

CURRICULUM VITAE  
**Ishay Ari Pomerantz**

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**Personal information**

- Birth year: 1978.
- Home Address: 3517 N Hills Dr., Austin, TX 78731

**Education**

- 2006-2011: Direct Ph.D program, experimental nuclear physics.  
Thesis title: “[Hard Photodisintegration of a proton pair](#)”.  
Under the supervision of Prof. Eliezer Piasetzky,  
Tel-Aviv University.
- 2001-2005: B.Sc. major in Physics and Computer Science,  
Tel-Aviv University.

**Employment**

- 2012 –present Postdoctoral research associate,  
Center for High Energy Density Science,  
The University of Texas at Austin
- 2011: HIL Applied Medical with Prof. Arie Zigler group at the Hebrew  
U. Experimental research on laser-plasma proton acceleration for  
cancer treatment.
- 2009-2011: Teaching Assistant for the graduate class  
“Advanced Electromagnetism”.
- 2005-2011: Physics labs instructor,  
School of physics and astronomy, Tel-Aviv Univ.
- 2002-2006: Head developer, Ovdinnet Software Ltd.
- 2000-2002: Software developer Design Labs Ltd.

**Military service (IDF)**

- 2001-present: Reserves army service as a combat medic.
- 1999-2000: Staff sergeant of a field infirmary.
- 1997-1999: Military service as a combat medic.

**Awards**

- 2010: The Alix De Rothschild Scholarship in Science and Technology.

- 2009: The Judah Eisenberg Award for academic achievement.  
 2009: The Jacob and Riva Dam Fellowship for Outstanding Doctoral Students in Physics, Chemistry and Mathematics.  
 2007: Abraham and Deborah Cohen prize for excellence in research.  
 2001: Outstanding admission score award, Tel-Aviv University.

### Awarded grants

- 2013: (PI) Conference organization support  
 “The 3rd Conference on High Intensity Laser and attosecond science research in Israel (CHILI)”  
 European Science Foundation (ESF)  
 14,000€
- 2012: (PI) Conference organization support  
 “The 2<sup>nd</sup> Conference on High Intensity Laser and attosecond science research in Israel (CHILI)”  
 European Science Foundation (ESF)  
 15,000€

### Invited talks at conferences

- Apr 2014: “Science and Applications for High Flux Laser-Neutron Generators”  
 ICAN Scientific Case workshop, Palaiseau, France
- Mar 2014: “An Ultra-Short Pulsed Neutron Source”  
 High-Intensity Lasers and High-Field Phenomena, Berlin, Germany
- Aug 2010: 'New results on  $^3\text{He}(\gamma, pp)$  and  $^3\text{He}(\gamma, pd)$  reactions',  
 Gordon Research Conference, Tilton, NH, USA.

### Invited seminars

- Mar 2014: “High Intensity Lasers and the Dawn of Ultrafast Nuclear Science”  
 NL Physics seminar, HUJI, Israel
- Mar 2014: “High Intensity Lasers and the Dawn of Ultrafast Nuclear Science”  
 Physics colloquium, Tel-Aviv U., Israel
- Mar 2014: “A Laser-Cluster Source of Exotic Nuclei”  
 Extreme Light Infrastructure – NP, Magurele, Romania
- Dec 2013: “Ultrafast Nuclear Science”  
 Joint Nuclear Seminar, Tel-Aviv U., Israel
- Oct 2013: “An Ultra-Short Pulsed Neutron Source”  
 AMO Seminar U.Texas, TX, USA
- Mar 2011: 'Hard Photodisintegration of  $^3\text{He}$ ',  
 Laboratory for Laser Energetics, Rochester, NY.
- Mar 2011: 'Hard Photodisintegration of  $^3\text{He}$ ', UMD, College Park, MD.
- Apr 2010: 'Proton Pair Photodisintegration',  
 Joint Nuclear Physics Seminar, HUJI, Israel
- Oct 2008: Departmental seminar on 'Proton Pair Photodisintegration',  
 Yale U., New Haven, CT, USA.

