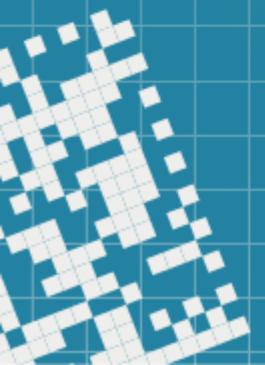
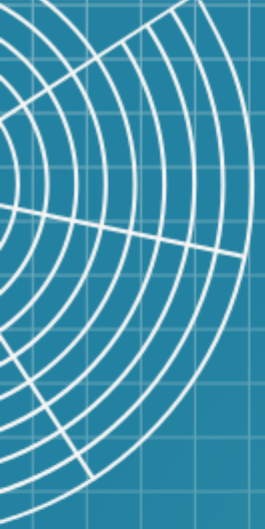
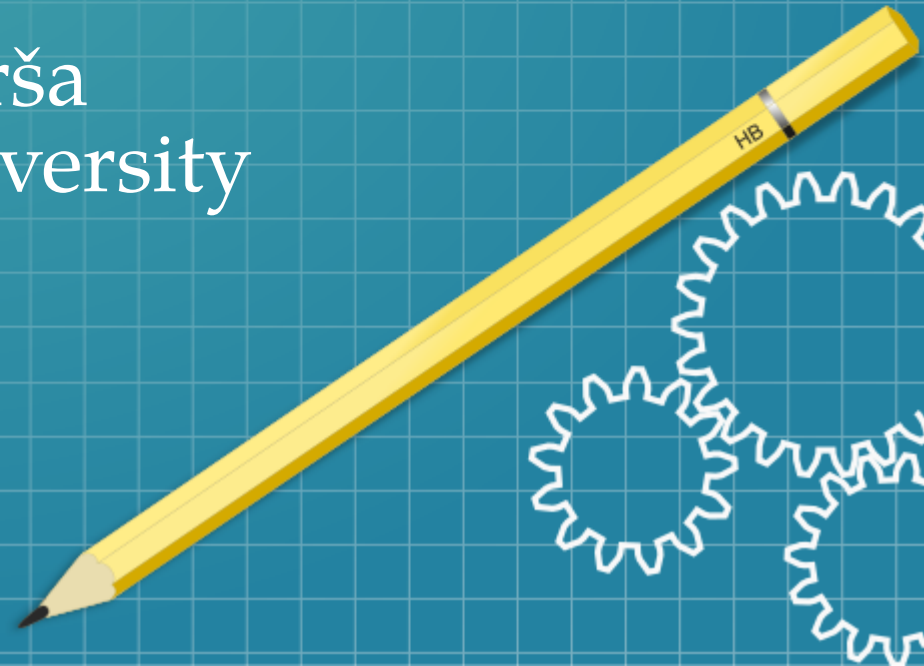
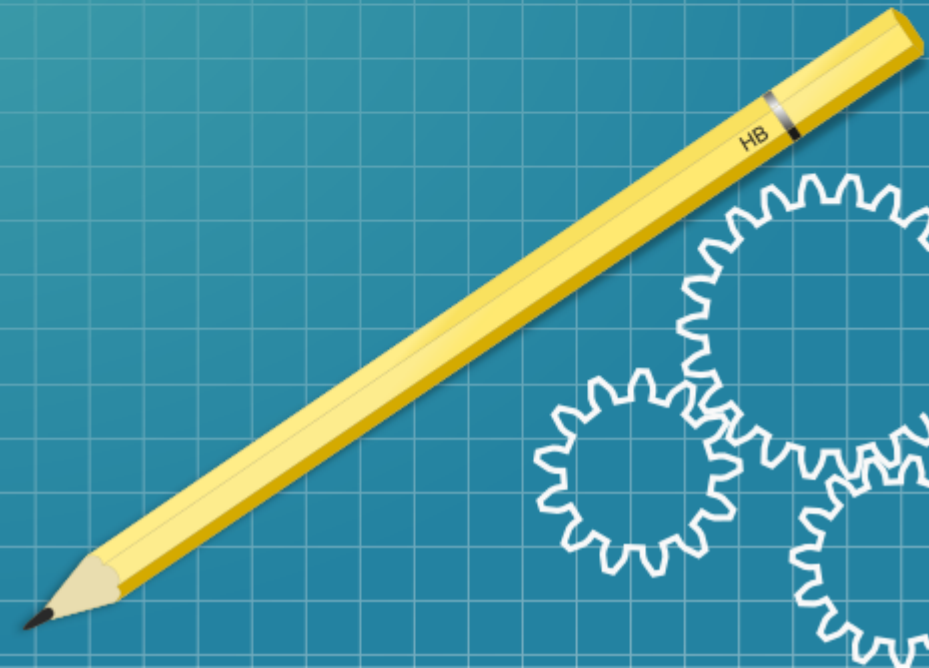
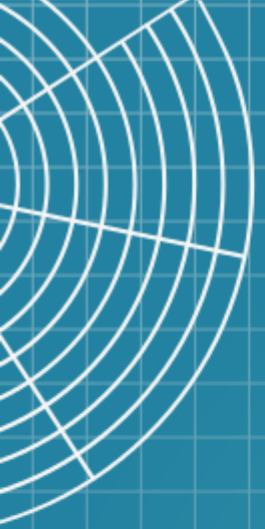


