

Vanderlei C. Oliveira Jr.

Associate Professor of Geophysics

 [Observatório Nacional, Rio de Janeiro, RJ, Brazil](#)

 vanderlei@on.br

 vandscoelho@gmail.com

 pinga-lab.org/people/oliveira-jr

 orcid.org/0000-0002-6338-4086



OVERVIEW

Associate Professor at the geophysics department of Observatório Nacional, Brazil. Specialist in developing numerical methods for processing and interpreting potential fields (gravity and magnetic).

APPOINTMENTS

Associate Professor of Geophysics

2017–

Observatório Nacional, Rio de Janeiro, Brazil

Assistant Professor of Geophysics

2013–2016

Observatório Nacional, Rio de Janeiro, Brazil

RESEARCH INTERESTS

- **Equivalent layer technique:** computationally efficient methods for processing and interpreting large potential field data sets
- **Inversion of gravity and/or magnetic data:** methods to invert gravity and/or magnetic data for the purpose of estimating the position and shape of geological bodies
- **Magnetization of geological bodies:** methods for estimating the magnetization direction of geological bodies by using land and airborne magnetic data
- **Magnetization of rock samples:** methods for estimating the magnetization distribution within rock samples by using scanning magnetic microscopy data
- **Magnetic modelling of geological bodies:** methods for computing the demagnetizing field within geological bodies having high susceptibility
- **Regional characterization of gravity field:** computationally efficient methods for combining different data sets
- **Regional characterization of the crustal magnetic field:** computationally efficient methods for combining different data sets

EDUCATION

PhD Geophysics

Dec/2010 – Jan/2013

Observatório Nacional, Brazil

Title (portuguese): “Processamento e inversão de dados de campos potenciais: Novas abordagens”

Title (english): “Processing and inversion of potential field data: New approaches”

Advisor: Dr. Valeria C. F. Barbosa

Description: This work presents two new methodologies for processing and interpreting potential field data. The first one is the Polynomial Equivalent Layer, which is a cost-effective method for processing large potential-field data sets via the equivalent-layer technique. The second is a non-linear method for inverting gravity-gradient data to estimate the shape of isolated 3-D geological bodies.

MSc Geophysics

Mar/2009 – Nov/2010

Observatório Nacional, Brazil

Title (portuguese): “Inversão gravimétrica radial por camadas para a reconstrução de corpos geológicos 3D”

Title (english): “Radial gravity inversion by layers for retrieving 3D geological bodies”

Advisor: Dr. Valeria C. F. Barbosa

Description: This work presents a gravity-inversion method for estimating the geometry of a 3D source. The subsurface region containing the geologic source is discretized into an ensemble of vertically juxtaposed prisms. By estimating the coordinates of the horizontal section of each prism, the method retrieves a set of polygonal horizontal sections representing depth slices of the 3D gravity source.

BSc Geophysics

Mar/2004 – Dec/2008

University of São Paulo, Brazil

Title (portuguese): “Modelagem gravimétrica 3D da borda norte da Bacia do Paraná”

Title (english): “3D gravity modelling of the northern border of the Paraná basin”

Advisor: Dr. Yara R. Marangoni

Description: This work presents a geological model of the northern border of the Paraná basin obtained from gravity data.

PEER-REVIEWED JOURNAL PAPERS (ORCID)

