Returning & New Students Meeting

Welcome to Penn State Statistics Department
August 20, 2015

Prof. Aleksandra (Sesa) Slavkovic
(Associate Head for Graduate Studies)
sesa@psu.edu
Graduate Website(s) & Handouts

• Welcome back!
• Please review the graduate website, ANGEL page & any other handouts
  – Contain forms and review of basic procedures and policies
  – http://stat.psu.edu/education/graduate-programs
  – http://stat.psu.edu/education/student-resources
  – http://sites.psu.edu/statisticsgsa/
  – ANGEL: My Group/Graduate STAT Program Advising
• http://www.gradschool.psu.edu/current-students/student/
Roadmap & Progress Report

• Roadmap to success
  – Graduate Assistantship (Fellowship/RA/TA)
  – Curricular
  – Research
  – Professional

• Mentoring/Advising

• Graduate Student Activity report
Roadmap & Progress Report

• Mentoring/Advising
  – Mentoring guidelines: https://drive.google.com/file/d/0B6adu_JnV3R5UTZ2a25pdUs1TGs/view
  – Meet with your academic/thesis advisor in early September & January, or more often
    • September: To learn whether you were on the right track during the last academic year
    • January: To collect data on who will graduate in May and August. This helps us to figure out how many TA slots for new students.
Roadmap & Progress Report

• Graduate Student Activity report
• Online system in development
  – Teaching, coursework, research, professional
  – Self-evaluations
  – Faculty evaluations
  – Still valid until we install a new policy
Graduate Assistantships

Teaching Assistantships
Research Assistantships
Fellowships
Training Programs
Your support (PhD/MS)

• Includes **full financial support** as long as you are making adequate progress towards your degree.
  • **Full financial support** means tuition and stipend during the academic year, and health insurance.
  • Limited tuition waivers and stipend are also available in the summer.
  • You are a student and an employee.
  • If you plan to leave the program at an unusual time, you will be required to pay for your tuition and health insurance until graduation.

• **NEW: Starting Fall 2015, everyone at least at pay-grade 15!** (RAs could vary)
Assistantships

• Are officially 20 hours per week
• Start the week before classes start.
• End at the end of exam week.

• ANGEL forms to state your preferences in My Group/Graduate STAT Program Advising

• More general PSU policy at
  http://www.gradschool.psu.edu/current-students/student/
Teaching Assistantships

• **Grader**
  – Most common: grading and office hours
  – May include supervising computer lab
  – May be on-line

• **Lecturer**
  – Teach an undergraduate course
  – Supervise a grader
  – Usually start in the summer when classes are smaller

• **On-line instructor**
  – Teach on-line using course set up by faculty
TA Duties and Workload

• See handouts provided by Pat & Dennis!
• Proactively discuss with instructor
  – expectations
  – whether your work is satisfactory & how to improve
  – setup your office hours
• Different instructors may have different policies
• Should not schedule the office hour during 3:30-5:00 Thursday but should attend the Dept. Seminar, and keep 12:00-1:00pm Tuesday for graduate-led workshops.

• New: Graduate policy on grading graduate courses and conflict of interest forms for you to sign and submit to Melanie:  http://www.gradschool.psu.edu/current-students/student/
Research Assistantships

• Research under the direction of a faculty member (occasionally in another department)

• May be related to your thesis work OR

• May be some other project.

• Should lead to potential publishable work.
Research Fellowships & Training Grants

• NSF Fellowships – U.S. students 1\textsuperscript{st} and 2\textsuperscript{nd} year
• NIH Fellowships
• IGERT BDSS here at PSU in your 1\textsuperscript{st} and 2\textsuperscript{nd} year both U.S.
and international students
• CTSI
• Bioinformatics program
• Etc...