### Contributed talks

- Dec 2013: "An Ultra-Short Pulsed Neutron Source"  
CHILI2013, Tel-Aviv, Israel
- Dec 2013: "An Ultra-Short Pulsed Neutron Source"  
IPS meeting, Weizmann Inst, Israel
- Nov 2013: "An Ultra-Short Pulsed Neutron Source"  
APS/DPP Fall meeting, Denver, CO, USA
- Jun 2013: "Laser Driven Neutron Generation at the Texas Petawatt"  
CLEO 2013, San Jose, CA, USA
- Apr 2013: "Laser-ion acceleration from transparent overdense plasmas at the Texas  
Petawatt"  
SPIE Optics, Prague, Czech Republic
- Dec 2012: 'Ion acceleration using ultrathin targets at the Texas Petawatt',  
IPS meeting, HUJI, Jerusalem, Israel
- Dec 2012: 'Ion acceleration using ultrathin targets at the Texas Petawatt',  
poster presentation, CHILI2012, Tel-Aviv, Israel
- Mar 2011: 'Hard Photodisintegration of  $^3\text{He}$ ', MIT, Boston MA.
- Jul 2010: 'Hard Photodisintegration of a Proton Pair',  
International Nuclear Physics Conference, Vancouver, BC.
- May 2010: 'Proton Pair Photodisintegration',  
Particle physics dept. seminar, TAU, Israel
- Mar 2010: 'Proton Pair Photodisintegration', Nuclear Research Center Negev, Israel
- Oct 2008: 'Proton Pair Photodisintegration', DNP Fall meeting, Oakland, CA, USA.
- Jun 2008: Seminar on 'Proton Pair Photodisintegration' at the 23rd Annual Hampton  
University Graduate Studies Program, Newport News, VA, USA.
- Jun 2008: Analysis workshop 'Coincidence efficiency calculation using MCEEP'  
Jlab, Newport News, VA, USA.
- Dec 2007: The 53rd Annual Meeting of the Israel Physical Society  
'Proton Pair Photodisintegration' Weizmann institute of science, Israel.
- Jun 2007: Hall A Collaboration Meeting 'Proton Pair Photodisintegration'  
Jlab, Newport News, VA, USA.

### Workshop organization

- Dec 2013: The 3<sup>rd</sup> Conference on High Intensity Laser and attosecond science research  
in Israel (CHILI)  
Carlton hotel Tel-Aviv, with M Fraenkel, G. Marcus and A. Zigler  
~100 Participants from ~15 Countries
- Dec 2012: The 2<sup>nd</sup> Conference on High Intensity Laser and attosecond science  
research in Israel (CHILI)  
Carlton hotel Tel-Aviv, with N Dudovitch, G. Marcus and A. Zigler  
~100 Participants from ~15 Countries
- Nov 2011: Conference on High Intensity Laser research in Israel (CHILI)  
The Hebrew University of Jerusalem, with A. Zigler  
~70 Participants from 4 Countries

1. I Korover, N Muangma, O Hen, R Shneor, V Sulkosky, A Kelleher, S Gilad, DW Higinbotham, E Piasetzky, JW Watson, SA Wood, P Aguilera, Z Ahmed, H Albataineh, K Allada, B Anderson, D Anez, K Aniol, J Annand, W Armstrong, J Arrington, T Averett, T Badman, H Baghdasaryan, X Bai, A Beck, S Beck, V Bellini, F Benmokhtar, W Bertozzi, J Bittner, W Boeglin, A Camsonne, C Chen, J-P Chen, K Chirapatpimol, E Cisbani, MM Dalton, A Daniel, D Day, CW de Jager, R De Leo, W Deconinck, M Defurne, D Flay, N Fomin, M Friend, S Frullani, E Fuchey, F Garibaldi, D Gaskell, R Gilman, O Glamazdin, C Gu, P Gueye, D Hamilton, C Hanretty, J-O Hansen, M Hashemi Shabestari, T Holmstrom, M Huang, S Iqbal, G Jin, N Kalantarians, H Kang, M Khandaker, J LeRose, J Leckey, R Lindgren, E Long, J Mammei, DJ Margaziotis, P Markowitz, A Marti Jimenez-Arguello, D Meekins, Z Meziani, R Michaels, M Mihovilovic, P Monaghan, C Munoz Camacho, B Norum, K Pan, S Phillips, I Pomerantz, M Posik, V Punjabi, X Qian, Y Qiang, X Qiu, A Rakhman, PE Reimer, S Riordan, G Ron, O Rondon-Aramayo, A Saha, E Schulte, L Selvy, A Shahinyan, S Sirca, J Sjoegren, K Slifer, P Solvignon, N Sparveris, R Subedi, W Tireman, D Wang, LB Weinstein, B Wojtsekhowski, W Yan, I Yaron, Z Ye, X Zhan, J Zhang, Y Zhang, B Zhao, Z Zhao, X Zheng, P Zhu, R Zielinski: **Probing the Repulsive Core of the Nucleon-Nucleon Interaction via the He 4 (e, e' p N) Triple-Coincidence Reaction.** *Phys Rev Lett* 2014, **113**:022501.