- [1] Siqueira, F. C. L., Oliveira Jr., V. C., and Barbosa, V. C. F. Fast iterative equivalent-layer technique for gravity data processing: A method grounded on excess mass constraint. *GEOPHYSICS*, 82(4):G57–G69, 2017. doi:10.1190/geo2016-0332.1.
- [2] Takahashi, D. and Oliveira Jr., V. C. Ellipsoids (v1.0): 3-D magnetic modelling of ellipsoidal bodies. *Geoscientific Model Development*, 10(9):3591–3608, 2017. ISSN 1991-9603. doi:10.5194/gmd-10-3591-2017.
- [3] Reis, A. L. A., Oliveira, V. C., Yokoyama, E., Bruno, A. C., and Pereira, J. M. B. Estimating the magnetization distribution within rectangular rock samples. *Geochemistry, Geophysics, Geosystems*, 17(8):3350–3374, 2016. ISSN 15252027. doi:10.1002/2016GC006329.
- [4] Oliveira Jr, V., Sales, D., Barbosa, V., and Uieda, L. Estimation of the total magnetization direction of approximately spherical bodies. *Nonlinear Processes in Geophysics*, 22(2):215–232, 2015. doi:10.5194/npg-22-215-2015.
- [5] Uieda, L., Oliveira Jr., V. C., and Barbosa, V. C. F. Geophysical tutorial: Euler deconvolution of potential-field data. *The Leading Edge*, 33(4):448–450, 2014. ISSN 1070-485X, 1938-3789. doi:10.1190/tle33040448.1.
- [6] Melo, F. F., Barbosa, V. C. F., Uieda, L., Oliveira Jr., V. C., and Silva, J. B. C. Estimating the nature and the horizontal and vertical positions of 3d magnetic sources using Euler deconvolution. *GEOPHYSICS*, 78(6):J87–J98, 2013. ISSN 0016-8033, 1942-2156. doi:10.1190/geo2012-0515.1.
- [7] Oliveira Jr., V. C. and Barbosa, V. C. 3-D radial gravity gradient inversion. *Geophysical Journal International*, 195(2):883–902, 2013. ISSN 1365-246X, 0956-540X. doi:10.1093/gji/ggt307.
- [8] Oliveira Jr., V. C., Barbosa, V. C. F., and Uieda, L. Polynomial equivalent layer. *GEOPHYSICS*, 78(1):G1–G13, 2013. doi:10.1190/geo2012-0196.1.
- [9] Oliveira Jr., V. C., Barbosa, V. C. F., and Silva, J. B. C. Source geometry estimation using the mass excess criterion to constrain 3-D radial inversion of gravity data. *Geophysical Journal International*, 187(2):754–772, 2011. ISSN 0956540X. doi:10.1111/j.1365-246X.2011.05172.x.

FEDERAL FUNDING [≈\$4M/10yr]

- National Science Foundation (NSF), “[Harmonic detection of the Majorana fermion in narrow bandgap InAsSb](#)”, \$120,000 (PI, 6/14 - 5/15).
- Office of Naval Research (ONR), “Spin-polarized electron transport in intrinsic and extrinsic group-IV semiconductors”, \$363,726 (PI, 05/14 - 4/17).
- NSF, “[Scalable Digital Spin Logic Devices](#)”, \$360,000 (PI, 10/2012 - 9/15).
- Defense Threat Reduction Agency/ U. Michigan, “Spin-Polarized Silicon Photonic and Electronic Interconnects”, \$650,000 (co-PI, 11/12 - 10/17).
- ONR, “Spins in Silicon: Reduced Dimensions and Novel Material Applications”, \$261,472 (PI, 02/11 - 12/13).

- ONR, “Future Spintronics for Today’s Electronics”, \$484,370 (PI, 6/08 - 5/11).
- NSF, “[CAREER: Silicon Spintronics](#)”, \$400,000 (PI, 6/08 - 5/14).
- ONR, “[Elements of Silicon-based Spintronic Circuits](#)”, \$248,652 (PI, 10/07 - 9/10).
- DARPA, “Silicon Spintronics for Quantum Computation”, \$230,000 (PI, 7/07 - 1/09).
- Department of Energy, “[Imaging of Buried Nanoscale Luminescent Layers](#)”, \$478,433 (PI, 8/07 - 7/10).
- ONR, “[All-Electrical Spin Detection in III-V Semiconductors](#)”, \$149,557 (PI, 1/06 - 12/06).
- DARPA, “Electron Spin Detection for Silicon Spintronics”, \$100,000 (PI, 5/06 - 4/07).
- NSF, “[Tunneling Spectroscopy for Nanofabricated Biochemical Sensors](#)”, \$240,001 (co-PI, 6/06 - 5/09).