• Off-campus & on-campus: New programs coming up
NSF Graduate Research Fellowship

• U.S. citizen & permanent residents
• First and second-year students
• $34k per 12 months (total about $48k)
• 2 Page Research Description
• $1k from College of Science for applying (first-year students only – talk to us NOW!!!)
• Work with a faculty member to complete
• Due in Fall (Late October!)
• http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6201
• Contact Naomi Altman or Aleksandra Slavkovic
NIH F31

• NSRI Individual Predoctoral Fellowship
• [http://grants.nih.gov/training/F_files_nrsa.htm](http://grants.nih.gov/training/F_files_nrsa.htm)
• Contact John Fricks
On-campus Training Programs

- Computation, Bioinformatics and Statistics (CBIOS)
- IGERT Big Data Social Science (BDSS)
- Clinical and Translational Science Institute (CTSI)
- Prevention and Methodology Training Program (PAMT)
Computation, Bioinformatics and Statistics

- NSRI Institutional Predoctoral Training Grant (T32) from the National Institutes of Health
- The Genomics Institute of the Huck Institutes of the Life Sciences
- Support for two years
- [http://www.huck.psu.edu/education/grants/computation-bioinformatics-statistics](http://www.huck.psu.edu/education/grants/computation-bioinformatics-statistics)
- Contact Francesca Chiaromonte for more information.
Big Data Social Science (BDSS)

- IGERT grant from the NSF
- Quantitative Social Science Institute
- Can apply now as you are entering the program
- [http://bdss.psu.edu](http://bdss.psu.edu)
- Contact Aleksandra Slavkovic for more information
Clinical and Translational Science Institute

- Apply at end of first or second year
- TL1 program funded by the NIH
- [http://ctsi.psu.edu](http://ctsi.psu.edu)
- Contact Mosuk Chow for more information
Prevention and Methodology Training (PAMT)

• A collaboration of Penn State's Prevention Research Center and Methodology Center

• [http://methodology.psu.edu/pamt/](http://methodology.psu.edu/pamt/)

• Contact Runze Li for more information
Curriculum

Timeline
Courses
Pre-comps, Comps, post-comps
PhD Defense
Course Work

- [http://stat.psu.edu/education/graduate-programs](http://stat.psu.edu/education/graduate-programs)
- English requirements (international students)
- Statistics Consulting
- Electives from other departments
  - There are interesting courses offered by many other departments such as Computer Sciences & Engineering (e.g., CSE 597C Machine Learning, also OR classes), and many Social and Behavioral Sciences offer quantitative social science class (e.g., see the course schedule in Sociology, Political Sciences, College of Health and Human Development, the Methodology Center and Business school and discuss it with your advisor or the graduate chair).
- Computing skills increasingly important
Course Work

• Half-time assistantships can carry 9-12cr.
• For upper classmen can petition to add extra course
• For the 1st year possible to petition but harder to get
Timeline

- **Expectation:** complete our program within 5 years
- **Milestones (OLD, pre-2014):**
  1. Master Qualifier Exam (1\textsuperscript{st} year)
  2. Ph.D. qualifier Exam (2\textsuperscript{nd} year)
  3. Ph.D. comprehensive exam (3\textsuperscript{rd} year)
  4. Ph.D. final oral defense (5\textsuperscript{th} year, pay more attention on deadline)

Program MUST be completed within eight years after the date of successful completion of the candidacy examination, e.g., PhD qualifying exam!
Timeline

- **Expectation:** complete our program within 5 years
- **Milestones (NEW, since Fall 2014):**
  1. Ph.D. Candidacy Exam (1st year)
  2. Choose an advisor (2nd year)
  3. Ph.D. comprehensive exam (2nd/3rd year)
  4. Ph.D. final oral defense (5th year, pay more attention on deadline)

Some additional policies still in works!

Program MUST be completed within eight years after the date of successful completion of the candidacy examination, e.g., PhD qualifying exam!
Balanced, rigorous yet flexible program

- **Expectation**: complete the program within 5 years
- **Milestones** (*OLD, pre-2014)*:
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- Program MUST be completed within eight years after the date of successful completion of the candidacy examination, e.g., PhD qualifying exam!