2. **Pomerantz I**, McCary E, Meadows AR, Arefiev A, Bernstein AC, Chester C, Cortez J, Donovan M, Dyer G, Gaul EW, Hamilton D, Kuk D, Lestrade AC, Wang C, Ditmire T, Hegelich BM: **An Ultra-Short Pulsed Neutron Source.** *Submitted for publication (PRL)* 2014.

3. **Pomerantz I**, Ditmire T: **A Tabletop Source of Exotic Nuclei.** *In preparation* 2014.

4. Hegelich BM, **Pomerantz I**, Yin L, Wu HC, Jung D, Albright BJ, Gautier DC, Letzring S, Palaniyappan S, Shah R, Allinger K, Hörlein R, Schreiber J, Habs D, Blakeney J, Dyer G, Fuller L, Gaul E, McCary E, Meadows AR, Wang C, Ditmire T, Fernández JC: **Laser-driven ion acceleration from relativistically transparent nanotargets.** *New J Phys* 2013, **15**:085015.

5. **Pomerantz I**, Ilieva Y, Gilman R, Higinbotham D W, Piasetzky E, Strauch S, Adhikari K P, Aghasyan M, Allada K, Amarian M J, Pereira S Anefalos, Anghinolfi M, Baghdasaryan H, Ball J, Baltzell N A, Battaglieri M, Batourine V, Beck A, Beck S, Bedlinskiy I, Berman B L, Biselli A S, Boeglin W, Bono J, Bookwalter C, Boiarinov S, Briscoe W J, Brooks W K, Bubis N, Burkert V, Camsonne A, Canan M, Carman D S, Celentano A, Chandavar S, Charles G, Chirapatpimol K, Cisbani E, Cole P L, Contalbrigo M, Crede V, Cusanno F, D'Angelo A, Daniel A, Dashyan N, de Jager C W, De Vita R, De Sanctis E, Deur A, Djalali C, Dodge G E, Doughty D, Dupre R, Dutta C, Egiyan H, Alaoui A El, Fassi L El, Eugenio P, Fedotov G, Fegan S, Fleming J A, Fradi A, Garibaldi F, Geagla O, Gevorgyan N, Giovanetti K L, Girod F X, Glister J, Goetz J T, Gohn W, Golovatch E, Gothe R W, Griffioen K A, Guegan B, Guidal M,

Guo L, Hafidi K, Hakobyan H, Harrison N, Heddle D, Hicks K, Ho D, Holtrop M, Hyde C E, Ireland D G, Ishkhanov B S, Isupov E L, Jiang X, Jo H S, Joo K, Katramatou A T, Keller D, Khandaker M, Khetarpal P, Khrosinkova E, Kim A, Kim W, Klein F J, Koirala S, Kubarovsky A, Kubarovsky V, Kuleshov S V, Kvaltine N D, Lee B, LeRose J J, Lewis S, Lindgren R, Livingston K, Lu H Y, MacGregor I J D, Mao Y, Martinez D, Mayer M, McCullough E, McKinnon B, Meekins D, Meyer C A, Michaels R, Mineeva T, Mirazita M, Moffit B, Mokeev V, Montgomery R A, Moutarde H, Munevar E, Camacho C Munoz, Nadel-Turonski P, Nasseripour R, Nepali C S, Niccolai S, Niculescu G, Niculescu I, Osipenko M, Ostrovidov A I, Pappalardo L L, Paremuzyan R, Park K, Park S, Petratos G G, Phelps E, Pisano S, Pogorelko O, Pozdniakov S, Procureur S, Protopopescu D, Puckett A J R, Qian X, Qiang Y, Ricco G, Rimal D, Ripani M, Ritchie B G, Rodriguez I, Ron G, Rosner G, Rossi P, Sabatie F, Saha A, Saini M S, Sarty A J, Sawatzky B, Saylor N A, Schott D, Schulte E, Schumacher R A, Seder E, Seraydaryan H, Shneor R, Smith G D, Sokhan D, Sparveris N, Stepanyan S S, Stepanyan S, Stoler P, Subedi R, Sulkosky V, Taiuti M, Tang W, Taylor C E, Tkachenko S, Ungaro M, Vernarsky B, Vineyard M F, Voskanyan H, Voutier E, Walford N K, Wang Y, Watts D P, Weinstein L B, Weygand D P, Wojtsekhowski B, Wood M H, Yan X, Yao H, Zachariou N, Zhan X, Zhang J, Zhao Z W, Zheng X, Zonta I: **Hard Two-Body Photodisintegration of  $^3\text{He}$** . *Phys Rev Lett* 2013, **110**:242301.