The brave new world of eclipsing binary modeling

Andrej Prša
Villanova University



The brave new world of eclipsing binary modeling



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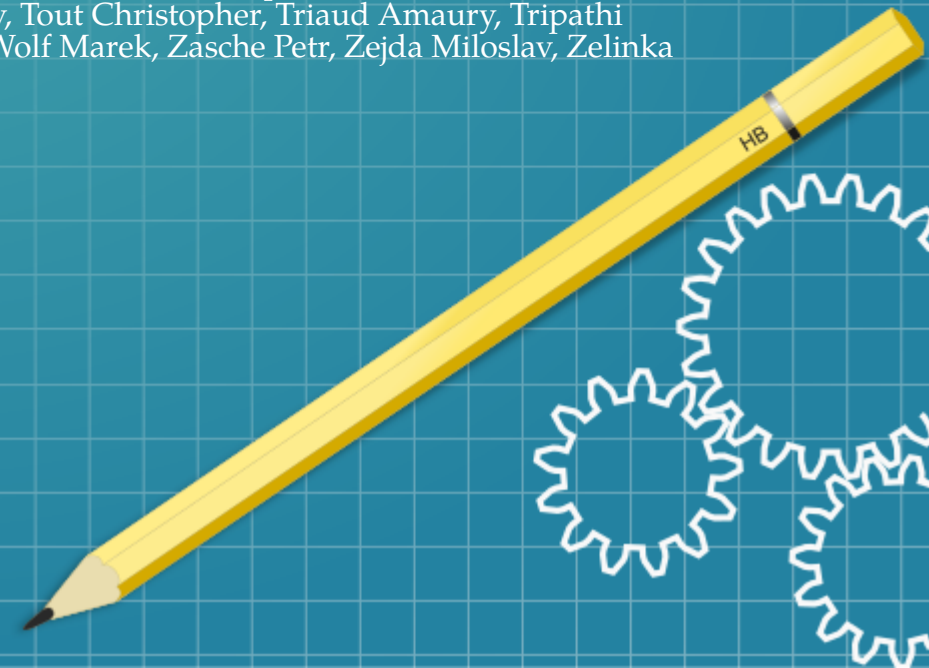
The brave new world of eclipsing binary modeling

