

WRRF Workshops

The 2003 WRRF Workshops Schedule:

- 9:00am - Registration
- 9:30am - Opening Comments
- 10:00am - Workshops Begin
- 12:00pm - Lunch & Robot Demos
- 1:00pm - Workshops Resume
- 4:00pm - Close of Official Workshops
(people welcome to stay as long as teachers and building can be kept open)

All workshops are *all-day*. This year all workshops will provide even more hands on and directly applicable knowledge and experience.

Stuff you can take home and use!!

Cost

\$5 per person for WRRF member teams

\$15 per person otherwise

Presenters

Steve Bronstein – Monta Vista HS, Team 115
Eva Carrender - Northern CA FIRST Lego League
Bill Dunbar – Physics, Gunn HS, Team 192
Bill Faustine – Physics, Aragon HS, Team 840
Harry Garland – Mentor, Lincoln HS, Team 258
Rebecca Illowsky – Monta Vista HS, Team 115
James Isom - Northern CA FIRST Lego League
Damon Jansen – Physics Newark Memorial HS
Eagle Kessler – Animator, Gunn HS, Team 192
Alex Ko – Engineer, Applied Materials
Steve Kyramarios – Engineer, NASA, Team 254
Jon Lawton – San Jose City College
Ken Leung – NASA, WRRF Fellow
Jay Lundy, Bellarmine College Prep, Team 254
Jason Morrella – FIRST Regional Director
Frank Paton – AutoDesk Corporation
Steve Putz – Northern CA FIRST Lego League
Peter Yim – CIM Engineering, Team 840

Team Organization

- **Rookie Workshop** – Everything a rookie team needs to know to successfully participate in the FIRST Robotics Competition.
Instructor - Jason Morrella
- **How to Run a Team** – Managing food, parents, funds, and people dynamics.
Steve Bronstein, Steve Kyramarios, Peter Yim, Bill Dunbar (moderator)
- **Chairman's Award** - What is it? What FIRST is looking for? What does it REALLY mean? Look at past winners, setting expectations, and community service programs.

Mechanics / Fabrication

- **Motors & Drivetrains** - Designing and building motorized robotic components. Includes theory of motor operation (larger-than-life models), transmission and conversion of mechanical power (see-thru gearboxes, Lego models), and design and construction of drive systems (case studies of past robots).
Ken Leung, Jon Lawton
- **Pneumatics** - FIRST pneumatics, fluid power, hands-on demo. Explains how force is multiplied by cylinder diameter, and other key concepts.
Instructor - Alex Ko
- **Materials & Structures** – What to use and why. Discussion of failure modes, cost vs. strength vs. weight tradeoffs, and useful structures.
Instructor - Bill Faustine
- **Robot Physics** - Crash Course of the basic physics concepts pertinent to building and troubleshooting a FIRST robot.
Instructor - Damon Jansen

CAD / Animation

- **AutoDesk Inventor** – Using Computer Aided Design to document, save time, and save \$\$.
Instructor- Bruce Gale
- **Animation** – Expert guidance in how to organize and execute on your animation projects. Some cool and simple effects you can integrate into your animations.
Instructor - Eagle Kessler

Lego League

- **Mentoring How To** – effectively organize and coach an FLL team. Includes what to expect at FLL tournaments and a hands-on introduction to practice building and programming LEGO Mindstorms robots.
Instructor – Steve Putz, James Isom
- **Judge / Ref / Volunteer Training** - Receive detailed training on the 2003 FLL Mission Mars Robotics Challenge, judging process and operations of an FLL tournament. Volunteering qualifies as student community service hours.
Instructor – Eva Carrender

Electronics / Software

- **Electronics** - Basic electronics theory as it applies to FIRST robotics.
Instructor - Harry Garland
- **Programming** – Writing code to program the **NEW** FIRST control system.
Rebecca Illowsky, Jay Lundy

October 25, 2003

Richmond Location

- How to Run a Team
- AutoDesk Inventor
- Animation

San Jose Location

- Rookie Workshop
- Robot Physics
- Lego League – Mentoring How To
- Lego League – Referee & Judging Training

November 22, 2003

Richmond Location

- Rookie Workshop
- Robot Physics
- Programming
- Lego League – Mentoring How To

San Jose Location

- How to Run a Team
- Motors/Drivetrain
- Pneumatics
- Animation
- Lego League – Referee & Judging Training
- Electronics

December 13, 2003

Richmond Location

- Motors/ Drivetrain
- Pneumatics
- Electronics

San Jose Location

- Structure/Materials
- Programming
- AutoDesk Inventor
- Chairman's Award (AM Mini Session)

WRRF Western Region Robotics Forum

P.O. Box 450

583C Edquiba Road, Ste. 109

Moffett Field, CA, 94035

650.491.8720 (Voice)

270.682.2028 (Fax)

Workshop Coordinator: **Patrick Wang**

patrickzwang@hotmail.com

WRRF Robotics Workshops

**October 25
November 22
December 13**

2 Locations

Richmond, CA

De Anza High School
5000 Valley View Road
Richmond, CA 94803

San Jose, CA

San Jose State University
1 Washington Square
San Jose, CA 95192