INVITED TALKS AT INTERNATIONAL CONFERENCES

38. Nano-Spin Conversion Workshop, RIKEN Tokyo, 10/16 (declined)
37. APS March meeting, Baltimore, 3/16
36. APS Mid Atlantic Section Meeting, Morgantown, WV, 10/15
35. MMM-2014, Honolulu, 11/14 (by postdoc Pengke Li)
34. 2014 Joint International 226th Electrochemical Society, Cancun, 10/14 (declined)
33. APS March Meeting, Denver, 3/6/14 (by postdoc Pengke Li)
32. American Physical Society March Meeting “Spintronics” Tutorial, Denver, 3/2/14
31. Fund. & Applications of Semiconductor Spin Engineering, Osaka, 12/13 (declined)
30. Spintronics V Symposium of the SPIE, San Diego, 8/12/12 (declined)
29. CMOS Emerging Technologies Conference, Vancouver, 7/18/12 (declined)
28. 38th Special Session for Spintronics, Magnetics Society of Japan, Osaka, 1/20/12
27. American Physical Society March Meeting, Dallas, 3/21/11
26. 6th Int’l Conf. on Physics and Applications of Spin-Related Phenomena in Semiconductors, Tokyo, 8/1/10
25. 30th Int’l Conference on the Physics of Semiconductors, Seoul, 7/26/10
24. Int’l Conf. on Core Res. and Eng. Science of Adv. Mat., Osaka, 5/30-6/4/10
23. Int’l Conference on Solid State Devices and Materials, Sendai, 10/9/09
22. IMR Workshop on Group IV Spintronics, Tohoku U., Sendai, 10/5/09
21. ATI Spintronics Discussion Meeting, Tokyo, Japan, 10/3/09

20. [“The Spin on Electronics” Discussion Meeting](#), Royal Society, London, 9/28/09
19. SPIE Optics+Photonics 2009, San Diego, 08/2/09
18. Jaszowiec 2009, Krynica, Poland, 6/26/09
17. Spin-Up 2009, Longyearbyen, Svalbard Norway, 5/31/09
16. New Frontiers in Spintronics, Institute for Advanced Studies, Jerusalem, 5/12/09
15. Spin Currents 2009, Stanford Sierra Conf. Center, 4/18/09
14. Materials Research Society Spring Meeting, San Francisco, 4/15/09
13. 10th Int’l Conference on Ultimate Integration of Silicon, Aachen, 3/18/09
12. NTT Int’l Symposium on Nanoscale Transport and Technology, Atsugi, 1/23/09
11. [4th International Nano-Science Symposium](#), Osaka, 9/29-10/1/08
10. 4th ”Spin Phenomena in Reduced Dimensions”, Regensburg, 9/24-9/27/08
9. Joint European Magnetism Symposia, Dublin, 9/18/08
8. Gordon Research Conference on Magnetic Nanostructures, Grenoble, 9/4/08
7. 29th Int’l Conference on the Physics of Semiconductors, Rio de Janeiro, 7/28/08
6. NanoElectronics 2008, RWTH Aachen, 5/15/08
5. American Physical Society March Meeting, New Orleans, 3/12/08
4. 2nd ATI/IFCAM Int’l Workshop on Spin Currents, Tohoku U., 2/19/08
3. Materials Research Society Fall Meeting, Boston, 11/26/07
2. Magnetism and Magnetic Materials Conference, Tampa, 11/8/07
1. [Kavli Frontiers in Science Symposium](#) (US NAS and Chinese IoP), Beijing, 10/29/07

SEMINARS AND COLLOQUIA

52. Assistant Secretary of Defense for Research & Engineering, Basic Research Forum, 4/21/16
51. University of Maryland, Physics colloquium, 4/21/15
50. Purdue University, [Condensed Matter seminar](#), 2/13/15
49. U. Maryland, Condensed Matter seminar, 2/5/15
48. Rutgers University, Laboratory for Surface Modification seminar, 2/20/14
47. U. Pittsburgh, Condensed Matter seminar, 10/18/13
46. Carnegie-Mellon University, Physics Colloquium, 10/17/13
45. U. Maryland, Condensed Matter seminar, 10/3/13