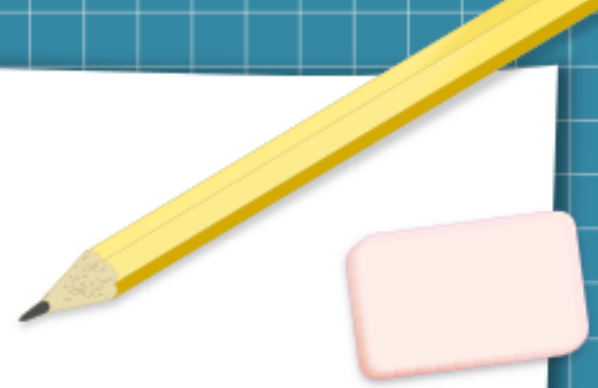


Bahar Engin, Bahýl Vladimír, Borkovits Tamás, Broz Miroslav, Celedon Lient, Choi Philip, Christopoulou Eleftheria-Panagiota, Conroy Kyle, Csizmadia Szilárd, Debski Bartłomiej, Drozd Marek, Dsilva Karan, El-Badry Kareem, Fedurco Miroslav, Forró Adrienn, Gajdoš Pavol, Gazeas Kosmas, Griffin Elizabeth, Güzel Ozan, Hajdu Tamás, Harmanec Petr, Hartman Zachary, Hegedüs Tibor, Icli Tugce, Janik Jan, Johnston Cole, Jonák Juraj, Kafka Stella, Kim Yonggi, Kıran Evrim, Kocak Dolunay, Kochoska Angela, Kolesnikov Dmitry, Kučáková Hana Lalounta Eleni, Lee Chung-Uk, Maqbool Bari, Martin David, Mason Brian, Merc Jaroslav, Mikulášek Zdeněk, Miroshnichenko Anatoly, Mitnyan Tibor, Mkrтчian David, Moe Maxwell, Murphy Simon, Nemeth Peter, Nielsen Kristoffer, Nuspl Janos, Oláh Katalin, Oomen Glenn-Michael, Oplštilová Alžběta, Orlov Valeri, Orosz Jerome, Parimucha Stefan, Paunzen Ernst, Pavlik Vaclav, Pawlak Michal, Pieńkowski Daniel, Pourbaix Dimitri, Prato Lisa, Reggiani Maddalena, Renzo Mathieu, Rode-Paunzen Monika, Rosu Sophie, Rukmini Jagirdar, Sekaran Sanjay, Senavci Hakan, Siopis Christos, Skarka Marek, Štegnér David, Stevens Daniel, Szász Gabriel, Teyssier Francois, Tokovinin Andrey, Tout Christopher, Triaud Amaury, Tripathi Aashana, Tvardovskyi Dmytro, Van Hamme Walter, Volkov Igor, Wilson Robert, Wolf Marek, Zasche Petr, Zejda Miloslav, Zelinka Ivan, Zervas Konstantinos, Zhou Xiao and Zúñiga-Fernández Sebastián

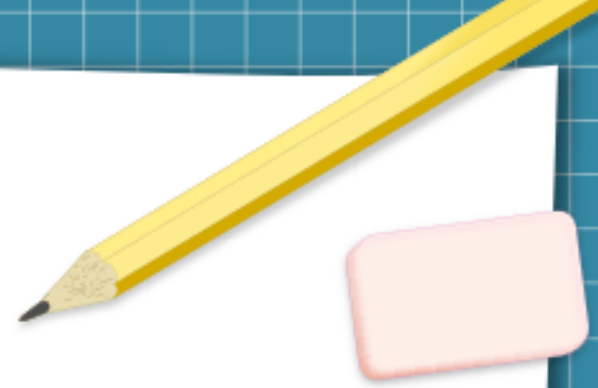


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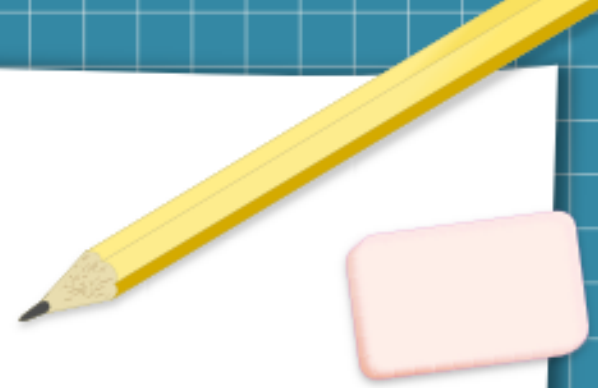




why are we doing what we are doing?

