelerators" $37,500 TNRLC (1991)

Collaborators and Other Affiliations

1. University of Houston, Beam Particle Dynamics Group (R. Weinstein)
2. University of Houston – Downtown, NASA Urban Space Science Program (P. Smith)
3. Louisiana State University, GAEMP Program (Ray Ferrel)

THESIS AND DISSERTATIONS DIRECTED:

"A Study of a possible magnetite biosignature in Martian meteorite ALH84001: Implications for the biological toxicology of Mars" Kathie Thomas-Keprta. Ph.D. Environmental Toxicology 2007

"A complex variables technique for approximating the derivatives of real-valued functions" Beverly M. Brown, M. Sc. Mathematics 2002.

"Radiation transport modeling and assessment to better predict radiation exposure, dose, and toxicological effects to human organs on long duration space flights" Pamela S. Denkins. Ph. D. Environmental Toxicology 2001.

"An evaluation of the Laplace Transform " Khaled El- Loubani, M. Sc. Mathematics 2000

"A mathematical model of the Meissner Effect in Superconductivity" George H. Johnson, III. M. Sc. Mathematics 1996

"Least squares method and its application to the critical current density in high Tc superconducting Y123 sample" Jixue Liu, M. Sc. Mathematics 1994

"The numerical solutions of integral equations in superconduction experiments" Jianqing Wu, M. Sc. Mathematics 1993

COMMITTEES:

Chair, Curriculum Committee, College of Science and Technology 2010 to present

Member, University Curriculum Committee, 2007 - 2009

Chair, Research Committee, College of Science and Technology 2001 – 2007

Member, Graduate Council, 1999 –2003

Member, University Faculty Development Committee. 1999 – present

Chair, Graduate Studies Committee, Department of Mathematics. 2003 – 2006.

PROFESSIONAL MEMBERSHIPS:

Sigma Xi – The Scientific Research Society.
Sigma Pi Sigma – Physics Honorary Society
Mathematical Association of America
SIAM: Society of Industrial and Applied Mathematicians