44. U. Maryland, Condensed Matter seminar, 9/12/13
43. U. Delaware, ECE Devices and Materials seminar, 4/12/13
42. Adelphi Army Research Lab, seminar, 10/24/12
41. Johns Hopkins Applied Physics Lab, seminar, 5/3/12
40. Keio University, Tokyo, [seminar](#), 1/13/12
39. U. Utah, Physics colloquium, 11/17/11
38. NIST/UMD Joint Quantum Institute, [seminar](#), 3/7/11
37. NSA/UMD Laboratory for Physical Sciences, seminar, 3/2/11
36. U. Rochester, ECE seminar, 2/2/11
35. SUNY Buffalo, Physics, Condensed Matter seminar 2/1/11
34. Johns Hopkins, Physics, Condensed Matter seminar 10/20/10
33. Penn State, Physics, Condensed Matter seminar 10/18/10
32. West Virginia University, Physics colloquium, 9/24/10
31. National Institute of Materials Science, Tsukuba Japan, seminar, 6/4/10
30. Osaka University, seminar, 6/1/10
29. NIST Gaithersburg, seminar, 4/20/10
28. Ohio State University, Condensed Matter seminar, 3/3/10
27. New York University, Condensed Matter seminar, 11/13/09
26. Weizmann Institute, Rehovot Israel, Physics seminar 5/4/09
25. University of Maryland, College Park, Electrical Engineering seminar, 2/27/09
24. Case Western Reserve University, Condensed Matter seminar, 11/3/08
23. UCLA, Electrical Engineering seminar, 4/14/08
22. Purdue University, [Electrical Engineering seminar](#), 4/11/08
21. University of Pennsylvania, Electrical Engineering seminar, 4/2/08
20. Northeastern University, Physics & ECE joint seminar, 3/20/08
19. NIST, Gaithersburg, seminar, 3/4/08
18. Brown University, Engineering seminar, 2/14/08
17. University of Maryland, Physics seminar, 2/7/08
16. IBM T.J. Watson Research Center, Physical Sciences Seminar, 2/1/08

15. Purdue University, Electrical Engineering seminar, 1/24/08
14. University of Pittsburgh, Physics colloquium, 1/7/08
13. 115th Lectureship of the Zhong-Guan-Cun Forum on Condensed Matter Physics, Chinese Academy of Sciences Institute of Physics, Beijing, 11/2/07
12. Nanjing University, Physics colloquium, 11/1/07
11. Fudan University, Physics colloquium, 10/31/07
10. SUNY Albany, Nanoscale Science and Engineering colloquium, 10/19/07
9. SUNY Buffalo, Physics colloquium, 10/4/07
8. University of Delaware, Physics and Astronomy seminar, 2/27/07
7. University of Delaware, Electrical and Computer Engineering seminar, 9/27/04
6. University of Delaware, Physics and Astronomy seminar, 9/21/04
5. Virginia Tech, Physics seminar, 2/28/04
4. Lehigh University, Physics colloquium, 2/23/04
3. Drexel University, Physics colloquium, 2/9/04
2. University of Delaware, Electrical and Computer Engineering colloquium, 1/20/04
1. Rensselaer Polytechnic Institute, Physics colloquium, 9/24/03