- Theoretical, Methodological & Interdisciplinary work – strong links with astronomy, biology, climate science, biomedical, social and behavioral sciences …
- Dual degrees (e.g., Operations Research)
- Graduate minor options (e.g., Computing)
## Year 1 (pre-2014)

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<td>Real Analysis (MATH 403) Or Elective</td>
<td>Stochastic Processes &amp; MCMC (STAT 515)</td>
<td></td>
</tr>
<tr>
<td>Reading Seminar 1cr (STAT 597C)</td>
<td>Supervised Teaching 1cr (STAT 597C)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS Qualifying Exam</td>
<td>If needed: MS Qual Exam</td>
</tr>
</tbody>
</table>

- Academic advisors assigned
- All faculty participate in the first year & subsequent evaluations
- Students coming with Masters may take MS Qual prior to Fall classes
- International students: if did not pass TSE, must take English
# Year 2 (pre-2014)

<table>
<thead>
<tr>
<th>Fall 2</th>
<th>Spring 2 (suggested)</th>
<th>Summer 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Models (STAT 561)</td>
<td>Probability Theory (STAT 517)</td>
<td>Research Teaching/Grading</td>
</tr>
<tr>
<td>Asymptotic tools (STAT 553)</td>
<td>Elective</td>
<td>Internship Travel</td>
</tr>
<tr>
<td>Statistical Consulting I (STAT 580) 2cr or</td>
<td>Statistical Consulting II (STAT 581) 1cr or Elective</td>
<td>Conferences</td>
</tr>
<tr>
<td>Elective</td>
<td>Look for research advisor</td>
<td>Write papers</td>
</tr>
<tr>
<td>Ph.D. Qualifying Exam (January)</td>
<td>If needed: Ph.D. Qualifying Exam (May)</td>
<td></td>
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STAT Electives: Statistical Computing, Categorical Data, Data Mining, Dimension Reduction, Advanced Statistical Inference, Bioinformatics …

Electives: Outside statistics … many options: CSE, Bio, Social Sciences …
Year 3 (pre-2014)

<table>
<thead>
<tr>
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Some course flexibility & timing across years 2 and 3; at least 18 cr. of electives

**Research topics:** Mutivariate analysis, Dimension reduction, Spatial statistics, Nonparametric statistics, High-dimensional data, Design, Astrostatistics, Bayesian statistics, Genomics, Bioinformatics, Survival analysis, Social Networks, Data Privacy … with applications in many different contexts…
### Years 4 & 5 (pre-2014)

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**CONGRATS! New job!**

**Student Advisory Committee (SAC) throughout your studies:**
- Reading groups
- Student organized seminars
- Career options
- Social activities
Balanced, rigorous yet flexible program

- **Expectation**: complete our program within 5 years
- **Milestones (NEW, since Fall 2014)**:
  1. Ph.D. Candidacy Exam (1st year)
  2. Choose an advisor (2nd year)
  3. Ph.D. comprehensive exam (2nd/3rd year)
  4. Ph.D. final oral defense (5th year, pay attention to deadlines)

The new policies may come out soon with additional requirements!

- Theoretical, Methodological & Interdisciplinary work – strong links with astronomy, biology, climate science, biomedical, social and behavioral sciences …
- Dual degrees (e.g., Operations Research)
- Graduate minor options (e.g., Computing)

Program MUST be completed within eight years after the date of successful completion of the candidacy examination, e.g., PhD qualifying exam!
### Year 1 (post-2014)

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Academic advisors assigned  
All faculty participate in the first year & subsequent evaluations

- Assumes knowledge of STAT 414 (calculus-based probability), basic calculus, linear algebra; real analysis is a plus.  
- Students coming with Masters may take Exams prior to Fall classes  
- International students: if did not pass TSE, must take English
Qualifying exams (dates to be confirmed)

• Saturday May 14, 2016
  – Theory 1: STAT 513 & STAT 515
  – Theory 2: STAT 514 & STAT 553

• Applied exam – take home (Mon, May 16, 9am to Tue, May 17, midnight)
  – STAT 511 and STAT 512
  – Pick up Monday, 9am submit Tuesday by midnight
  – Online
Years 2 & 3

• Required courses:
  – STAT 517 (Probability), Fall 2nd or 3rd year
  – STAT 561 (Inference with Bayes), Spring 2nd or 3rd year
  – STAT 580, STAT 581 Consulting sequence, 2nd or 3rd year
  – STAT 590 Colloquium – 1cr in addition to year 1
    https://sites.psu.edu/statperspectives/

• Strongly suggested, but not required, count as electives
  – STAT 540 (Computing)
  – STAT 551 (Linear models)

• Electives: At least 18 credits. At least 4 out of 6 from statistics.
STAT Electives
(some possible in the first year)