6. Zigler A, Eisenman S, Botton M, Nahum E, Schleifer E, Baspaly A, **Pomerantz I**, Abicht F, Branzel J, Priebe G, Steinke S, Andreev A, Schnuerer M, Sandner W, Gordon D, Sprangle P, Ledingham KWD: **Enhanced Proton Acceleration by an Ultrashort Laser Interaction with Structured Dynamic Plasma Targets**. *Phys Rev Lett* 2013, **110**:215004.

7. Abrahamyan S, Ahmed Z, Allada K, Anez D, Averett T, Barbieri A, Bartlett K, Beacham J, Bono J, Boyce JR, Brindza P, Camsonne A, Cranmer K, Dalton MM, de Jager CW, Donaghy J, Essig R, Field C, Folts E, Gasparian A, Goeckner-Wald N, Gomez J, Graham M, Hansen JO, Higinbotham DW, Holmstrom T, Huang J, Iqbal S, Jaros J, Jensen E, Kelleher A, Khandaker M, LeRose JJ, Lindgren R, Liyanage N, Long E, Mammei J, Markowitz P, Maruyama T, Maxwell V, Mayilyan S, McDonald J, Michaels R, Moffeit K, Nelyubin V, Odian A, Oriunno M, Partridge R, Paolone M, Piasetzky E, **Pomerantz I**, Qiang Y, Riordan S, Roblin Y, Sawatzky B, Schuster P, Segal J, Selvy L, Shahinyan A, Subedi R, Sulkosky V, Stepanyan S, Toro N, Walz D, Wojtsekhowski B, Zhang J.: **Search for a New Gauge Boson in Electron-Nucleus Fixed-Target Scattering by the APEX Experiment**. *Phys Rev Lett* 2011, **107**:191804.

8. Ron G, Zhan X, Glister J, Lee B, Allada K, Armstrong W, Arrington J, Beck A, Benmokhtar F, Berman B. L, Boeglin W, Brash E, Camsonne A, Calarco J, Chen J. P, Choi S, Chudakov E, Coman L, Craver B, Cusanno F, Dumas J, Dutta C, Feuerbach R, Freyberger A, Frullani S, Garibaldi F, Gilman R, Hansen O, Higinbotham D. W, Holmstrom T, Hyde C. E, Ibrahim H, Ilieva Y, de Jager C. W, Jiang X, Jones M,

Kelleher A, Khrosinkova E, Kuchina E, Kumbartzki G, Lerose J. J, Lindgren R, Markowitz P, May-Tal Beck S, McCullough E, Meziane M, Meziani ZE, Michaels R, Moffit B, Norum B. E, Oh Y, Olson M, Paolone M, Paschke K, Perdrisat C. F, Piasetzky E, Potokar M, Pomatsalyuk R, **Pomerantz I**, Puckett A. J. R, Punjabi V, Qian X, Qiang Y, Ransome R, Reyhan M, Roche J, Rousseau Y, Saha A, Sarty A. J, Sawatzky B, Schulte E, Shabestari M, Shahinyan A, Shneor R, Širca S, Slifer K, Solvignon P, Song J, Sparks R, Subedi R, Strauch S, Urciuoli G. M, Wang K, Wojtsekhowski B, Yan X, Yao H, Zhu X: **Low- $Q^2$  measurements of the proton form factor ratio  $\mu_{\{p\}} G_{\{E\}}/G_{\{M\}}$** . *Phys Rev C* 2011, **84**:055204.

9. Glistler J, Ron G, Lee B W, Gilman R, Sarty A J, Strauch S, Higinbotham D W, Piasetzky E, Allada K, Armstrong W, Arrington J, Beck A, Benmokhtar F, Berman BL, Boeglin W, Brash E, Camsonne A, Calarco J, Chen JP, Choi S, Chudakov E, Coman L, Craver B, Cusanno F, Dumas J, Dutta C, Feuerbach R, Freyberger A, Frullani S, Garibaldi F, Hansen J -0, Holmstrom T, Hyde C E, Ibrahim H, Ilieva Y, de Jager CW, Jiang X, Jones MK, Kang H, Kelleher A, Khrosinkova E, Kuchina E, Kumbartzki G, LeRose J J, Lindgren R, Markowitz P, May-Tal Beck S, McCullough E, Meekins D, Meziane M, Meziani ZE, Michaels R, Moffit B, Norum BE, Oh Y, Olson M, Paolone M, Paschke K, Perdrisat CF, Potokar M, Pomatsalyuk R, **Pomerantz I**, Puckett A, Punjabi V, Qian X, Qiang Y, Ransome R, Reyhan M, Roche J, Rousseau Y, Saha A, Sawatzky B, Schulte E, Shabestari M, Shahinyan A, Shneor R, Sirca S, Slifer K, Solvignon P, Song J, Sparks R, Subedi R, Urciuoli GM, Wang K, Wojtsekhowski B, Yan X, Yao H, Zhan X, Zhu X: **Polarization observables in deuteron photodisintegration below 360 MeV**. *Physics Letters B* 2011, **697**:194–198.