THESES SUPERVISED

1. [Hyun-Soo Kim](#) – MS 12/13 “[Hot Electron Injection into Uniaxially Strained Silicon](#)” *UMD*
 2. [Jing Li](#) – PhD 1/12 “[Extrinsic Spin Relaxation in Silicon Spin Transport Devices](#)” *postdoc at UMN then UTK*
 3. [Jing Li](#) – MS 8/09 “[Oblique Hanle Effect in Silicon Spintronic Devices](#)”
 4. [Biqin Huang](#) – PhD 1/08 “[Vertical Transport Silicon Spintronic Devices](#)” *HRL*
 5. [Biqin Huang](#) – MS 6/07 “[Optical Spin Valve Effects](#)”
 6. [Lai Zhao](#) – MS 8/08 “[Integrated ballistic electron emission luminescence](#)” *Applied Materials*
 7. [Jing Xu](#) – MS 8/08 “[Modeling and simulation of spin transport and precession in silicon](#)” *Microsoft*
- Other (non-thesis) MS completion: Gardner Swan '12 (*USPTO*) and Holly Tinkey '14 (*UMD*)

SYNERGISTIC ACTIVITIES

- Proposal reviewer: NSF (ECCS panel 9/08, 1/10, 5/11, 11/12, 2/16), Research Corporation, DOE, EPSCoR, Defense Threat Reduction Agency, Science Foundation Ireland, Icelandic Centre for Research, Israel Science Foundation, Austrian Science Fund
- Referee: Nature Physics, Nature Nanotech, Nature Materials, Physical Review Letters, Physical Review B, Applied Physics Letters, Europhysics Letters, Journal of Applied Physics, J. Magn. Mat., Semiconductor Sci. and Tech., etc.
- Proposed and chaired 2015 APS March meeting invited symposium session, [Spin Accumulation: Experiment and Theory Behind the Controversy](#).
- Tutorial Instructor and session chair: “[Spintronics](#)”, APS March meeting (2014), Spin Transport Physics short course, DRC (2010).
- Program Committee: 12th Joint MMM/Intermag (2013), PASPS-7 (Eindhoven August 5-8 2012), 2010 and 2011 Electronic Materials Conference, Device Research Conference (2009, 2010 and 2011), Focus Session on Spin Dependent Phenomena in Semiconductors, APS March meeting (2009), Chinese-American Kavli Frontiers in Science Symposium, US National Academy of Sciences (2008)
- Five lectures viewed by over 3000 students worldwide on coursera.org MOOC “[Exploring Quantum Physics](#)”
- U.S. Patent 7244997, “[Magneto-Luminescent Transducer](#)”
- Life Member 61024031, American Physical Society

AWARDS

- 2016 [Fellow, American Physical Society](#): “*For advancing the study of spin-polarized electron transport in semiconductors, especially the fundamental processes revealed by coherent and time-resolved spin transport over macroscopic distances in silicon and germanium.*”
- 2011 [A.M. Haig prize / Outstanding Young Scientist](#), MD Academy of Sciences
- 2009 NSF CAREER award
- 2008 Outstanding Junior Faculty Member for the College of Engineering (Delaware)
- 2007 Cambridge NanoTech Research Award
- 1998 G. Howard Carragan Award (RPI) “For outstanding scholarship”
- 1998 Hertz Foundation - Grant recipient
- 1996 Rensselaer Founder’s Award

MAJOR DEPARTMENTAL COMMITTEES CHAIRED

- Graduate qualifier exam committee, 2016-present (manage authorship of both Classical and Quantum exams each semester)
- CME faculty search committee, 2013 (hired V. Manucharyan and J. Williams)
- Undergraduate curriculum review committee, 2011 (authored 50+ page report)

TEACHING

@ U. Maryland, Physics Dept.:

- Spring 16: **PHYS402 Quantum Physics II**
“In a very strong physics department, based on my several prior courses, Appelbaum is one of the very best.” “Prof. Appelbaum is a remarkable teacher. He has an extremely strong command on the course content and made sure to convey the course material in a way that was very accessible to students. I would recommend students to take a course with the professor as there are few professors whose command on the course content is as inspirational as his.” “... knows what he wants to teach and knows how to teach it effectively.” “... really cared about student learning, and I really enjoyed the course and the material.” “... takes excellent administrative care of the class. It’s clear he understands the material with great intimacy and that he cares deeply about it, which is pretty motivating to have in a teacher.”
- Fall 15: **PHYS404 Statistical Thermodynamics**
“Dr. Appelbaum is a great instructor, he encourages students to participate with questions in class, inspires independent thinking, and made the class clear and interesting to attend. I enjoyed the course very much. Keep up the great work!” “... definitely one of the most challenging yet most interesting undergraduate physics courses. Prof. Appelbaum went through every important derivation very carefully and made many concepts extremely easy to understand. In general, he gave us a very good introduction to the statistical view of physics. I strongly recommend his stat physics class to other students.” “... Professor was very considerate of the students... put time aside to talk to students one-on-one to see what issues they are having and that helped.” “... very knowledgeable and the lectures are very in depth. If you’re looking for a more challenging, insightful course, I’d definitely recommend him as a professor. There are a lot of alternative (arguably better) derivations he does in lecture that add to those in the textbook. ... answers to questions are always very thoughtful and thorough. If you’re passionate about physics and want to learn, he’s one of the best professors I’ve had.”
- Spring 15: **PHYS402 Quantum Physics II**
“very insightful and clear.” “Good use of matlab code and visuals to cause understanding. Excellent professor” “I really enjoyed the use of electronic notes during lecture and feel like I learned a lot during the course. His ability to clearly describe the topics, often taking a different approach than the book, was nice as it gave us two different perspectives on the same problems.” “Professor Appelbaum has been instrumental in helping me to wrap my head around the most difficult branch of physics.”
- Fall 14: **PHYS165 Intro to Programming for the Physical Sciences**
“Professor Appelbaum was an excellent teacher who really knows his stuff. He’s a great presenter of material and always emphasized that we learn... I enjoyed the course.”

- Spring 14: **PHYS402 Quantum Physics II**

“Great course, I learned a lot. Very good instruction style that introduced us to physics in the real world” “Love the teaching style. Very accommodating and easy to follow.” “...always answered questions helpfully and patiently ...” “He did an amazing job teaching us the mathematical underpinnings of QM.” “...comes up with different possible ways to teach and make us understand the lecture. Thank you for that.”

- Fall 13: **PHYS731 Solid State Physics**

“I learned a lot from the course and feel it gave a great survey of a vast and interesting field of physics” “Computing projects were fun” “The lectures were very well organized (I especially liked that the PDF notes were available online) and well thought out. Overall this was a great course” “instructor was always prepared for lecture and explained the material in a knowledgeable fashion” “The teaching was clear and concise.”

- Fall 12: **PHYS731 Solid State Physics**

“Ian is the most organized, effective teacher I have had in graduate school. Because of his preparedness and ability to explain physical concepts clearly, we were able to cover a lot of material. This course was an elective for me, and I was pleasantly surprised at how much I learned, how much I enjoyed learning it, and how easy it was to learn it. Ian’s technology-driven teaching style is innovative and kept me engaged. Finally, the problem sets were illustrative and pitched at a level I felt was reasonable, yet challenging. Again, this course was incredible and I’d recommend it to any graduate student who is even mildly interested.” “This class was wonderfully designed and taught.” “This was a fantastic course that I think really did a good job of covering a wide range of topics at an appropriate level of depth.”

- Spring 12: **PHYS401 Quantum Physics I**

“I found this course extremely enjoyable. It reminded me of why I decided to become a Physics major. Professor Appelbaum was very knowledgeable and applied mathematical formalisms that were originally unfamiliar but ultimately extremely helpful.” “Professor was very coherent and very methodical. He taught the material very well and cared greatly about the students.”

- Fall 11: **PHYS731 Solid State Physics**

“I enjoyed the course immensely.” “Good lectures, difficult but rewarding homework.” “Overall, a class I enjoyed and was worth taking.”