• Stat 480 (computing packages)
• Stat 509 (Design and Analysis of Clinical trials)
• Stat 510 (Time series)
• Stat 505 (Multivariate analysis)
• Stat 557 (Data Mining)
• Stat 540 (Statistical Computing) especially if passed MS Theory Exam
• Stat 597A (Mixture Models) if passed MS Theory exam or get a permission of the instructor
STAT Electives

• Stat 519 Topics in Stochastic Processes
• Stat 544 Categorical Data
• Stat 562 Statistical Inference II
• Stat 565 Multivariate Analysis – PhD level
• Stat 590 Colloquium
• Stat 597A Bioinformatics II
• Stat 597B Sufficient Dimension Reduction:
• MANY OTHERS... special topics courses vary
• See other departments too!
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STAT Electives: Statistical Computing, Categorical Data, Data Mining, Dimension Reduction, Advanced Statistical Inference, Bioinformatics …

Electives: Outside statistics … many options: CSE, Bio, Social Sciences …
Research advisors: Matchmaking

- (not implemented yet)
- First week of classes year 2
- Visit with faculty
- Students rank the faculty
- Faculty rank the students
## Year 3 (post-2014 suggested)

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Statistics Graduate Student Association (SGSA) throughout your studies:  [http://sites.psu.edu/statisticsgsa/](http://sites.psu.edu/statisticsgsa/)

- Reading groups
- Student organized seminars
- Career options
- Social activities
**MS/PhD Thesis Advisor**

- **NEW:** Main advisor MUST be a graduate faculty from the statistics department, whose main appointment is in the Statistics Department.

- Affiliated faculty CANNOT be the main advisor; they could be a co-advisor.

- List of faculty: [http://stat.psu.edu/people](http://stat.psu.edu/people)

- Your thesis committee should have at least one member from outside the department.
PhD Comps Exam & Post Exam

• **Pre-comps:** You must be a full-time student and as an international student that means you need to be registered for at least 9 credits.
  – Register for something or STAT 600

• All candidates are required to have a minimum grade-point average of 3.00 for work done at the University at the time the comprehensive examination is given, and may not have deferred or missing grades.

• The graduate student must be in good academic standing and must be registered as a full-time or part-time graduate degree student for the semester in which the comprehensive examination is taken
  [http://bulletins.psu.edu/graduate/degreerequirements/degreeReq1#doctoralComprehensive](http://bulletins.psu.edu/graduate/degreerequirements/degreeReq1#doctoralComprehensive)
PhD Comps Exam & Post Exam

• **Pre-comps:** Two weeks' notice is required by the Office of Graduate Enrollment Services for scheduling this examination, which may be open to the University community and the public at the department's discretion. It is given and evaluated by the entire doctoral committee.

• Note: There is NO minimum number of STAT 600 credits that you need before you take your comprehensive exam, unless you plan to do a MS thesis on your way.
  – Assuming that you are not doing a Master's thesis, then you do NOT need to be registered for STAT 600 thesis credits if you are already registered for 9 other credits.
  – However, if you plan to take your comps during the summer, you should register for at least 1 credit of STAT 600.
  – If you plan to take it during a regular semester and you are short of credits, that is you have not signed up for enough courses, you can sign up for STAT 600.
  – You can have at the most 12 credits of STAT 600 with a letter grade other than the grade R for PhD and 6 for Masters. So the easiest is to sign up for STAT 600 asking for grade R and not another letter grade.
PhD Comps Exam & Post Exam

• PhD comps: Two weeks' notice is required by the Office of Graduate Enrollment Services for scheduling this examination, which may be open to the University community and the public at the department's discretion. It is given and evaluated by the entire doctoral committee.

• Should be completed by the end of summer of year 3.

• Two models:
  – thesis proposal with a written document
  – area review with written questions/answers

• Require annual committee meetings after that.
PhD Comps Exam & Post Exam

• **Post-comps:** After a Ph.D. candidate has passed the comprehensive examination, s/he must register continuously for each fall and spring semester until the final oral examination is passed.
  – Register for STAT 601

• Students who are in residence during summers must also register for summer sessions if they are using University facilities and/or faculty resources, except for Graduate Lecturers/Researchers, who are not required to enroll for any credits unless they are first-semester graduate students, or are required to be enrolled by their graduate program.