10. Zhan X, Allada K, Armstrong DS, Arrington J, Bertozzi W, Boeglin W, Chen J.P, Chirapatpimol K, Choi S, Chudakov E, Cisbani E, Decowski P, Dutta C, Frullani S, Fuchey E, Garibaldi F, Gilad S, Gilman R, Glistler J, Hafidi K, Hahn B, Hansen JO, Higinbotham DW, Holmstrom T, Holt R. J, Huang J, Huber G. M, Itard F, de Jager C. W, Jiang X, Johnson M, Katich J, de-Leo R, Lerose J. J, Lindgren R, Long E, Margaziotis D. J, May-Tal Beck S, Meekins D, Michaels R, Moffit B, Norum B. E, Olson M, Piasetzky E., **Pomerantz I**, Protopopescu D, Qian X, Qiang Y, Rakhman A, Ransome R. D, Reimer P. E, Reinhold J, Riordan S, Ron G, Saha A, Sarty A. J, Sawatzky B, Schulte E. C, Shabestari M, Shahinyan A, Shneor R, Širca S, Solvignon P, Sparveris NF, Strauch S, Subedi R, Sulkosky V, Vilardi I, Wang Y, Wojtsekhowski B, Ye Z, Zhang Y: **High-precision measurement of the proton elastic form factor ratio  $\mu_{pGE}/GM$  at low  $Q^2$** . *Physics Letters B* 2011, **705**:59–64.

11. **Pomerantz I**, Bubis N, Allada K, Beck A, Beck S, Berman BL, Boeglin W, Camsonne A, Canan M, Chirapatpimol K, Cisbani E, Cusanno F, de Jager CW, Dutta C, Garibaldi F, Geagla O., Gilman R, Glistler J, Higinbotham DW, Jiang X, Katramatou AT, Khrosinkova E, Lee BW, Lerose JJ, Lindgren R, McCullough E, Meekins D, Michaels R, Moffit B, Petratos GG., Piasetzky E, Qian X, Qiang Y, Rodriguez I, Ron G, Saha A, Sarty AJ, Sawatzky B, Schulte E, Shneor R, Sparveris N, Subedi R, Strauch S, Sulkosky

V, Wang Y, Wojtsekhowski B., Yan X, Yao H, Zhan X, Zheng X. **Hard photodisintegration of a proton pair**. *Physics Letters B* 2010, **684**:106–109.

12. Ron G, Glister J, Lee B, Allada K, Armstrong W, Arrington J, Beck A, Benmokhtar F, Berman BL, Boeglin W, Brash E, Camsonne A, Calarco J, Chen JP, Choi S, Chudakov E, Coman L, Craver B, Cusanno F, Dumas J, Dutta C, Feuerbach R, Freyberger A, Frullani S, Garibaldi F, Gilman R, Hansen O, Higinbotham DW, Holmstrom T, Hyde CE, Ibrahim H, Ilieva Y, de Jager CW, Jiang X, Jones MK, Kang H, Kelleher A, Khrosinkova E, Kuchina E, Kumbartzki G, LeRose JJ, Lindgren R, Markowitz P, May-Tal Beck S, McCullough E, Meekins D, Meziane M, Meziani ZE, Michaels R, Moffit B, Norum BE, Oh Y, Olson M, Paolone M, Paschke K, Perdrisat CF, Piasetzky E, Potokar M, Pomatsalyuk R, **Pomerantz I**, Puckett A, Punjabi V, Qian X, Qiang Y, Ransome R, Reyhan M, Roche J, Rousseau Y, Saha A, Sarty AJ, Sawatzky B, Schulte E, Shabestari M, Shahinyan A, Shneor R, Sirca S, Slifer K, Solvignon P, Song J, Sparks R, Subedi R, Strauch S, Urciuoli GM, Wang K, Wojtsekhowski B, Yan X, Yao H, Zhan X, Zhu X: **Measurements of the Proton Elastic-Form-Factor Ratio  $\mu p G_{Ep}/G_{Mp}$  at Low Momentum Transfer**. *Phys Rev Lett* 2007, **99**:202002.