- Spring 11: **PHYS401 Quantum Physics I**

“This was probably my favorite course that I have taken so far. I really appreciated the mathematical derivations of universal mathematical concepts, and then seeing directly how they applied to quantum mechanics. This was in my opinion much better than simply stating the results and then working with them. I also appreciated the focus on numerical analysis, which allows one to gain a much stronger intuition about the subject than only working on the few examples that can be solved analytically. Overall it felt like I gained an excellent understanding of the basics of quantum mechanics, as well as a number of universal mathematical and analytical skills.” “...this was easily one of the most engaging, challenging, and rewarding physics courses I have taken at UMD. It was very refreshing to be able to spend less time copying notes and more time absorbing the professor’s unique perspective on the topic. I hope other students do not pass up an opportunity to take this course.” “...I’ve never been more excited about a topic I was learning, and I believe that is all because of Dr. Appelbaum.”

- Fall 10: **PHYS375 Experimental Physics III (Optics)**
“Prof. Appelbaum was a good, enthusiastic, and helpful professor.” “I’d highly recommend Appelbaum.”
- Spring 10: **PHYS401 Quantum Physics I**
“This professor is by far one of the best lecturers I’ve had at this university. His lectures compliment the text, presenting material in different (often simpler) styles. He is very well organized (something I’ve never seen in the phys. department), and has a well-designed website with easily accessible notes/assignments.”
- Fall 09: **PHYS375 Experimental Physics III (Optics)**
Complete redesign of experiments: Matlab for data acquisition, replacement of optical hardware, manual rewrites, etc.

@ U. Delaware, ECE Dept.:

- Spring 08: **ELEG646 Nanoelectronic Device Principles**
“Helps a lot in and out of class. . . I like the computational methods used in micro- and nano-electronics, which was taught by the instructor. His lectures help promote my understanding of semiconductor devices to a higher level. . . Great class, well taught. Intense projects but very helpful in understanding the subject.”
- Fall 07: **ELEG340 Solid-State Electronics**
“Highly knowledgeable. . . he was a great teacher and really knew what he was talking about. . . More than willing to provide help or extra material to students who seek it. . . genuinely cares about how his students perform in his class. . . very helpful and open to any questions at any time. . . Professor did a tremendous job teaching the subject. Lectures were very effective and clear. This class made me realize how much i love engineering. . .”
- Spring 07: **ELEG240 Physical Electronics**
“Great teacher. . . effective, and helpful. . . available for help almost any time. . . the course has better prepared me for my future engineering courses. . . the topics we covered were very interesting. . .”
- Fall 06: **ELEG340 Solid-State Electronics**
“Professor provides slides with the material and explains the slides well. . . Professor Appelbaum exhibits great knowledge of the subject material. Lectures are straightforward. . . Dr. Appelbaum was able to instill a passion for the subject matter. . . The level of caring presented was appropriate and genuine. . . overall this was one of my favorite courses this semester. . .”
- Spring 06: **ELEG/PHYS667 Magnetism and Spintronics**
“The professor is nice and well prepared. Thank you. . . He is a good researcher with huge knowledge in this field. Young, energetic and ambitious researcher, I learned a lot in depth from him. . . The course should be made compulsory for students specializing in Magnetism and Spintronics related fields. . .”
- Fall 05: **ELEG340 Solid-State Electronics**
“The instructor is one of, if not the best that I have had. . . He is very knowledgeable of the subject matter and communicates it well. . . He was also very helpful in office hours. . . Professor’s knowledge of the material was thorough. Lectures were well presented. . . Professor

Appelbaum is a very good professor. He is extremely smart and knowledgeable of the material in this class... Very extensive knowledge of the material... I liked Appelbaum's visual teaching method..."

- Fall 04: **ELEG667-018/PHYS667-018 Magnetism and Spintronics**

"Dr Appelbaum is a good instructor, helps students a lot, he supplies them with extra information, he is interested in the subject and is well-prepared... it was very beneficial for my research. Now I feel more comfortable in the literature. I got a better understanding of what is going on in spintronics... the class was very well structured and included all the basics. In the presentations more advanced topics were included and the instructor made sure the explanations were clear the most important points were made... I enjoyed the course very much and it was very useful..."