• [http://bulletins.psu.edu/graduate/academicprocedures/procedures7](http://bulletins.psu.edu/graduate/academicprocedures/procedures7)
PhD Thesis Defense

• On time paperwork as per Graduate School policy
• Defense is a public event! Should prepare 50min talk.
• Announcement sent out to the department at least 4 weeks prior to the defense
• Information to be included
  – Student’s name and date, time & location
  – Name of the PhD Thesis Advisor
  – Name of the Committee Members
  – Title & Abstract
  – A follow-up announcement 1 week prior and then a day or two prior to the defense
PhD Thesis Defense

• NEW: Important for international students!

• If defend close to the of the end of semester (after the deadline for graduating that semester) then only 4 weeks to complete corrections and that is when F1 will expire!

• Student does NOT need to register for the next semester. But if not done, then must enroll (and you may have to pay on your own!)

• Apply for OPT on time and check with IOS on policies!!!
Post PhD Thesis Defense

• Graduating students exit survey!

• Internship & Job interview surveys at various points in time

• All on ANGEL: My Groups/Graduate STAT Program Advising
MS checklist

• At least 30 credits (24 from STATs)
  – Core first year core courses with PhD exams (minus STAT 553) – 15 credits
  – STAT590, STAT592 – 2 credits, 1 each
  – Plus 580/581 – 3 credits
  – At least 6 cr of STAT 600 (for thesis research)
  – At least 1 elective from stats at 500-level
  – Total 24 credits

• Other electives at 500-level from other departments approved by advisor, but should not exceed STAT electives

• At most 3 credits at 400-level

• Master’s qualifying exam (no 553)

• Master’s thesis
PhD Checklist

• Required 30 credits
  – First year core courses (20 credits)
  – STAT 517, STAT 561, STAT580/581 (9 credits)
  – STAT 590 (1 more credit past year 1)
• Electives at least 18 credits, with at least 4 out of 6 classes from statistics with advisor approval of non-statistics classes.
• PhD qualifying exam
• PhD comps
• PhD thesis
Research

SARI
Seminars & Research
Internships on- & off-campus
Scholarship and Research Integrity (SARI)

• A requirement from graduate school
• May also be required for RA supported by NSF and/or NIH
• The SARI program has two parts:
  – Part 1: Online CITI
  – Part 2: within STAT580

• IF not completed on time will NOT be allowed to work as an RA nor teach until completion!
Scholarship and Research Integrity (SARI)

- **Part 1:** Online CITI (Collaborative Institutional Training Initiative) to be completed during the first year, **by the end of first Fall semester**
  
  - [http://www.research.psu.edu/training/sari/citi](http://www.research.psu.edu/training/sari/citi)
  - *Responsible Conduct of Research (RCR)* course
  - May need: Social Science & Biomedical modules if data requires IRB
  

- Save a PDF printout and send it to Melanie McKinney
Scholarship and Research Integrity (SARI)

• **Part 2:** Graduate students are required to engage in an additional five hours of discussion-based RCR education prior to degree completion.

• This part is integrated in our Stat 580.

IF not completed on time will NOT be allowed to work as an RA nor teach until completion!
Seminars and Research

• Required/strongly encourage all students to attend our department seminars, PhD Thesis defenses, and seek other opportunities within PSU and beyond.

  Important for your career development, learning more about Stats, etc.!

• Many of our faculty have ongoing applied and theory projects for summer RA and for longer-term research.

  Talk to the faculty about possible project! You can do a short-term project with one faculty and a thesis with another! Important for building your CV!
Internships

• Internships may be on or off-campus

• On-campus should provide tuition – check before accepting
  – Library statistical consultants
  – Interns in our consulting center

• Off-campus
  – Local: Minitab
  – Others: usually summer or summer +
# Recent Internships