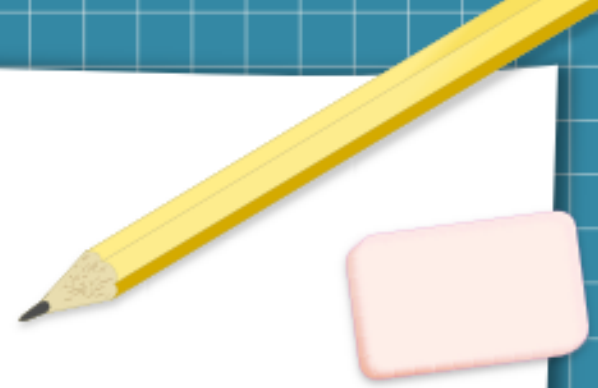


handling data noise

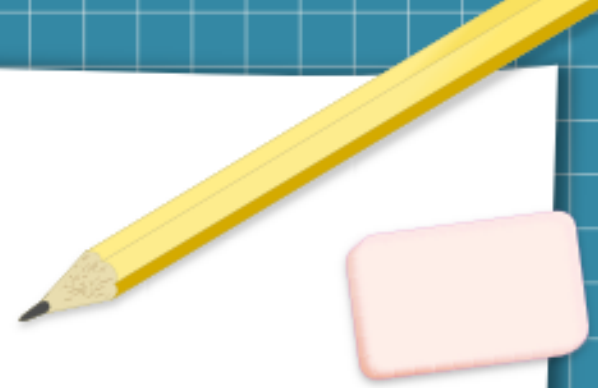


the choice of parameters

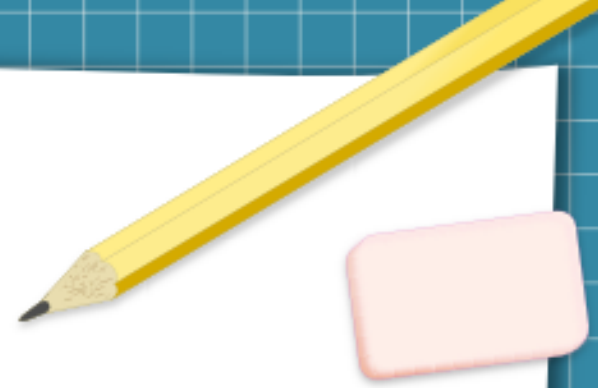
(yes, I'm looking at you, fillout factor!)



solving the inverse problem – for real

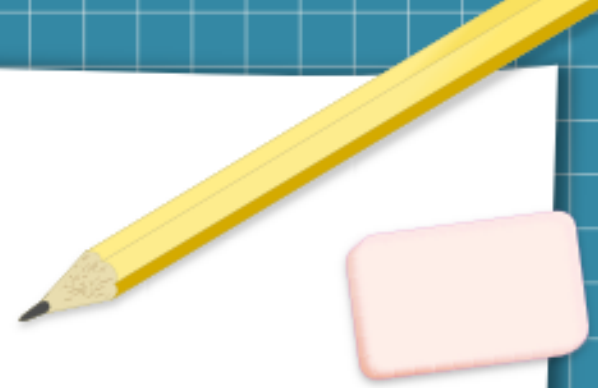


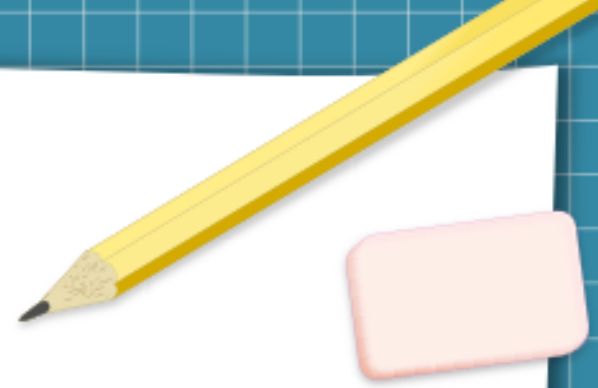
fundamental parameters to 1% (0.1%) or better



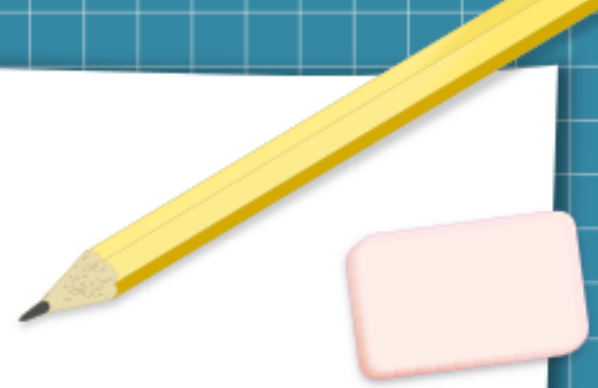
large surveys: ZTF, Gaia, LSST, ... – how do we handle data?

classification

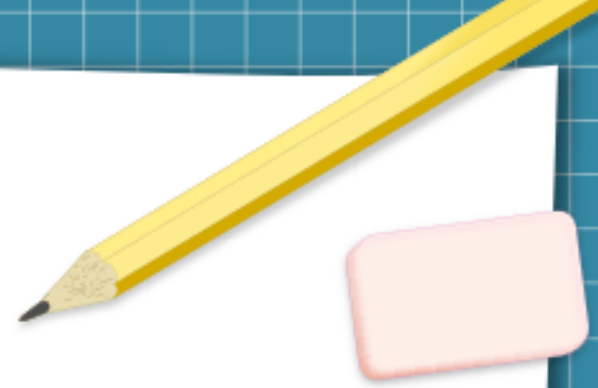




are contact binaries done right?



the cross-roads of binarity and asteroseismology



bridging stellar populations, stellar evolution and binarity

Summary:

The “brave” new world of EB modeling boils down to:

- * figuring out *why* we do the thing we do;
- * critically examining current practices over and over again;
- * adopting best practices from other fields;
- * yelling out when something does not work;
- * embracing that EB modeling is *difficult* and *expensive*.





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If these (and similar) issues keep you up at night ...

**WE ARE HIRING, STARTING ANY TIME BETWEEN
NEXT WEEK AND JANUARY 2020! PLEASE JOIN US!**