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubrizol Corporation</td>
<td>near Cleveland</td>
</tr>
<tr>
<td>Liberty Mutual Insurance</td>
<td>Boston</td>
</tr>
<tr>
<td>EMD Serono (pharmaceutical)</td>
<td>Billerica, Ma</td>
</tr>
<tr>
<td>United Airlines</td>
<td>Chicago</td>
</tr>
<tr>
<td>Janssen (pharmaceutical)</td>
<td>Titusville, NJ</td>
</tr>
<tr>
<td>AbbVie</td>
<td>North Chicago</td>
</tr>
<tr>
<td>Sandia National Laboratories</td>
<td>Albuquerque</td>
</tr>
<tr>
<td>DuPont (summer +)</td>
<td>Wilmington, DE</td>
</tr>
<tr>
<td>Security and Exchange Comm</td>
<td>DC</td>
</tr>
<tr>
<td>Google, Inc.</td>
<td>Mountain View, CA</td>
</tr>
<tr>
<td>AT&amp;T Labs</td>
<td>Florham, NJ</td>
</tr>
</tbody>
</table>
Application for Internship

- **International students**: Go to the International Student Office (ISO) and ask about your eligibility and requirement for summer internship, e.g. CPT

- Apply for the **Summer Tuition Assistance Program (STAP)**: pay attention to Mel’s email about STAP. Register for STAT596. *Don’t miss the deadline!*

- If necessary, suggest your advisor check with the graduate chair before filling in the form for the advisor.

- Internship & Job interview surveys at various points in time. On ANGEL: My Groups/Graduate STAT Program Advising
Waiver of STAT581 via an internship (ONLY MAS students!!!)

- The internship needs to be taken after Stat 580 and needs to be at least 8 weeks long.
  1. Submit the Internship offer letter from the company to the Graduate Chair and the Academic or Thesis Advisor.
  2. Register for 1 credit in Stat596 under the supervision of the student’s advisor or the graduate chair.
  3. Ask the internship supervisor to send an e-mail to the Graduate Chair about halfway through the internship indicating whether the student is making good progress in the internship.
  4. Upon the completion (or toward the end of the internship), the student needs to give a 20 minutes powerpoint presentation
  5. The student will need to submit a brief project/tech report
Professional +
Department/University

• Participate in departmental events
  – Seminars, receptions, lunch with speakers, ...

• Be active in SGSA
  – Lunches with faculty
  – Students-led mini workshops, study and/or research groups
  – Invite speakers
  – NSF Fellowships – U.S. students 1st and 2nd year

• Attend training workshops/conferences on campus

• For career development
  – College IDP:
    https://elements.science.psu.edu/faculty-staff/postdoctoral-information
  – http://myidp.sciencecareers.org/
Joining professional societies

- American Statistical Association (ASA)
- Institute of Mathematical Statistics (IMS)
- International Statistical Institute (ISI)

- Free or minimal fee
- Access to journals
- Applications for scholarships, travel, paper and research awards...
- Discounts to attend the meetings, networking
Additional Policies

STAP
STAP (Summer Tuition Assistance Program)!

- To take comprehensive exam during summer, you need apply for STAP. 1 credit
- To have your oral defense during summer, you need apply for STAP. 1 credit
- To have a MS degree during summer, you need apply for STAP. 1 credit
- To have a summer intern (for international), you need apply for STAP. 1 credit
- BW to enroll for one 1cr
Arrival and Leaving

• You are students but also employees of PSU with assigned duties to the department
• Observe the start and end of the semester, and make sure you are available through the end of the finals week for your TA duties
• All forms on ANGEL and on SGSA site
  – Early leave request form
  – Late return request form
  – Personal leave form
Communicate

• Get to know faculty, staff and your fellow students, and let us get to know you

• Talk to your advisors with any concerns and/or suggestions

• Talk to Sesa, talk to Dave ...

• Talk to our current ombudsmen:
  – Mosuk Chow, 863-8128, mchow@stat.psu.edu
  – Glenn Johnson, 863-4891, gfj100@psu.ed

• CAPS (Counseling and Psychological Services)
  http://studentaffairs.psu.edu/counseling/
Comments & Suggestions

• Any changes from your end?
• What works/what doesn’t?
• Ideas?
• If not self motivated, ask why?
Why Penn State?

• Top ranked Statistics program.

• Balanced, rigorous and flexible program.

• Large faculty with diverse interests.

• Opportunities for theoretical, methodological & interdisciplinary research.

• Opportunities to develop consulting & teaching skills.

• Good career placement into all sectors.

• Friendly faculty and students.

• Safe location with lots of recreational & cultural opportunities.
Top Ranked Department

National Research Council (NRC) 2011 ranking. S (survey) range 5 to 13.

US NEWS 2014 ranking statistics programs: top 15

National Research Council Regression-Based Rankings

PSU Statistics

Statistics and Probability (n=61)

National Research Council Survey-based Ranking, top 5 to 13 among all graduate programs in Statistics
Balanced, rigorous yet flexible program

- **Expectation:** complete our program within 5 years
- **Milestones:**
  1. Ph.D. Candidacy Exam (1\textsuperscript{st} year)
  2. Choose an advisor (2\textsuperscript{nd} year)
  3. Ph.D. comprehensive exam (2\textsuperscript{nd}/3\textsuperscript{rd} year)
  4. Ph.D. thesis & final oral defense (4\textsuperscript{th}/5\textsuperscript{th} year)

- Theoretical, Methodological & Interdisciplinary work – strong links with astronomy, biology, climate science, biomedical, social and behavioral sciences …

- Dual degrees (e.g., Operations Research)

- Graduate minor options (e.g., Computing)
Good career placement into all sectors

- Recent Interviews: Academic, Industry, Research Labs, Government …

- **Academic:** Baruch College - CUNY, California State University Pomona, Carnegie Mellon, Chinese University of Hong Kong, Columbia University, Duke University, Harvard University, Johns Hopkins, Michigan State University, National University of Singapore, NYU, NCSU, Oregon State University, Oxford University, PSU, SUNY-Fredonia, UT Huston, Villanova University

- **Industry:** Accuweather, Astellas, Disney, Epic Systems, Inc., Google, Eli, IBM Watson Research Center, Lilly, Microsoft research, Skytree, VideoMining,

- **Government:** RAND, NIH/NCI, Census, Department of Education
Good career placement into all sectors

• **Academic:** Teaching and/or Research assistant professors
  – Biostatistics - University of Minnesota, Yale,
  – Statistics – Carnegie Mellon, Temple, University of Notre Dame, University of Virginia
  – Math & Stats - CUNY, Williams College, Bentley University, Utah State, Old Dominion University, Miami University-Ohio; Istanbul Medeniyet University (Turkey), University of Melbourne (Australia), University of Campinas (Brazil)

• **Academic:** Postdoctoral research positions
  – Statistics - University of California, Berkeley, University of Washington, University of Chicago, Harvard University, Carnegie Mellon University
  – Department of Biostatistics and Computational Biology Dana-Farber Cancer Institute
  – NYU Langone Medical Center
Good career placement into all sectors

• Industry & think tanks
  – AbbVie
  – Eli Lily & Co.
  – Google
  – RAND
  – Merck & Co. Inc.
  – American Institutes of Research

• Government
  – Los Alamos National Laboratories, New Mexico
  – Department of Defense
  – U.S. Census
  – United Nations Office in Geneva
  – U.S. Department of Education
Recent (External) Graduate Awards

- A number of Best Student Paper Awards
- Kevin Lee – Academic Computing Fellowship 2015
- Daisy Phillips - Gertrude M. Cox Scholarship 2013
- Meridith Bartely – honorable mention, Gertrude M. Cox Scholarship 2015
- Wanghuan Chu, Cindy Cook, Joshua Snoke, Sayali Padke, Ben Sheng - IGERT BDSS Associate Fellowship
- Jessica Trail – NIH Fellowship
- Vishesh Karwa - SAS Fellowship
- Jeff Woo - U.S. Census Fellowship
- Weijie Shen - Quality and Productivity Research Conference student scholarship
- Kwame Kankam - Design and Analysis of Experiments conference travel grant
Recent (External) Faculty Awards/Honors

- David Hunter, Bing Li, Duncan Fong (affiliated faculty): American Statistical Association Fellows, 2015
- Dennis Lin: 2015 Shewhart Medal from the American Society for Quality & William G. Hunter Award
- Kari Lock-Morgan: 2015 Tombros (teaching) Fellow
- Naomi Altman: Writes *Nature Methods* “Points of Significance Column”, 2014 -- present
- Jogesh Babu (along with affiliated faculty member Eric Feigelson): 2012 PROSE book award in the cosmology and astronomy category
- Don Richards: Named to inaugural group of fellows of American Mathematical Association, 2012
- Aleksandra Slavkovic: Elected Fellow of ISI, 2012
Welcome to Penn State Statistics Department
Welcome to Happy Valley

HappyValley.com